

# **RF & EMC Product Catalog 2022**

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# We're with you all the way



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Digital Catalog is available at http://arworld.us/catalog AR RF/Microwave Instrumentation is ISO Certified.





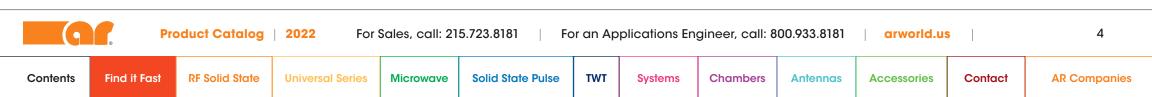
# **Total Solutions**

From complete testing systems to software, anechoic chambers and shielded rooms, AR is your one-stop for RF and EMC testing. Our testing solutions are built to last and come with the product quality and high-level support customers can expect from AR.

Throughout this catalog, you will find everything you need for RF and EMC testing. Use the table below to quickly find some of our more popular items.

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# **Amplifiers**

Frequency	Power (W)	Model Number	Category	Page
4 kHz – 400 MHz	100	100A400AM20	RF Solid State	13
10 kHz – 3 MHz	800	800A3B	RF Solid State	13
10 kHz – 100 MHz	150	150A100D	RF Solid State	14
10 kHz – 225 MHz	1200	1200A225B	RF Solid State	14
10 kHz – 225 MHz	2500	2500A225C	RF Solid State	15
10 kHz – 225 MHz	5000	5000A225C	RF Solid State	15
10 kHz – 225 MHz	10000	10000A225B	RF Solid State	16
10 kHz- 225 MHz	12500	12500A225A-L	RF Solid State	16
10 kHz – 250 MHz	25	25A250B	RF Solid State	17
10 kHz – 250 MHz	50	50A250	RF Solid State	17
10 kHz – 250 MHz	125	125A250	RF Solid State	18
10 kHz – 250 MHz	500	500A250D	RF Solid State	18
10 kHz – 400 MHz	100	100A400A	RF Solid State	19
10 kHz – 400 MHz	175	175A400	RF Solid State	19
10 kHz – 400 MHz	250	250A400	RF Solid State	20
10 kHz – 400 MHz	350	350A400	RF Solid State	20
10 kHz – 400 MHz	600	600A400	RF Solid State	21
10 kHz- 400 MHz	1000	1000A400	RF Solid State	21
10 kHz – 1000 MHz	1	1U1000	Universal	29
10 kHz – 1000 MHz	2.5	2.5U1000	Universal	29
10 kHz – 1000 MHz	5	501000	Universal	30
10 kHz - 1000 MHz	10	10U1000	Universal	30

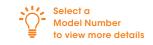


Frequency	Power (W)	Model Number	Category	Page
10 kHz – 1000 MHz	25	25U1000	Universal	31
10 kHz – 1000 MHz	50	50U1000	Universal	31
10 kHz – 1000 MHz	150	100U1000A	Universal	32
10 kHz – 1000 MHz	250	150U1000	Universal	32
100 kHz – 1000 MHz	100	250U1000A	Universal	33
100 kHz – 1000 MHz	500	500U1000	Universal	33
50 –1000 MHz	50	50W1000D	RF Solid State	22
80 – 1000 MHz	150	150W1000B	RF Solid State	22
80 – 1000 MHz	250	250W1000C	RF Solid State	23
80 – 1000 MHz	500	500W1000C	RF Solid State	23
80 – 1000 MHz	750	750W1000B	RF Solid State	24
80 – 1000 MHz	1000	1000W1000H	RF Solid State	24
80 – 1000 MHz	1500	1500W1000A	RF Solid State	25
80 – 1000 MHz	2000	2000W1000D	RF Solid State	25
80 – 1000 MHz	3000	3000W1000B	RF Solid State	26
80 – 1000 MHz	4000	4000W1000B	RF Solid State	26
80 – 1000 MHz	6000	6000W1000	RF Solid State	27
80 – 1000 MHz	10000	10000W1000A	RF Solid State	27
0.7 - 6 GHz	15	15\$1G6	Microwave	35
1 - 6 GHz	30	30\$1G6C	Microwave	35
1 - 6 GHz	60	75\$1G6C	Microwave	36

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# **Amplifiers**

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1 – 6 GHz	125	125\$1G6C	Microwave	36
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1 – 6 GHz	500	500\$1G6C	Microwave	37
1 – 6 GHz	750	750S1G6C	Microwave	38
1 – 6 GHz	1000	1000\$1G6C	Microwave	38
0.8 – 2.5 GHz	1000	1000SP0z8G2z5	Pulse	45
0.8 – 2.5 GHz	2000	2000SP0z8G2z5	Pulse	45
0.8 – 2.5 GHz	4000	4000SP0z8G2z5	Pulse	46
0.8 – 2.5 GHz	8000	8000SP0z8G2z5	Pulse	46
1 – 2 GHz	1300	1300SP1G2	Pulse	47
1 – 2 GHz	2000	2000SP1G2	Pulse	47
1 – 2 GHz	4000	4000SP1G2	Pulse	48
1 – 2 GHz	8000	8000SP1G2	Pulse	48
1 - 2.5 GHz	2000	2000\$1G2z8	Microwave	39
1 - 2.5 GHz	125	125\$1G2z5	Microwave	39
1 - 2.5 GHz	250	250\$1G2z5B	Microwave	40
1 - 2.5 GHz	500	500\$1G2z5A	Microwave	40
1 - 2.5 GHz	1000	1000\$1G2z5B	Microwave	41
1 – 6 GHz	50	50S1G6AB	Microwave	42



Frequency	Power (W)	Model Number	Category	Page
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1.2 - 1.4 GHz	1500	1500SP1z2G1z4	Pulse	49
1.2 - 1.4 GHz	4000	4000SP1z2G1z4	Pulse	49
1.2 - 1.4 GHz	5300	5300SP1z2G1z4	Pulse	50
1.2 - 1.4 GHz	8000	8000SP1z2G1z4	Pulse	48
1.2 - 1.4 GHz	80000	80000SP1z2G1z4	Pulse	52
2 - 4 GHz	1000	1000SP2G4	Pulse	53
2 - 4 GHz	2000	2000SP2G4	Pulse	53
2 - 4 GHz	4000	4000TP2G4	тwт	68
2 - 4 GHz	5000	5000SP2G4	Pulse	54
2 - 4 GHz	7000	7000SP2G4	Pulse	54
2 - 4 GHz	6900	6900TP2G4	тwт	69
2 – 4 GHz	10000	10000SP2G4	Pulse	55
2 - 4 GHz	12000	12000TP2G4	тwт	69
2 - 4 GHz	15000	15000SP2G4	Pulse	56
2 - 4 GHz	20000	20000SP2G4	Pulse	56
2.5 - 7.5 GHz	300	300T2G8	тwт	59
2.5 - 7.5 GHz	500	500T2G8	тwт	59
2.5 - 7.5 GHz	1000	1000T2G8B	тwт	60

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# **Amplifiers**

Frequency	Power (W)	Model Number	Category	Page
2.5 - 7.5 GHz	1700	1500T2G8A	тwт	60
2.5 - 7.5 GHz	2000	2000TP2G8B	тwт	70
2.7 - 3.1 GHz	4000	4000SP2z7G3z1	Pulse	57
2.7 - 3.1 GHz	8000	8000TP2z7G3z1	тwт	70
2.7 - 3.1 GHz	12000	12000SP2z7G3z1	Pulse	57
4 – 8 GHz	200	200T4G8	тwт	61
4 – 8 GHz	4000	4000TP4G8	тwт	71
4 - 8 GHz	7400	7400TP4G8	тwт	71
4 - 8 GHz	12000	12000TP4G8	тwт	72
6 - 18 GHz	20	20\$6G18A-L	Microwave	42
6 – 18 GHz	40	40\$6G18A-L	Microwave	43
6 – 18 GHz	250	250T6G18	тwт	61
6 - 18 GHz	500	500T6G18	тwт	62
7.5 – 18 GHz	250	250T8G18	тwт	62
7.5 - 18 GHz	500	500T8G18	тwт	63
7.5 – 18 GHz	1000	1000T8G18B	тwт	63
7.5 – 18 GHz	1000	1000TP8G18	тwт	72
7.5 – 18 GHz	1500	1500T8G18	тwт	64



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Frequency	Power (W)	Model Number	Category	Page
7.5 - 18 GHz	2000	2000TP8G18	тwт	73
8 – 10 GHz	10000	10000TP8G10	тwт	73
8 – 12 GHz	4000	4000TP8G12	тwт	74
8 – 12 GHz	8300	8300TP8G12	тwт	74
8 – 12 GHz	20000	20000TP8G12	тwт	75
12 - 18 GHz	3000	3000TP12G18	тwт	75
12 - 18 GHz	5700	5700TP12G18	тwт	76
18 - 26.5 GHz	40	40T18G26A	тwт	64
18 - 26.5 GHz	130	130T18G26z5B	тwт	65
18 - 26.5 GHz	200	200T18G26z5A	тwт	65
26.5 - 40 GHz	40	40T26G40A	тwт	66
26.5 - 40 GHz	130	130T26z5G40B	тwт	66
26.5 - 40 GHz	200	200T26z5G40A	тwт	67
40 - 50 GHz	70	70T40G50	тwт	67
40 - 50 GHz	100	100T40G50	тwт	68



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**Universal Series** 

Solid State Pulse

TWT **Systems**  Chambers

Contact

**AR Companies** 

# **Systems**

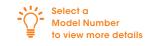
Description	Model Number	Page					
IEC 61000-4-3 Predefined Systems							
3 V/m field strength with up to a 3 meter test distance from 80 MHz - 6 GHz	SSIEC3V3M	79					
10 V/m field strength with up to a 2 meter test distance from 80 MHz - 6 GHz	SSIEC10V2M	79					
10 V/m field strength with up to a 3 meter test distance from 80 MHz - 6 GHz	SSIEC10V3M	79					
30 V/m field strength with up to a 2 meter test distance from 80 MHz - 6 GHz	SSIEC30V2M	79					
30 V/m field strength with up to a 3 meter test distance from 80 MHz - 6 GHz	SSIEC30V3M	80					

## ISO 11451-2 Predefined Systems

50 V/m field strength for full vehicle testing from 10 kHz - 18 GHz	SSISOV50V10K18G	80
50 V/m field strength for full vehicle testing from 20 MHz - 18 GHz	SSISOV50V20M18G	80
100 V/m field strength for full vehicle testing from 10 kHz – 18 GHz	SSISOV100V10K18G	80
100 V/m field strength for full vehicle testing from 20 MHz - 18 GHz	SSISOV100V20M18G	81
200 V/m field strength for full vehicle testing from 10 kHz - 18 GHz	SSISOV200V10K18G	81
200 V/m field strength for full vehicle testing from 30 MHz - 18 GHz	SSISOV200V30M18G	81

## ISO 11452-2 Predefined Systems

	50 V/m field strength for vehicle component testing from 10 kHz – 18 GHz	SSISOC50V10K18G	81
	50 V/m field strength for vehicle component testing from 80 MHz – 18 GHz	SSISOC50V80M18G	82
	100 V/m field strength for vehicle component testing from 10 kHz – 18 GHz	SSISOC100V10K18G	82
1	00 V/m field strength for vehicle component testing from 80 MHz - 18 GHz	SSISOC100V80M18G	82
:	200 V/m field strength for vehicle component testing from 10 kHz – 18 GHz	SSISOC200V10K18G	82
2	00 V/m field strength for vehicle component testing from 80 MHz – 18 GHz	SSISOC200V80M18G	83



# Find it Fast Table

#### AR Predefined Test Systems Make Testing Easy

We have complete standard and custom test systems that perform entire RF & EMC tests with just the press of a few buttons. Everything you need – amplifiers, antennas, couplers, signal generators, system controllers, receivers, and more, along with the software to control it – all in one comprehensive system.

#### Your System, Your Way

AR is here for you at each step to ensure that the system design, integration, and support of your test system complies with your goals. AR has designed hundreds of EMC systems that vary in scope from a single, less complex rack of equipment for low field strength IEC 61000-4-3 testing to MIL-STD-461/464 test systems. Spanning from DC - 50 GHz, producing field strengths in excess of 4,000 V/m and everything in between AR Systems are in compliance with military, aviation, commercial and automotive test standards.

AR's Predefined Systems are designed to meet the minimum requirements of several of today's common EMC test standards. Depending on your needs, these systems can be used as is or tailored and customized to meet your specific requirements. Additionally, AR could also design a system that meets your needs from scratch.

#### **AR Quality Backed by AR Protection**

One of the added benefits of an AR test system is peace of mind. Every product in your AR test system is designed and built to the highest quality standards and backed by the most comprehensive warranty in the business and a global support network. When you have a question about any part of the system, you can call us. We've been here for over 50 years, and we'll continue to be here, serving your needs and engineering the products that meet tomorrow's challenges.

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Accessories

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# **Systems**

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Description	Model Number	Page					
MIL-STD-461 Predefined Systems							
10 V/m field strength for military testing applications from 10 kHz – 18 GHz	SSMIL10V10K18G	83					
10 V/m field strength for military testing applications from 2 MHz – 18 GHz	SSMIL10V2M18G	83					
10 V/m field strength for military testing applications from 2 MHz – 40 GHz	SSMIL10V2M40G	83					
50 V/m field strength for military testing applications from 10 kHz – 18 GHz	SSMIL50V10K18G	84					
50 V/m field strength for military testing applications from 2 MHz – 18 GHz	SSMIL50V2M18G	84					
50 V/m field strength for military testing applications from 2 MHz – 40 GHz	SSMIL50V2M40G	84					
200 V/m field strength for military testing applications from 10 kHz - 18 GHz	SSMIL200V10K18G	84					
200 V/m field strength for military testing applications from 2 MHz – 18 GHz	SSMIL200V2M18G	85					
200 V/m field strength for military testing applications from 2 MHz – 40 GHz	SSMIL200V2M40G	85					
Conducted Immunity Test System	ms						
Complete Testing Solutions 10 kHz - 400 MHz, 100 W	C100402	86					
Complete Testing Solutions 10 kHz - 400 MHz, 175 W	C100403	86					
Complete Testing Solutions 100 – 1000 MHz, 250 W	CI01000	87					
Multi-Tone Test Systems							
Multi-Tone RF Radiated Immunity System, 2 Tones	MT2IEC10V3M	88					
Multi-Tone RF Radiated Immunity System, 4 Tones	MT4IEC10V3M	89					





# **Systems**

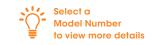
Description	Model Number	Page					
Solid State Field Generating System	Solid State Field Generating Systems						
Rack mounted Power Supply, control circuitry, and fault monitoring	AA1000	88					
18 – 26.5 GHz, producing a field strength of 20V/m at 1 meter	AA18G26-20	88					
18 – 26.5 GHz, producing a field strength of 50V/m at 1meter	AA18G26-50	89					
26.5 – 40 GHz, producing a field strength of 20V/m at 1 meter	AA26G40-20	89					
26.5 – 40 GHz, producing a field strength of 50V/m at 1 meter	AA26G40-50	90					

#### **Multi-Tone Testing**

The MT06002 (MultiStar Multi-Tone Tester) is a state-of-the-art system that is designed to run RF Radiated and Conducted Immunity tests faster than ever before. By testing multiple frequencies (tones) at once, test times are reduced by a factor equivalent to the number of tones selected. The number of tones is only limited by the signal generator bandwidth (1000 MHz) and the size of the amplifier used with the system.

#### 18 - 40 GHz Solid State Field Generation

AR offers a high-frequency amplifier/antenna solution in one package. These systems provide better harmonic





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Descriptions	Model Number	Page
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Radiated Immunity Chamber – 3m Test Distance	ARCP-0022	92
3m chamber w/ Ø1.5m test volume	ARCP-0023	92
Semi Anechoic 5m Chamber w/ Ø2m test volume	ARCP-0024	92
Semi Anechoic 10m Chamber w/ 3m Qz	ARCP-0025	93
Semi Anechoic 10m Chamber w/ 4m Qz	ARCP-0026	93
Semi Anechoic 10m Chamber w/ 5m Qz	ARCP-0027	93
Vehicle Component Test Chamber	ARCP-0028	93
Military Component Test Chamber (hybrid)	ARCP-0029	94
Military Component Test Chamber (non-hybrid)	ARCP-0030	94
Reverb Chamber LUF200	ARCP-0031	94
Reverb Chamber LUF400	ARCP-0032	94
Reverb Chamber LUF1000	ARCP-0033	95
Fully Anechoic 3m Chamber	ARCP-0034	95

At AR, we understand that the best option for our customers is being able to go to a single point of contact and obtain a complete EMC solution. In addition, we know how important a quick response for budgeting purposes is to you. With that in mind, AR, in partnership with Comtest Engineering, has established several predefined chamber designs that can easily be used when requesting a Rough Order of Magnitude (ROM) price. Our fourteen predefined chambers specifications represent the readily available offerings for our customer's reference and early planning.

Select a

Model Number to view more details

# 



**Chambers Antennas**  **AR Companies** 

# Antennas

Frequency Range			
10 kHz – 50 GHz			

Power Range 1 W - 20 kW

Select a

Model Number

to view more details



Frequency	Power (W)	Model Number	Page		
Log-Periodic					
26 – 250 MHz	15000	ATR26M250	97		
26 MHz - 1 GHz	20000	ATR26M1G	97		
26 MHz - 6 GHz	5000	ATR26M6G	98		
26 MHz - 6 GHz	5000	ATR26M6G-1	98		
80 MHz - 1 GHz	2000	ATL80M1G	99		
80 MHz - 6 GHz	5000	ATR80M6G	99		
150 MHz – 1 GHz	2000	ATL150M1G	100		
200 MHz - 2 GHz	300	LP1	100		
200 MHz - 3 GHz	250	LP3	100		
200 MHz - 6 GHz	200	LP6	100		
200 MHz - 6 GHz	5000	ATR200M6G	101		
700 MHz - 7.5 GHz	1200	ATT700M8G	101		
700 MHz - 12 GHz	600	ATT700M12G	102		
30 - 2 GHz	See Graphs	JB1	102		
30 - 3 GHz	See Graphs	JB3	102		
30 - 6 GHz	See Graphs	JB6	102		
Horn					
200 MHz - 1 GHz	5000	ATH200M1G	103		
200 MHz - 1 GHz	10000	ATH200M1G-1	103		
200 MHz – 2 GHz	1000	ATH200M2G	104		

Frequency	Power (W)	Model Number	Page
400 MHz - 1 GHz	3000	ATH400M1G	104
800 MHz - 6 GHz	2300	ATH800M6G	105
1 – 18 GHz	300	DRH-118	105
2 – 10 GHz	700	ATH2G10	106
2.5 - 7.5 GHz	12000	ATH2G8A-2	106
2.5 - 7.5 GHz	12000	ATH2G8A-1	107
4 - 8 GHz	500	ATH4G8	107
6 - 8 GHz	3000	ATH6G18A	108
7.5 – 18 GHz	2800	ATH7G18A	108
18 - 26.5 GHz	350	ATH18G27A	109
18 - 26.5 GHz	350	ATH18G27A-1	109
18 - 40 GHz	50	DRH-1840	110
18 - 40 GHz	450	ATH18G40	110
26.5 - 40 GHz	240	ATH26G40A-1	111
26.5 - 40 GHz	400	ATH26G40A	111
33 - 50 GHz	240	ATH33G50	112

Frequency	Power (W)	Model Number	Page			
E-Field Generators						
10 kHz - 25 MHz	3000	ATE10K25M-1	112			
10 kHz - 30 MHz	1000	ATE10K30MA	113			
10 kHz - 100 MHz	500	ATE10K100M	113			
10 kHz - 100 MHz	3000	ATP10K100M	114			
25 MHz - 1 GHz	3500	ATC25M1G	114			
	Biconio	cal				
30 - 300 MHz	1	BC1	115			
30 - 300 MHz	50	BC2	115			
30 - 300 MHz	500	BC5	115			
I	DAS Ante	nnas				
400 MHz - 3 GHz	25	LP425PCB	116			
400 MHz - 3 GHz	25	LP425PCB-O-DIN	116			
400 MHz - 3 GHz	200	LP425	117			
400 MHz - 6 GHz	25	LP460PCB	117			
650 MHz - 3 GHz	25	LP6530PCB	118			
650 MHz - 6 GHz	15	LP6560PCB	118			

The antennas you need for virtually any testing procedures are right here at AR. We offer a complete variety of rugged, high power antennas, with expect field generation graphs. Since all are frequency and power matched to AR amplifiers, it's easy to precisely select the suitable unit.

	0

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Contact

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**Universal Series** Microwave

Solid State Pulse

TWT **Systems** 

Chambers	Ante

tennas Accessories **AR Companies** 

# Accessories

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All our RF solid-state amplifiers have modulation capability that will faithfully reproduce AM, FM or Pulse Modulation appearing on the input signal for use in the most demanding EMC applications. These selfcontained, broadband, completely solid-state amplifiers are designed for applications requiring the ultimate in output power over a wide instantaneous bandwidth with high gain.



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Frequency Range

Power Range

## **100A400AM20** 4 kHz - 400 MHz 100 W CW

Rated Output Power Into 500:



100 kHz	– 400 MHz: 125 W, typ.; 100 W min
put for Rated Output	1 milliwatt max.
	<ul> <li>@ 3 dB Compression Into 50Ω:</li> <li>min. rising to 100 W min. at 100 kHz</li> <li>400 MHz: 125 W typ.; 100 W min</li> </ul>
	@ 1 dB Compression Into 50Ω: 10 W min. rising to 75 W at 100 kHz Hz – 400 MHz: 85 W typ.; 75 W min
atness ±1 dB typ.	/ ±1.5 dB max, 100 kHz – 400 MHz
requency Response	4 kHz-400 MHz instantaneously
<b>ain</b> 50 dB min., 100 kHz	(at max. setting) - 400 MHz; <50 dB below 100 kHz
ain Adjustment (continuous	range) 20 dB min.
put Impedance	50 ohms, VSWR 2:1 max.
utput Impedance	50 ohms, nomina

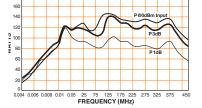
#### Mismatch Tolerance\*

100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

#### Harmonic Distortion

Minus 30 dBc	Minus 20 dBc max. at 75 W, typical at 50 W (1 – 400 MHz)
Spurious	Minus 73 dBc typ.
Third Order Intercept Point	55 dBm typ.
Noise Figure	8 dB typ.

Type N female
Type N female
Type IN Territor
Type N female
24-pin female
9-pin Subminiature D female
ST Conn Tx and Rx RS-232
Туре В
RJ-45
15–pin Subminiature D
Forced air (self–contained fans)
18.5 kg (41 lb.)
10.4 kg (23 lb.)
x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in.
3 x 13.2 x 55.1 cm / 19 x 5.2 x 21.7 in.
EAR99
100A400AM20



## 800A3B 10 kHz - 3 MHz 800 W CW

800 W
1 milliwatt max.
@ 3 dB compression Nominal 800 W Min. 800 W, 10 kHz – 2 MHz Min. 700 W, 2 – 3 MHz
@ 1 dB compression Nominal 500 W / min. 400 W
± 1 dB max
10 kHz – 3 MHz instantaneously
60 dB min
inge) 23 dB min
50 ohms, nomina

12.5, 25, 50, 100, 150, 200, 400 ohms nominal (10 kHz–3 MHz) on front panel

#### Mismatch Tolerance\*

Will operate without damage or oscillation with any magnitude and phase of source and load impedance. 100% of rated power without foldback up to 6:1 mismatch above which may limit to 400 W reflected power.

#### Harmonic Distortion

Minus 20 dBc max. at 400 W power output

#### Connectors RF Input RF Output

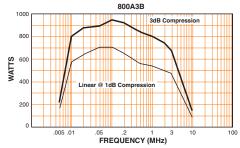
Type N female on front panel Type N female on front panel

#### Remote Control

IEEE-488/RS-232, USB ability to remote control and power an external impedance transformer.



Cooling	te display of forward and reflected power. Forced air (self-contained fans)
Primary Power	190 – 240 VAC 50 – 60 Hz, 2,500 W max.
Weight (max.) With cabinet Without cabinet	36.4 kg (80 lb.) 29.4 kg (65 lb.)
Without cabinet 4 For external impedance	3 x 34 x 55.1 cm / 19.8 x 13.4 x 21.7 in 18.3 x 30.5 x 54.4 cm / 19 x 12 x 21.4 in transformer options, see specification mpedance transformers.
Export classification	FAR9



(9	Pr	oduct Catalog	2022 For	Sales, call: 21	5.723.8181	For an Ap	plications En	gineer, call: 8	00.933.8181	arworld.us	<b>S</b>	15
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 10 kHz – 1 GHz Power Range 1 W – 50 kW

## **150A100D** 10 kHz - 100 MHz 150 W CW

Rated Output Power	180 W typ., 150 W min
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Typical: 165 W / min. 140 W
Power Output	@ 1 dB compression Typical: 135 W / min. 110 W
Flatness	±1 dB typ., ±1.5 dB max
Frequency Response	10 kHz – 100 MHz instantaneously
Gain (at max. setting)	51.8 dB min.
Gain Adjustment (continue	ous range) 20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms nominal

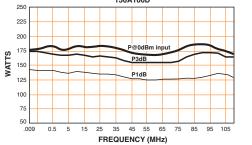
#### Mismatch Tolerance\*

100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

Noise Figure	9 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 100 W
	Minus 20 dBc that, at 70 W
Third Order Intercept Point	55 dBm typ.
Spurious	Minus 73 dBc typ.
Primary Power	
	100 – 240 VAC 50/60 Hz
	500 W



Connectors RF Input RF Output	Type N female Type N female
Remote Interfaces	
IEEE-488	24-pin female
RS-232	9-pin subminiature D (female)
Fiber optic	ST Conn Tx and Rx RS-232
USB 2	Туре В
Ethernet	RJ-45
Safety Interlock	15–pin subminiature D
Cooling	Forced air (self-contained fans)
Weight	
With cabinet	18.5 kg (41 lb.)
Without cabinet	10.4 kg (23 lb.)
Size (WxHxD)	
With cabinet	50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in
Without cabinet	48.3 x 13.2 x 55.1 cm / 19 x 5.2 x 21.7 in
Export classificatio	n EAR99
	150A100D



## **1200A225B** 10 kHz – 225 MHz 1200 W CW

Rated Output Pow	er	
		nin. 1,200 W, .01 – 100 MHz nin. 1,100 W, 100 – 225 MHz
Input for Rated Ou	itput	1 milliwatt max
Power Outpu <sup>†</sup>	// /	@ 3 dB compressior nin. 1,200 W, .01 – 100 MHz nin. 1,100 W, 100 – 225 MHz
Power Output		@ 1 dB compressior nin. 1,100 W, .01 – 100 MHz min. 800 W, 100 – 225 MHz
Flatness		±2 dB typ., ±2.5 dB max
Frequency Respon	10 k	Hz–225 MHz instantaneously
Gain (at max. setti	ng)	61.8 dB
Gain Adjustment (	continuous range)	>20 dB
Input Impedance	Ę	50 ohms, VSWR to 1.5:1 max
Output Impedance	)	50 ohms nominal

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

#### Harmonic Distortion

Minus 30 dBc typical, minus 20 dBc maximum at 800 W

Third Order Intercept Point

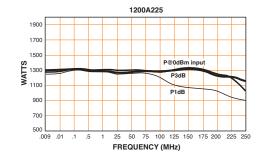
Primary Power

200 – 240 VAC single–phase 50/60 Hz 4.5 kW

73 dBm typ.



Size (WxHxD)	56.1 x 132.1 x 82.4 cm / 22.1 x 52 x 32.5 in
Weight	125 kg (275 lbs)
Cooling Forced air (self-	contained fans)
Fiber optic USB 2 Ethernet Safety Interlock	Type B RJ–45 15–pin subminiature D
Remote Control IEEE–488 RS–232	24–pin female 9–pin subminiature D (female) ST Conn Tx and Rx RS–232
Connectors RF Input: RF Output:	N female 7/16 DIN female



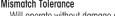
(•	Pr	oduct Catalog	<b>2022</b> For	Sales, call: 21	5.723.8181   Fo	or an Ap	plications En	gineer, call: 8	00.933.8181	arworld.us	<b>S</b>	16
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 2500A225C 10 kHz - 225 MHz 2500 W CW

Rated Output Power	
·	Typ.: 2,800 W, min. 2,500 W, .01 – 100 MHz Typ.: 2,300 W, min. 2000 W, 100 – 225 MHz
Input for Rated Outp	ut 1 milliwatt max.
Power Output	@ 3 dB compression Typ.: 2,800 W, min. 2,500 W, .01 – 100 MHz Typ.: 2,300 W, min. 2000 W, 100 – 200 MHz Typ.: 2000 W, min. 1,800 W, 200 – 225 MHz
	@ 1 dB compression Typ.: 2,400 W, min. 2000 W, .01 – 100 MHz Typ.: 1,900 W, min. 1,500 W, 100 – 200 MHz Typ.: 1,500 W, min. 1,300 W, 200 – 225 MHz
Flatness	±2 dB typ., ±2.5 dB max
Frequency Response	e 10 kHz – 225 MHz instantaneously
Gain (at max. setting	) 64 dB min.
Gain Adjustment (co	ntinuous range) 20 dB
Input Impedance	50 ohms, VSWR 1.5:1 max.
Output Impedance	50 ohms nominal
Mismatch Tolerance	



Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

#### Mismatch Capability

Will faithfully reproduce AM, FM, or pulse modulation appearing on input signal.

#### Harmonic Distortion

Minus 30 dBc typical, minus 20 dBc maximum at 1,750 W

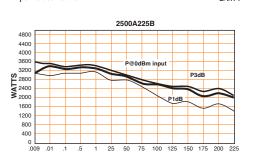
Third Order Intercept Point



Spurious	Minus 70 dBc typ.
Primary Power (user r	nust specify):
	200–240 VAC or 380–415 VAC 3–phase
	50/60 Hz
	8.5 kW
Connectors	
RF Input:	N female
RF Output:	7/16 DIN female
Sample Ports	N female
Remote Package	
IEEE-488	24–pin female
RS-232	9-pin subminiature D (female)
Fiber optic	ST Conn Tx and Rx RS-232
USB 2	Туре В
Ethernet	RJ-45
Safety Interlock	5-pin subminiature D

Forced	air (self-contained fans)	

Weight 159 kg (350 lb.) Size (WxHxD) 56.1 x 132.1 x 82.4 cm / 22.1 x 52 x 32.5 in. Export classification EAR99



5000A225C 10 kHz - 225 MHz 5000 W CW

Rated Output Po	ower			
·		nin. 5000 W, .01 – 100 MHz		
	Typ.: 4,500 W, m	in. 4000 W, 100 – 225 MHz		
Input for Rated	Output	1 mW max.		
Power Output		@ 3 dB compression		
•		nin. 5000 W, .01 – 100 MHz		
	//	in. 4000 W, 100 – 200 MHz		
	Typical: 4250 W, m	in 3750 W, 200 – 225 MHz		
Power Output		@ 1 dB compression		
-	Typical: 5000 W, min 4000 W, .01 – 100 MH			
	Typical: 4000 W, m	in 3000 W, 100 – 200 MHz		
	Typical: 3250 W, m	iin 2750 W, 200 – 225 MHz		
Flatness		±1.5 dB typ., ±2.5 dB max		
Frequency Resp	onse 10 kH	z–225 MHz instantaneously		
<b>Gain</b> (at max. se	etting)	67 dB min		
Gain Adjustmen	† (continuous range)	>20 dB		
Input Impedanc	e	50 ohms, VSWR 2:1 max		
Output Impedar	ice	50 ohms nomina		
		llation when connected to of foldback circuitry.		

#### Harmonic Distortion

Minus 30 dBc typ., minus 20 dBc max. at 3750 W

Third Order Intercept Point	77 dBm typ.
Spurious	Minus 70 dBc typ.

Primary Power (user must specify):

200 – 240 VAC or 380-415 VAC, 3-phase, 50/60Hz,17 kW



Connectors RF Input: RF Output: Remote Control IEEE-488 RS-232 Fiber optic USB 2 Ethernet	N female EIA 1–5/8 male, rear 24–pin female 9–pin subminiature D (female) ST Conn Tx and Rx RS–232 Type B RJ–45
Safety Interlock	15–pin subminiature D
Cooling Forced air (self-contained fans)	)
Weight	295 kg (650 lbs)

Size (WxHxD)

Export classification

56.1 x 181.6 x 82.4 cm (22.1 x 71.5 x 32.5 in.

EAR99

**AR Companies** 



Contact

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Contents

**Find it Fast** 

**RF Solid State** 

**Universal Series** 

74 dBm typ.

Solid State Pulse Microwave

TWT

**Systen** 

ns	Chambers
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ambers	Antennas	Accessories
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Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 10000A225B 10 kHz - 225 MHz 10000 W CW

Rated Output Power	
Nominal	11000 W
Minimum	10000 W, .01 – 100 MHz,
	6000 W, 100 – 225 MHz
Input for Rated Output	1 milliwatt max.
Power Output for 1 dB compressi	on
Nominal	8000 W
Minimum	7000 W, .01 – 100 MHz,
	4000 W, 100 – 225 MHz
Flatness	±3 dB max.
	±1 dB with internal leveling
Frequency Response 10	) kHz–225 MHz instantaneously
Gain (at max. setting)	70 dB min.
Gain Adjustment (continuous rang	e) 20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

#### Mismatch Tolerance

100% rated power without foldback up to 6:1 mismatch above which may limit to 5000 W reflected power, from 10 kHz to 100 MHz. Limited to 3000 W reflected power from 100 MHz to 225 MHz.

Minus 20 dBc max. at 6000 W
77 dBm typ.
0 – 15000 W full scale
150 nanoseconds max.

Primary Power (user must specify):

190 - 240 VAC, Delta (4 wire)



380 - 480 VAC, Delta (4 wire) 47 - 63 Hz, 3-phase 40000 W max. at .95 P.F. typ. Connectors Type N female on rear panel **RF** Output Type EIA 1-5/8 male on rear panel Forward Sample Type N female on front panel (coupling factor 80 dB typ.) **Reverse Sample** Type N female on front panel (coupling factor 80 dB typ.) Pulse Modulation Input Type BNC female on rear panel 15-pin female Type D on rear panel Safety Interlock Remote Control IEEE-488 24-pin female on rear panel RS-232 9-pin female Type D on rear panel RS-232 (fiber optic): Type ST, rear panel Type B female, rear panel Ethernet: RJ-4

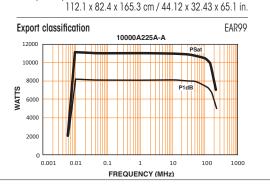
#### Cooling

USB 2:

RF Input

Forced air (self-contained fans)

Weight 500 kg (1,100 lb.) Size (WxHxD)



## 12500A225A-L 10 kHz - 225 MHz 12500 W CW

Rated Output Power	10,500 \
Minimum	12,500 W 10000 W, .01 – 100 MHz
WITHTIGHT	6000 W, 100 – 225 MHz
Input for Rated Output	1 milliwatt max.
Power Output for 1 dB compression	
Nominal	11000 W
Minimum	10000 W, .01 – 100 MHz 5000 W, 100 – 225 MHz
	3000 W, 100 - 223 WHZ
Flatness	±3 dB max.
	±1 dB with internal leveling
Frequency Response 10 kHz	z – 225 MHz instantaneously
Gain (at max. setting)	71 dB min.
Gain Adjustment (continuous range)	20 dB min
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nomina
Mismatch Tolerance	
100% rated power without foldbac	
which may limit to 5000 W reflected power, from	
10 kHz to 100 MHz. Limited to 30	UU W reflected power from
100 MHz to 225 MHz.	

Harmonic Distortion	Minus 20 dBc max. at 8000 W
Third Order Intercept Point	77 dBm typ
RF Power Display	0 – 15000 W full scale
RF Rise/Fall Time	150 nanoseconds max.
Primary Power (user must specify	)



	190 – 240 VAC Delta (4 wire) 380 – 480 VAC, Delta (4 wire) 47 – 63 Hz, 3-phase
	45000 W max. at .95 P.F. typ.
Connectors	
RF Input	Type N female on rear panel
RF Output	Type EIA 1–5/8 male on rear panel
Forward Sample	Type N female on front panel
	(coupling factor 80 dB typical)
Reverse Sample	Type N female on front panel
'	(coupling factor 80 dB typical)
Pulse Modulation Input	Type BNC female, rear panel
Safety Interlock	15-pin female Type D on rear panel
Remote Control	
IEEE-488	24-pin female on rear panel
RS-232	9-pin female Type D on rear panel
USB 2	Type B female, rear
Ethernet	RJ-45

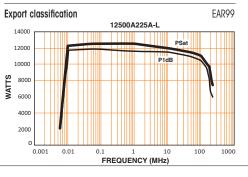
#### Cooling

Liquid cooled via external chilled water supply

Weight (max.) 500 kg (1,100 lb.)

Size (WxHxD)

112.1 x 82.4 x 165.3 cm / 44.12 x 32.43 x 65.1 in.



Contact

Product Catalog

2022

For Sales, call: 215.723.8181

For an Applications Engineer, call: 800.933.8181

arworld.us

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Contents

**Find it Fast** 

**RF Solid State** 

**Solid State Pulse** Microwave

TWT

**Systems** 

Chambers

S	Antennas	Accessories
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**AR Companies** 

Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 25A250B 10 kHz - 250 MHz 25 W CW

Rated Output Power	35 W typ., 25 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Typ. 35 W / min. 25 W
Power Output	@ 1 dB compression Typ. 30 W / min. 20 W
Flatness	±1 dB typ./±1.5 dB max.
Frequency Response 10 kH	z–250 MHz instantaneously
Gain (at max. setting)	44 dB min.
Gain Adjustment (continuous range)	20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

#### **Mismatch Tolerance\***

100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

#### Modulation Capability

Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.

Harmonic Distortion	Minus 20 dBc max. at 20 W, Minus 35 dBc typ. at 15 W
Spurious	Minus 73 dBc typ.
Third Order Intercept Point	55 dBm typ.
Noise Figure	8 dB typ.



Primary Power	
	100 – 240 VAC 50 / 60 Hz, 200 W
Connectors RF Input RF Output	Type N female Type N female
Remote Interfaces IEEE-488 RS-232 Fiber optic USB 2 Ethernet	24–pin female 9–pin Subminiature D female ST Conn Tx and Rx RS–232 Type B RJ–45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight With cabinet Without cabinet	16.7 kg (37 lb.) 8.6 kg (19 lb.)
Size (WxHxD) With cabinet Without cabinet	50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in. 48.3 x 13.2 x 55.1 cm / 19 x 5.2 x 21.7 in.
Export classification	EAR99
60	25A250B
55	PSat
SLLW 40 35 30	P3dB P1dB

0.009 0.01 0.1 0.5 1 25 50 75 100 125 150 175 200 225 250 275 FREQUENCY (MHz)

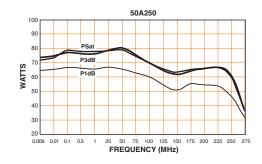
## 50A250 10 kHz - 250 MHz 50 W CW

Rated Output Power	70 W typ., 50 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Typ. 70 W / min. 50 W
Power Output	@ 1 dB compression Typ. 55 W / min. 40 W
Flatness	±1 dB typ./±1.5 dB max
Frequency Response	10 kHz – 250 MHz instantaneously
Gain (at max. setting)	47 dB min.
Gain Adjustment (continuou	s range) 20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
	out foldback. Will operate without hany magnitude and phase of

	Minus 20 dBc max. at 40 W, Minus 30 dBc typ. at 30 W
Spurious	Minus 73 dBc typ.
Third Order Intercept Point	55 dBm typ.
Noise Figure	8 dB typ.
Primary Power	100 – 240 VAC 50 / 60 Hz, 250 W



Connectors	
RF Input	Type N female
RF Output	Type N female
Remote Interfaces	
IEEE-488	24-pin female
RS-232	9-pin Subminiature D female
Fiber optic	ST Conn Tx and Rx RS-232
USB 2	Туре Е
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	
With cabinet	16.7 kg (37 lb.)
Without cabinet	8.6 kg (19 lb.)
Size (WxHxD)	
With cabinet	50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in
Without cabinet	48.3 x 13.2 x 55.1 cm / 19 x 5.2 x 21.7 in
Export classificatio	n FAR99
Export clussificatio	EAK95



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Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 125A250 10 kHz - 250 MHz 125 W CW

Rated Output Power	150 W typ., 125 W min
Input for Rated Output	1 milliwatt max
Power Output	@ 3 dB compression Typical: 145 W / min. 125 W
Power Output	@ 1 dB compression Typical: 110 W / min. 90 W
Flatness	±1 dB typ., ±1.5 dB max
Frequency Response	10 kHz – 250 MHz instantaneously
Gain (at max. setting)	50 dB min
Gain Adjustment (continuou	ıs range) 20 dB min
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms nominal

#### **Mismatch Tolerance\***

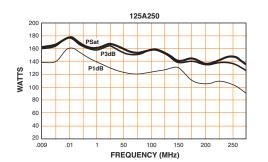
100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

Noise Figure	8 dB typ.
Harmonic Distortion	
	Minus 20 dBc max. at 90 W
	Minus 30 dBc typ. at 70 W
Third Order Intercept Point	55 dBm typ.
Spurious	Minus 73 dBc typ.
Primary Power	
	100 – 240 VAC
	50/60 Hz

500 W



Connectors RF Input RF Output	Type N female Type N female
Remote Interfaces IEEE-488 RS-232 Fiber optic USB 2 Ethernet Safety Interlock	24-pin female 9-pin subminiature D (female) ST Conn Tx and Rx RS-232 Type B RJ-45 15-pin subminiature D
Cooling	Forced air (self-contained fans)
Weight With cabinet Without cabinet	18.5 kg (41 lb.) 10.4 kg (23 lb.)
Size (WxHxD) With cabinet Without cabinet	50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in 48.3 x 13.2 x 55.1 cm / 19 x 5.2 x 21.7 in



Export classification

## 500A250D 10 kHz - 250 MHz 500 W CW

Rated Output Pov	ver	
	600 W typ., 5	500 W min., .01 – 250 MHz
Power Output		@ 3 dB compression 500 W min.,.01 – 250 MHz 1 min., 200 MHz – 250 MHz
	550 W lyp., 475 W	
Power Output		@ 1 dB compression 100 W min., .01 – 250 MHz 1 min., 200 MHz – 250 MHz
Flatness		±1.5 dB typ., ±2 dB max
Frequency Respo	nse 10 kHz	2–250 MHz instantaneously
Gain (at max. set	ting)	57 dB min.
Gain Adjustment	(continuous range)	20 dB min.
Input Impedance		50 ohms, VSWR 2:1 max
Output Impedanc	e	50 ohms nominal.
		lation when connected to of foldback circuitry.
Noise Figure		7 dB typ.
	•	

Harmonic Distortion		
Minus 20 dBc max	at 400 W; <-20 dBc typ. at 500 W	

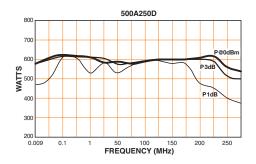
Third Order Intercept Point 68 dBm typ. Spurious Minus 73 dBc typ.

**Primary Power** 

200 – 240 VAC 50 / 60 Hz, 2,400 W



Connectors	
RF Input	Type N female
RF Output	Type N female
RF Sample Ports	Type N female (optional)
Remote Interfaces	
IEEE-488	24–pin female
RS-232	9-pin subminiature D (female)
Fiber optic	ST Conn Tx and Rx RS-232
USB 2	Туре В
Ethernet	RJ-45
Safety Interlock	15–pin subminiature D
Cooling	Forced air (self-contained fans)
Weight	
With Cabinet	78 kg (171 lb.)
Without Cabinet	58 kg (128 lb.)
Size (WxHxD)	
With Cabinet	50.3 x 38.1 x 75.5 cm / 19.8 x 15 x 29.7 in
Without Cabinet	48.3 x 35.6 x 75.5 cm / 19 x 14 x 29.7 in
Export classification	n EAR99



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EAR99

Frequency Range 10 kHz – 1 GHz Power Range 1 W - 50 kW

## **100A400A** 10 kHz – 400 MHz 100 W CW

Rated Output Power	130 W typ., 100 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Typ. 125 W / min. 100 W
Power Output	@ 1 dB compression Typ. 85 W / min. 75 W
Flatness	±1 dB typ./±1.5 dB max.
Frequency Response 10	) kHz–400 MHz instantaneously
Gain (at max. setting)	50 dB min.
Gain Adjustment (continuous rang	ge) 20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

#### Mismatch Tolerance\*

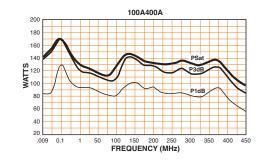
100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

#### Harmonic Distortion

	Minus 20 dBc max. at 75 W, Minus 30 dBc typical at 50 W
Spurious	Minus 73 dBc typ.
Third Order Intercept Point	55 dBm typ.
Noise Figure	8 dB typ.
Primary Power	100 – 240 VAC 50 / 60 Hz, 500 W

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	*)******				
	6	Ö	STREET, CONTENTS		6 10

Connectors					
RF Input	Type N female				
RF Output	Type N female				
Remote Interfaces					
IEEE-488	24-pin female				
RS-232	9-pin Subminiature D female				
Fiber optic	ST Conn Tx and Rx RS-2				
USB 2	Туре В				
Ethernet	RJ-45				
Safety Interlock	15–pin Subminiature D				
Cooling	Forced air (self-contained fans)				
Weight					
With cabinet	18.5 kg (41 lb.)				
Without cabinet	10.4 kg (23 lb.)				
Size (WxHxD)					
With cabinet	50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in.				
Without cabinet	48.3 x 13.2 x 55.1 cm / 19.8 x 5.2 x 21.7 in.				
Export classificatio	n EAR99				



## **175A400** 10 kHz – 400 MHz 175 W CW

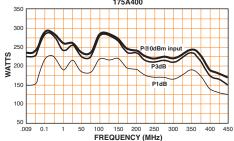
Rated Output Power	225 W typ., 175 W min.						
Input for Rated Output	1 milliwatt max.						
Power Output	@ 3 dB compression Typ. 210 W / min. 165 W						
Power Output	@ 1 dB compression Typ. 165 W / min. 125 W						
Flatness	±0.9 dB typ. / ±1.5 dB max.						
Frequency Response	0 kHz–400 MHz instantaneously						
Gain (at max. setting)	52.5 dB min.						
Gain Adjustment (continuous rar	nge) 20 dB min.						
Input Impedance	50 ohms, VSWR 2:1 max.						
Output Impedance	50 ohms, nominal						

damage or oscillation with any magnitude and phase of source and load impedance.

Harmonic Distortion	Minus 20 dBc max. at 150 W
Spurious	Minus 73 dBc typ.
Third Order Intercept Point	60 dBm typ.
Noise Figure	8.5 dB typ.
Primary Power	100 – 240 VAC 50 / 60 Hz, 770 W



Connectors RF Input RF Output	Type N female Type N female								
Remote Interfaces IEEE-488 RS-232 Fiber optic USB 2 Ethernet	24–pin female 9–pin Subminiature D female ST Conn Tx and Rx RS–232 Type B RJ–45								
Safety Interlock	15–pin Subminiature D								
Cooling	Forced air (self-contained fans)								
Weight With cabinet Without cabinet	33 kg (73 lb.) 22 kg (48 lb.)								
Size (WxHxD) With cabinet Without cabinet	50.3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in. 48.3 x 17.7 x 74.9 cm / 19 x 7 x 29.5 in.								
Export Classificatio	n EAR99								
	175A400								
350									
300									
250	P@0dBm input								



9	Product Catalog   2022 For Sales, call: 215.723.8181				5.723.8181   Fo	For an Applications Engineer, call: 800.933.8181				arworld.us		21
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 10 kHz – 1 GHz Power Range 1 W – 50 kW

## **250A400** 10 kHz - 400 MHz 250 W CW

Rated Output Power	325 W typ., 250 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Typ. 325 W / min. 250 W
Power Output	@ 1 dB compression Typ. 250 W / min. 200 W
Flatness	±1.5 dB typ. / ±2 dB max.
Frequency Response	10 kHz–400 MHz instantaneously
Gain (at max. setting)	54 dB min.
Gain Adjustment (continuous ra	nge) 20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

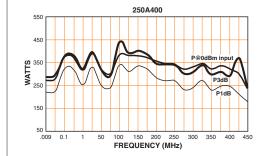
#### **Mismatch Tolerance\***

100% of rated power without foldback. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

	Minus 20 dBc max. at 200 W
Spurious	Minus 73 dBc typ.
Third Order Intercept Point	65 dBm typ.
Noise Figure	8.5 dB typ.
Primary Power	100 – 240 VAC 50 / 60 Hz, 1,350 W



Connectors	
RF Input	Type N female
RF Output	Type N female
Remote Interfaces	
IEEE-488	24-pin female
RS-232	9-pin Subminiature D female
Fiber optic	ST Conn Tx and Rx RS-232
USB 2	Туре В
Ethernet	RJ-45
Safety Interlock	15-pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	
With cabinet	45 kg (98 lb.)
Without cabinet	33 kg (73 lb.)
Size (WxHxD)	
With cabinet	50.3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in
Without cabinet	48.3 x 17.7 x 74.9 cm / 19 x 7 x 29.5 in
Export Classification	on FAR99



## **350A400** 10 kHz – 400 MHz 350 W CW

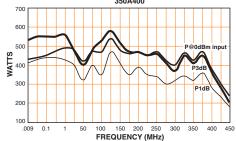
Rated Output Power	425 W typ., 350 W min.						
Input for Rated Output	1 milliwatt max						
Power Output	@ 3 dB compression Typ. 400 W / min. 325 W						
Power Output	@ 1 dB compression Typ. 325 W / min. 225 W						
Flatness	±1.5 dB typ. / ±2 dB max						
Frequency Response	0 kHz–400 MHz instantaneously						
Gain (at max. setting)	55.5 dB min						
Gain Adjustment (continuous rar	nge) 20 dB min						
Input Impedance	50 ohms, VSWR 2:1 max						
Output Impedance	50 ohms, nomina						

damage or oscillation with any magnitude and phase of source and load impedance.

Minus 20 dBc max. at 300 W						
Minus 73 dBc typ.						
65 dBm typ.						
8.5 dB typ.						
100 – 240 VAC 50 / 60 Hz , 1,750 W						



Connectors	T								
RF Input RF Output	Type N female Type N female								
Remote Interfaces									
IEEE-488 RS-232	24–pin female 9–pin Subminiature D female								
Fiber optic	ST Conn Tx and Rx RS–232								
USB 2	Туре В								
Ethernet	RJ-45								
Safety Interlock	15-pin Subminiature D								
Cooling	Forced air (self-contained fans)								
Weight									
With cabinet Without cabinet	48 kg (104 lb.) 35 kg (78 lb.)								
Size (WxHxD)									
With cabinet 5	0.3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in								
Without cabinet	48.3 x 17.7 x 74.9 cm / 19 x 7 x 29.5 in								
Export Classification	EAR99								
	350A400								
700									
600									
500	P@0dBm input								



(9	P	roduct Catalog	<b>2022</b> For Sales, call: 215.723.8181   Fo			For an Ap	For an Applications Engineer, call: 800.933.8181				arworld.us	
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Puls	se TWT	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 600A400 10 kHz - 400 MHz 600 W CW

Rated Output Pow	er	
		600 W min.; .01 – 250 MHz / min., 250 MHz – 400 MHz
Power Output		@ 3 dB compression 600 W min.; .01 – 250 MHz / min., 250 MHz – 400 MHz
Power Output		@ 1 dB compression 500 W min.; .01 – 250 MHz / min., 250 MHz – 400 MHz
Flatness		±1.5 dB typ. / ±2 dB max.
Frequency Respor	nse 10 kHz	z–400 MHz instantaneously
Gain (at max. sett	ing)	57.8 dB min.
Gain Adjustment	(continuous range)	20 dB min.
Input Impedance		50 ohms, VSWR 2:1 max.
Output Impedance	9	50 ohms, nominal

#### Mismatch Tolerance\*

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

#### Harmonic Distortion

<-20 typical at 600 W	Minus 20 dBc maximum at 500 W;
Spurious	Minus 73 dBc typ.
Third Order Intercept Point	67 dBm typ.
Noise Figure	7.5 dB typ.
Primary Power	200 – 240 VAC 50 / 60 Hz, 2,950 W

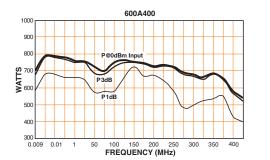
**Find it Fast** 

**RF Solid State** 

**Universal Series** 



Connectors RF Input RF Output RF Sample Ports:	Type N female Type 7/16 DIN Type N female (optional)
Remote Interfaces IEEE-488 RS-232 Fiber optic USB 2 Ethernet	24–pin female 9–pin Subminiature D female ST Conn Tx and Rx RS–232 Type B RJ–45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight With cabinet Without cabinet	87 kg (191 lb.) 68 kg (148 lb.)
Size (WxHxD) With cabinet Without cabinet	50.3 x 38.1 x 75.5 cm / 19.8 x 15 x 29.7 in. 48.3 x 35.6 x 75.5 cm / 19 x 14 x 29.7 in.
Export Classificatio	n EAR99



Microwave

## 1000A400 10 kHz - 400 MHz 1000 W CW

Rated Output Power	1,200 W typ., 1000 W min.		
Input for Rated Output	1 milliwatt max.		
Power Output	@ 3 dB compression Typ. 1,200 W / min. 1000 W		
Power Output	@ 1 dB compression Typ. 1000 W / min. 800 W		
Flatness	±1.5 dB typ. / ±2 dB max.		
Frequency Response	10 kHz–400 MHz instantaneously		
Gain (at max. setting)	60 dB min.		
Gain Adjustment (continuous r	range) 25 dB min.		
Input Impedance	50 ohms, VSWR 2:1 mo		
Output Impedance	50 ohms, nominal		
	e or oscillation when connected to t the aid of foldback circuitry.		
Modulation Capability Will faithfully reproduce AM, appearing on the input signo			
Harmonic Distortion	Minus 20 dBc max. at 1000 W		
Spurious	Minus 73 dBc typ.		
Third Order Intercept Point	68 dBm typ.		
Noise Figure	8 dB typ.		

200 – 240 VAC 3-phase, 50/60 Hz, 5.2 kW

Antennas



Accessories

Connectors	
RF Input	Type N female
RF Output	7–16 DIN female, rear
Remote Interfaces	
IEEE-488	24-pin female
RS-232	9-pin Subminiature D female
Fiber optic	ST Conn Tx and Rx RS-232
USB 2	Type B
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	124.8 kg (275 lb.)
Size (WxHxD) 56.1 x 97.	8 x 82.5 cm / 22.1 x 38.5 x 32.5 in
Environmental	
Operating Temperature:	5°C / +40°C
Operating Altitude:	Up to 2000 M
Shock and vibration:	Normal Truck Transport
Demulaters Ormalianes	
Regulatory Compliance	EN 41204-1
EMC	EN 61326-1
EMC	1010–1, CAN/CSA C22.2 #61010–1
EMC Safety UL 6	1010–1, CAN/CSA C22.2 #61010–1 CENELEC EN 61010–1
EMC	1010–1, CAN/CSA C22.2 #61010–1
EMC Safety UL 6	1010–1, CAN/CSA C22.2 #61010–1 CENELEC EN 61010–1 DIRECTIVE 2011/65/EU
EMC Safety UL 6 RoHS Export Classification	1010–1, CAN/CSA C22.2 #61010–1 CENELEC EN 61010–1
EMC Safety UL 6 RoHS Export Classification	1010–1, CAN/CSA C22.2 #61010–1 CENELEC EN 61010–1 DIRECTIVE 2011/65/EU EAR99
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EMC Safety UL 6 RoHS Export Classification	1010–1, CAN/CSA C22.2 #61010–1 CENELEC EN 61010–1 DIRECTIVE 2011/65/EU EAR99
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EMC Safety UL 6 RoHS Export Classification	1010–1, CAN/CSA C22.2 #61010–1 CENELEC EN 61010–1 DIRECTIVE 2011/65/EU EAR99
EMC Safety UL 6 RoHS Export Classification	1010–1, CAN/CSA C22.2 #61010–1 CENELEC EN 61010–1 DIRECTIVE 2011/65/EU EAR99

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Solid State Pulse

Contents

Primary Power

**Systems** 

Chambers

Contact

**AR Companies** 

23

Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 50W1000D 50 - 1000 MHz 50 W CW

Rated Output Power	70 W typ., 50 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Typ. 70 W / min. 60 W
Power Output	@ 1 dB compression Typ. 60 W / min. 45 W
Flatness	±1 dB typ./±1.5 dB max
Frequency Response	50–1000 MHz instantaneously
Gain (at max. setting)	48 dB min.
Gain Adjustment (continuous rang	e) 20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

#### Mismatch Tolerance

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

#### Modulation Capability

Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.

	Minus 20 dBc max. at 50 W, Minus 30 dBc typ. at 50 W
Spurious	Minus 73 dBc typ
Third Order Intercept Point	55 dBm typ.
Noise Figure	8 dB typ.

19	-	-	-	_	 -	-	8
Colores	ne interestable						CHA .
	(A)			-	-	-	5AA
	197	-			*	-	

Primary Power	100 – 240 VAC
	50 / 60 Hz, 250 W
Connectors	
RF Input	Type N female
RF Output	Type N female
Remote Interfaces	
IEEE-488 RS-232	24-pin female 9-pin Subminiature D female
Fiber optic	ST Conn Tx and Rx RS–232
USB 2	Type E
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self–contained fans)
	17.7 kg (39 lb.) 9.5 kg (21 lb.) 0.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in 8.3 x 13.2 x 55.1 cm / 19.8 x 5.2 x 21.7 in
Export classification	EAR99
100	50W1000D
95	
90 85	PSat
80 P3d	
<b>2</b> 75	
70 P1dB	
<b>≥</b> 65	
60	
- 00	

## 150W1000B 80 - 1000 MHz 150 W CW

Rated Output Power	160 W typical, 130 W min				
Input for Rated Output	1 milliwatt max				
Power Output	@ 3 dB compression Nominal 150 W / min. 125 W				
Power Output	@ 1 dB compression Nominal 125 W / min. 100 W				
Flatness	±1.5 dB typ. / ±2 dB max				
Frequency Response	80–1000 MHz instantaneously				
Gain (at max. setting)	52 dB n				
Gain Adjustment (continuous r	ange) 20 dB min				
Input Impedance	50 ohms, VSWR 1.5:1 ma				
Output Impedance	50 ohms, nomina				
	e or oscillation when connected to t the aid of foldback circuitry.				
Modulation Capability Will faithfully reproduce AM, appearing on input signal.	FM, or pulse modulation				
Noise Figure	8 dB max.; 6 dB typ				
Harmonic Distortion Minus 20 dBc maximum at 1 100 W	100 W; minus 30 dBc typical at				

100 W	,, Д
Third Order Intercept Point	58 dBm typ.
Spurious	Minus 73 dBc typ.



Primary Power	100 040 1/40						
	100 - 240 VAC						
	50/60 Hz, 650 W						
Connectors	Tuno N formalo on front name						
RF Input RF Output	Type N female on front pane Type N female on front pane						
Remote Interfaces							
IEEE-488	24–pin female						
RS-232	9-pin Subminiature D (female)						
Fiber Optic	ST Conn Tx and Rx RS-232						
USB 2	Туре Е						
Ethernet	RJ-45						
Safety Interlock	15–pin Subminiature D						
Cooling	Forced air (self-contained fans)						
	36.7 kg (81 lb.) 25.4 kg (56 lb.) 3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in 48.3 x 17.7 x 74.9 cm / 19 x 7 x 29.5 in						
Export Classification	EAR99						
220	150W1000B						
210 200							
190 180	ar @ 3dB Compression						
n 160							
150							
≥ <sub>130</sub>	@ 1dB Compression						
110							
100							
90							

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Accessories

Contents

**Find it Fast** 

**RF Solid State** 

**Universal Series** 

Solid State Pulse Microwave

TWT

**Systems** 

**Chambers Antennas** 

Contact	
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**AR Companies** 

24

Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 250W1000C 250 - 1000 MHz 250 W CW

ower	300 W typ., 250 W min					
Output	1 milliwatt max					
Typical: 300 W, Min	@ 3 dB compression imum: 275 W up to 500 MHz 250 W 500 - 1000 MHz					
Typical: 250 W, Min	@ 1 dB compression imum: 225 W up to 500 MHz 200 W 500 – 1000 MHz					
	±2 dB max./1.5 dB typ					
oonse 8	0–1000 MHz instantaneously					
etting)	54 dB min					
<b>nt</b> (continuous range	) 20 dB min					
e	50 ohms, VSWR 1.5:1 max					
nce	50 ohms, nomina					
	scillation when connected to aid of foldback circuitry.					
	Typical: 300 W, Min Typical: 250 W, Min bonse 8 etting) nt (continuous range se nce rance without damage or o					

#### Modulation Capability

Will faithfully reproduce AM, FM, or pulse modulation appearing on input signal. Noine Ei 0 ID

Noise Figure	8 dB max.; 6 dB typ
Harmonic Distortion Minus 20 dBc maximum at 200 \	N; minus 30 dBc typical a 200 W
Third Order Intercept Point	62 dBm typ
Spurious	Minus 73 dBc typ



Primary Power					100	0.4		
						_	io vac 000 w	
Connectors RF Input		Tu	oo N f	omalo	on f	ront	nano	
RF Output	Type N female on front panel Type N female on front panel							
Remote Interfaces					~ 4	. ,		
IEEE-488 RS-232		0 ni	n Cub				emale	
Fiber Optic			n Sub ST Coi			`		
USB 2			01 001				J-232 Type E	
Ethernet							RJ-45	
Safety Interlock			15	i–pin S	Subm	ninia	ture D	
Cooling		Force	d air (	(self–c	conta	inec	l fans	
With cabinet Without cabinet Size (WxHxD) With cabinet 50 Without cabinet	D.3 x 20.5 48.3 x		÷,	3 19.8	31.3 x 8.1	kġ (d x 2		
Export Classification						I	EAR99	
450	25	0W100	0C					
425								
375								
<u>2</u> 325	Linear @ 3	3dB Con	pressio	on				
	$\sim$	$\searrow$		$\checkmark$		/	$\overline{\ }$	
275				1 1				
275 250 Linear @ 1d	B Compress	sion 🔨	Ύ					
275	B Compress	sion 🔨			-	~		

## 500W1000C 80 - 1000 MHz 500 W CW

1 mW max. @ 3 dB compression mum: 525 W up to 700 MHz 475 W 700 - 1000 MHz @ 1 dB compression imum: 450 W up to 700 MHz 425 W 700 - 1000 MHz ±1 dB max. / 1.5 dB typ. D-1000 MHz instantaneously
mum: 525 W up to 700 MHz 475 W 700 – 1000 MHz @ 1 dB compression imum:450 W up to 700 MHz 425 W 700 – 1000 MHz ±1 dB max. / 1.5 dB typ.
mum:450 W up to 700 MHz 425 W 700 – 1000 MHz ±1 dB max. / 1.5 dB typ.
)–1000 MHz instantaneously
,
57 dB min
25 dB min.
50 ohms, VSWR 1.5:1 max
50 ohms, nomina
scillation when connected to aid of foldback circuitry.

Will faithfully reproduce AM, FM, or pulse modulation appearing on input signal.

Noise Figure	8 dB max.; 6 dB typ
Harmonic Distortion Minus 20 dBc maximum at 42	25 W; minus 30 dBc typical at 425 W
Third Order Intercept Point	63 dBm typ.
Spurious	Minus 73 dBc typ.



Primary Power													
							ļ	50/		-	_		VAC D W
Connectors													
RF Input													nale
RF Output Remote Interfaces									1)	/pe	IN 1	ren	nale
IEEE-488									24	1_r	oin t	fen	nale
RS-232			ç	9-p	in	Sul	om	inic					ale)
Fiber Optic											`		232
USB 2												Typ	e E
Ethernet												RJ.	-45
Safety Interlock						1	5-p	oin	Su	bm	inic	itui	e D
Cooling			Fo	orc	ed	air	(se	elf–	100	ntai	neo	d fo	ins)
With cabinet Without cabinet Size (WxHxD) With cabinet 50 Without cabinet Export Classification	0.3 x 48.3						· ·	5 9.8	0.8 3 x	15	(1 x 2 x 2	12 9.8	
		50	ow	10	000	2						LA	177
800													
750		-								F		_	
	<u>a</u>									F			sat -
	1				~						~ /		sat
	$\mathbb{N}$	$\mathbb{V}$	$\bigvee$	$\left( \right)$	$\sim$	Ľ		f			N	P3	dB
500						)						~	
												P1	dB
450													

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Accessories

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**Find it Fast** 

**RF Solid State** 

**Universal Series** Microwave Solid State Pulse

TWT

**Systems** 

Contact	AR	Ç
	AIX	

Companies

Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 750W1000B 80 - 1000 MHz 750 W CW

Rated Output P	ower	850 W typ., 750 W min
Input for Rated	Output	1 milliwatt max.
Power Output	Typical: 900 W, Mi	@ 3 dB compression nimum: 775 W up to 700 MHz; 725 W 700 – 1000 MHz
Power Output	Typical: 750 W, Mi	@ 1 dB compression nimum: 700 W up to 700 MHz; 650 W 700 – 1000 MHz
Flatness		±1.5 dB max. / 1 dB typ.
Frequency Response 80		80–1000 MHz instantaneously
Gain (at max. setting)		58.8 dB min.
Gain Adjustment (continuous range)		e) 25 dB min.
Input Impedan	ce	50 ohms, VSWR 1.5:1 max.
Output Impedance		50 ohms, nominal

#### Mismatch Tolerance

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

#### **Modulation Capability**

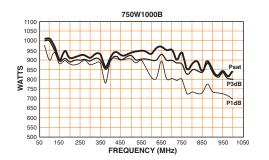
Will faithfully reproduce AM, FM, or pulse modulation appearing on input signal. Noise Figure 8 dB max.; 6 dB typ.

#### Harmonic Distortion Minus 20 dBc maximum at 700 W: minus 20 dBc typical at

	750 W
Third Order Intercept Point	64 dBm typ.
Spurious	Minus 73 dBc typ.



Primary Power
,
Connectors
RF Input
RF Output
Remote Interfaces
IEEE-488
RS-232
Fiber Optic
USB 2
Ethernet
Safety Interlock
Cooling
Weight
Size (WxHxD)
Export Classificatio
)



## 1000W1000H 80 - 1000 MHz 1000 W CW

Rated Output Power	1,200 W typ., 1000 W min
Input for Rated Output	1 milliwatt max.
Power Output Typico	@ 3 dB compression I: 1,200 W / 1,100 W min. up to 700 MHz; 950 W from 700 – 1000 MHz
Power Output Typ	@ 1 dB compression ical: 1000 W / 975 W min. up to 700 MHz, 900 W from 700 – 1000 MHz
Flatness	±1.5 dB max; ±1 dB typ
Frequency Response	80–1000 MHz instantaneously
Gain (at max. setting)	60 dB min.
Gain Adjustment (cont	nuous range) 25 dB min.
Input Impedance	50 ohms, VSWR 1.5:1 max
Output Impedance	50 ohms, nominal

any load impedance without the aid of foldback circuitry.

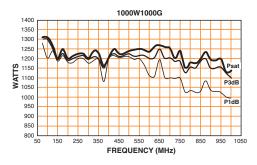
#### Modulation Capability Will faithfully reproduce AM, FM, or pulse modulation appearing on input signal.

Harmonic Distortion	
	Minus 20 dBc max. at 900 W Minus 20 dBc typ. @ 1000 W
Third Order Intercept Point	66 dBm typ.

····· • • • • • • • • • • • • • • • • •	/
Spurious	Minus 73 dBc typ.
Noise Figure	8 dB max., 6 dB typ.



·	Primary Power
200 – 240 VA	
50 / 60 Hz, 3,400 V	
	Connectors
Type N femal	RF Input
Type 7–16 DIN female on rear pane	RF Output
ICes	Remote Interfaces
24-pin femal	IEEE-488
9-pin Subminiature D (female	RS-232
ST Conn Tx and Rx RS-23	Fiber Optic
Туре	USB 2
RJ-4	Ethernet
k 15-pin Subminiature	Safety Interlock
Forced air (self-contained fan	Cooling
124.8 kg (275 lb.	Weight
	Size (WxHxD)
56.1 x 97.8 x 82.5 cm / 22.1 x 38.5 x 32.5 ir	
cation EAR9	Export Classification



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Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 1500W1000A 80 - 1000 MHz 1500 W CW

Rated Output I	Power	1,600 W typ., 1,500 W min.
Input for Rated	l Output	1 milliwatt max.
Power Output	Nominal	@ 3 dB compression 1,600 W / 1,500 W min. up to 700 MHz 1,400 W from 700 – 1000 MHz
Power Output	Nominal	@ 1 dB compression 1,450 W / 1,400 W min. up to 700 MHz, 1,250 W min. from 700 – 1000 MHz
Flatness		±2 dB max. / ±1.5 dB typ
Frequency Res	ponse	80–1000 MHz instantaneously
Gain (at max. :	setting)	61.8 dB min.
Gain Adjustment (continuous rar		uous range) 25 dB min.
Input Impedan	ce	50 ohms, VSWR 1.5:1 max.; 1.3:1 typ
Output Impedo	ince	50 ohms, nominal

#### **Mismatch Tolerance**

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

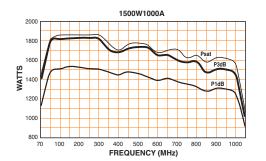
Harmonic Distortion	Minus 20 dBc max. at 1,250 W, -20 dBc typ. at 1,500 W
Third Order Intercept Point	68 dBm typ.
Spurious	Minus 73 dBc typ.
Noise Figure	8 dB max., 6 dB typ.

Primary Power (user must specify)

200 - 240 VAC, Delta-connected (4-wire) 380 - 415 VAC, Wye-connected (5-wire) 50 / 60 Hz, 3 phase, 7000 W



Connectors	
RF Input	Type N female on rear panel
RF Output	Type 1 5/8 female on rear panel
Forward Sample	Type N female, front (-63 dBc)
Reverse Sample	Type N female, front (-63 dBc)
Remote Interfaces:	
IEEE-488	24-pin female
RS-232	9-pin Subminiature D, female
Fiber Optic	ST Conn Tx and Rx RS-232
USB 2	Туре В
Ethernet	RJ-4
Safety Interlock	15–pin female subminiature D, rear panel
Cooling	
Forced air (s	elf-contained fans), enters front and bottom
Weight (approximate	) 182 kg (400 lb.)
Size (WxHxD)	
5	6.1 x 175.3 x 97.6 cm / 22.1 x 69 x 38.4 in.
Export Classification	EAR99



## 2000W1000D 80 - 1000 MHz 2000 W CW

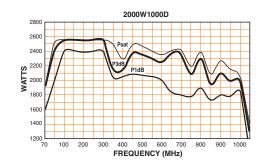
1 milliwatt max. @ 3 dB compression 10 W min. up to 700 MHz, W from 700 – 1000 MHz @ 1 dB compression 10 W min. up to 700 MHz, in. from 700 – 1000 MHz ±2 dB max. / ±1.5 dB typ 000 MHz instantaneously
0 W min. up to 700 MHz, W from 700 – 1000 MHz @ 1 dB compression 0 W min. up to 700 MHz, in. from 700 – 1000 MHz ±2 dB max. / ±1.5 dB typ
0 W min. up to 700 MHz, in. from 700 – 1000 MHz ±2 dB max. / ±1.5 dB typ
000 MHz instantaneously
63 dB min
25 dB min.
WR 1.5:1 max.; 1.3:1 typ
50 ohms, nominal

Harmonic Distortion Minus 20 dBc max. at 1,800 W, -20 dBc typ. at 2000 W Third Order Intercept Point 70 dBm typ. Minus 73 dBc typ. Spurious Noise Figure 8 dB max., 6 dB typ. Primary Power (user must specify)

200 - 240 VAC, Delta-connected (4-wire) 380 - 415 VAC, Wye-connected (5-wire) 50 / 60 Hz, 3 phase, 9000 Ŵ



Connectors	
RF Input	Type N female on rear pane
RF Output	Type 1 5/8 female on rear pane
Forward Sample	N female, front (-63 dBc
Reverse Sample	N female, front (–63 dBc)
Remote Interfaces:	
IEEE-488	24-pin female
RS-232	9–pin Subminiature D, female
Fiber Optic	ST Conn Tx and Rx RS-232
USB 2	Туре Е
Ethernet	RJ-45
Safety Interlock	15–pin female subminiature D, rear pane
Cooling	Forced air (self-contained fans
Weight (approximate)	218 kg (480 lb.)
Size (WxHxD) (3 cabir	nets)
56	5.1 x 175.3 x 97.6 cm / 22.1 x 69 x 38.4 in
Export Classification	EAR99
	-



	Pi	roduct Catalog	2022 For	Sales, call: 21	5.723.8181   Fc	or an Ap	plications En	gineer, call: 8	00.933.8181	arworld.us	<b>5</b>	27
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 3000W1000B 80 - 1000 MHz 3000 W CW

Rated Output I	Power	3	3000 W typ., 2800 W mir			
Input for Rated	l Output		1 milliwatt max.			
Power Output	Nominal 3		@ 3 dB compression ) W min. up to 500 MHz; V from 500 – 1000 MHz			
Power Output	Nominal 2,		@ 1 dB compression ) W min. up to 500 MHz; V from 500 – 1000 MHz			
Flatness		±	2 dB max. / ±1.5 dB typ.			
Frequency Response 80			00 MHz instantaneously			
Gain (at max.	setting)		64.8 dB min.			
Gain Adjustment (continuous range)			25 dB min.			
Input Impedar	ce	50 ohms, VSW	/R 1.5:1 max.; 1.3:1 typ.			
Output Impedance 50 ohms						

#### Mismatch Tolerance

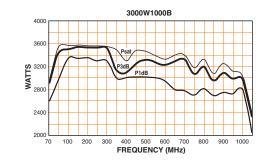
Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry. However, mismatch above 6:1 may limit output to 1,500 W reflected power.

Harmonic Distortion	Minus 20 dBc max. at 2,400 W, -20 dBc typ. at 3000 W
Third Order Intercept Point	72 dBm typ.
Noise Figure	8 dB max., 6 dB typ.
Primary Power (user must spe	cify)

200 - 240 VAC, Delta connected (4-wire) 360 – 435 VAC, Wye connected (5-wire) 50 / 60 Hz, 3 phase, 14 kVÁ

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Connectors	
RF Input	Type N female on rear panel
RF Output	Type 1 5/8 female on rear panel
Forward Sample	Type N female, front (-70 dBc)
<b>Reverse Sample</b>	Type N female, front (-70 dBc)
Remote Interfaces:	
IEEE-488	24-pin female
RS-232	9-pin Subminiature D, female
Fiber Optic	ST Conn Tx and Rx RS-232
USB 2	Туре В
Ethernet	RJ-45
Safety Interlock	15–pin female subminiature D, rear panel
Cooling	
Forced air (s	elf-contained fans), enters front and bottom
Weight (approximate	) 364 kg (800 lb.)
Size (WxHxD) (2 joine	ed cabinets)
( )( )	11.8 x 177.8 x 97.6 cm / 44 x 70 x 38.4 in
Export classification	EAR99



## 4000W1000B 80 - 1000 MHz 4000 W CW

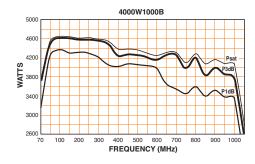
Rated Output F	ower	4000	W typ., 3700 W min.			
Input for Rated	Output		1 milliwatt max			
Power Output	Nominal	4000 W / 3,600 W	3 dB compression min. up to 500 MHz; om 500 – 1000 MHz			
Power Output	Nominal	3,500 W / 3000 W	I dB compression min. up to 500 MHz; om 500 − 1000 MHz			
Flatness		±2 dB	3 max. / ±1.5 dB typ			
Frequency Res	ponse	80 - 1000	MHz instantaneously			
Gain (at max. s	setting)		66 dB min.			
Gain Adjustme	nt (contin	uous range)	25 dB min.			
Input Impedan	ce	50 ohms, VSWR 1	.5:1 max.; 1.3:1 typ			
Output Impedo	ince		50 ohms, nominal			
Mismatch Tole	rance*					

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry. However, mismatch above 6:1 may limit output to 2000 W reflected power.

Harmonic Distortion	Minus 20 dBc max. at 3,400 W, -20 dBc typ. at 4000 W
Third Order Intercept Point	73 dBm typ.
Noise Figure	8 dB max., 6 dB typ.
	ecify) 240 VAC, Delta connected (4-wire) - 435 VAC, Wye connected (5-wire) 50 / 60 Hz, 3 phase, 17.5 kVA



Ethernet	RJ-45			
Safety Interlock	15–pin female subminiature D, rear panel			
Ethernet	RJ-45			
	,1			
USB 2	Type B			
Fiber Optic	ST Conn Tx and Rx RS-232			
RS-232	9–pin Subminiature D, female			
IEEE-488	24-pin female			
Remote Interfaces:				
Reverse Sample	Type N female, front (-70 dBc)			
Forward Sample	Type N female, front (-70 dBc			
RF Output	Type 1 5/8 female on rear panel			
RF Input	Type N female on rear panel			



9	Pi	roduct Catalog	2022 For	Sales, call: 21	5.723.8181   Fc	or an Ap	plications En	gineer, call: 8	00.933.8181	arworld.us	5	28
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 10 kHz - 1 GHz

Power Range 1 W - 50 kW

## 6000W1000 80 - 1000 MHz 6000 W CW

Rated Output F	ower	6000 W min.
Input for Rated	Output	1 milliwatt max.
Power Output	Nominal 6000 V	@ 3 dB compression / / 5,500 W min. up to 700 MHz; 5,100 W from 700 – 1000 MHz
Power Output	Nominal 5,500 \	@ 1 dB compression N / 5000 W min. up to 700 MHz; 4,500 W from 700 – 1000 MHz
Flatness		±2 dB max. / ±1.5 dB typ.
Frequency Res	ponse	80–1000 MHz instantaneously
Gain (at max. s	setting)	67.8 dB min.
Gain Adjustme	nt (continuous rar	nge) 25 dB min.
Input Impedan	<b>ce</b> 50 oh	ms, VSWR 1.5:1 max.; 1.3:1 typ.
Output Impedo	nce	50 ohms, nominal

#### **Mismatch Tolerance\***

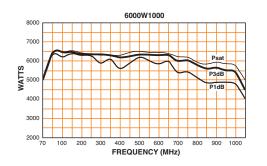
Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry. However, mismatch above 6:1 may limit output to 3000 W reflected power.

Minus 20 dBc max. at 5,500 W, -20 dBc typ. at 6000 W
75 dBm typ.
8 dB max., 6 dB typ.

Primary Power (user must specify) 200 - 240 VAC, Delta connected (4-wire) 360 – 435 VAC, Wye connected (5-wire) 50 / 60 Hz, 3 phase, 24 kVÁ



Connectors	
RF Input	Type N female on rear panel
RF Output	Type 3 1/8 EIA female on rear panel
Forward Sample	Type N female, front (–70 dBc)
Reverse Sample	Type N female, front (-70 dBc)
Remote Interfaces:	//
IEEE-488	24-pin female
RS-232	9–pin Subminiature D, female
Fiber Optic	ST Conn Tx and Rx RS-232
USB 2	Туре В
Ethernet	RJ-45
Safety Interlock	15–pin female subminiature D, rear panel
Cooling	
Forced air (se	elf-contained fans), enters front and bottom
Weigh <sup>†</sup> (approximate)	703 kg (1,550 lb.)
Size (WxHxD) (3 joine	d cabinets)
	170 x 183 x 99 cm / 67 x 72 x 39 in.
Export classification	EAR99



## 10000W1000A 80 - 1000 MHz 10000 W CW

Rated Output Power	Nominal, 12,500 W
	12000 W min. up to 700 MHz
	10,500 W min., 700 – 1000 MHz
Input for Rated Output	1 milliwatt max.
Power Output Nominal	@ 3 dB compression 12,500 W / 12000 W min. up to 700 MHz 10000 W from 700 – 1000 MHz
Power Output Nominal	@ 1 dB compression 11000 W / 10,500 W min. up to 700 MHz 9,500 W from 700 – 1000 MHz
Flatness	±2 dB max. / ±1.5 dB typ
Frequency Response	80–1000 MHz instantaneously
Gain (at max. setting)	70 dB min.
Gain Adjustment (cont	nuous range) 25 dB min.
Input Impedance	50 ohms, VSWR 1.5:1 max.; 1.3:1 typ
Output Impedance	50 ohms, nominal

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry. However, mismatch above 6:1 may limit output to 6000 W reflected power.

#### Modulation Capability

Harmonic Distortion

Faithfully reproduces AM, FM, or pulse modulation appearing on input signal.

> Minus 20 dBc max. at 10000 W, -25 dBc typ. at 10000 W



Third Order Intercept P	oint 78 dBm typ.
Noise Figure	8 dB max., 6 dB typ.
Primary Power (specify	voltage) 200 – 240 VAC, Delta connected (4–wire), 360 – 435 VAC, Wye connected (5–wire) 50 / 60 Hz, three phase, 48000W
Cooling	Type N female on rear panel Type 4–1/16 EIA, rear panel N female, front (–70 dBc) N female, front (–70 dBc) 24–pin female 9–pin Subminiature D, female ST Conn Tx and Rx RS–232 Type B RJ–45 15–pin female subminiature D, rear panel contained fans), enters front and bottom
SYSTEM (2 3-bay racks	3):
Weight (approximate)	1,407 kg (3,100 lb.)
Size (WxHxD)	340 x 183 x 99 cm / 134 x 72 x 39 in.
Export classification	EAR99

9	Proc	luct Catalog	<b>2022</b> For Sa	les, call: 215.7	723.8181   For	an Appli	ications Engir	neer, call: 800	).933.8181	arworld.us		29
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

The "U" Series is a customizable, Class A design is ideal for universal applications such as laboratory and EMC testing, testing antennas, components, piezoelectric devices, wireless chargers, and more. The "U" Series are single band amplifiers available in 3dB increments, up to 500 W of power, and span 10 kHz - 1000 MHz.



Frequency Range 10 kHz - 1000 MHz

EAR99

Power Range 1 - 500 W

## 101000 10 kHz – 1000 MHz 1 W CW

Rated Output Power	1 watt min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Typ. 1.5 W / min. 1 watt
Power Output	@ 1 dB compression Typ. 1.5 W / min. 1 watt
Flatness	±0.8 dB typ., ±1 dB max.
Frequency Response	0 kHz – 1000 MHz instantaneously
Gain (at max. setting)	30 dB min.
Gain Adjustment (continuous )	range) 20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

#### **Mismatch Tolerance**

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

#### Modulation Capability

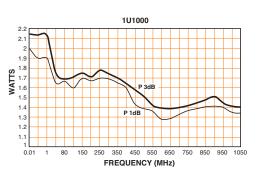
Will faithfully reproduce AM, F appea	M, or pulse modulation ring on the input signal.
Third Order Intercept Point	42 dBm typ.
Noise Figure	8 dB max., 6 dB typ.
Harmonic Distortion Minus 20 dBc max. at 1	watt, minus 30 dBc typ.
Spurious	Minus 73 dBc typ.
Primary Power (selected automatically)	90 – 264 VAC

50/60 Hz, 50 W



Connectors RF Input RF Output	Type N female on front panel Type N female on front panel
Cooling	Forced air (self-contained fans)
Weight	4.5 kg (11 lb.)
Size (WxHxD)	26 x 11.4 x 28.2 cm / 10.25 x 4.5 x 11.1 in.

Export classification



## 2.501000 10 kHz - 1000 MHz 2.5 W CW

Rated Output Power	2.5 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Typ. 3 W / min. 2.5 W
Power Output	@ 1 dB compression Typ. 2.5 W / min. 2 W
Flatness	±0.8 dB typ., ±1 dB max.
Frequency Response	10 kHz–1000 MHz instantaneously
Gain (at max. setting)	33 dB min.
Gain Adjustment (continuo	us range) 20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

Will faithfully reproduce AM, FM, or pulse modulation

appearing on the input signal.

45 dBm typ.

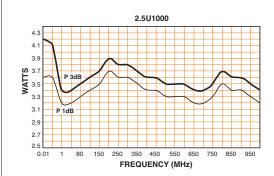
90-264 VAC 50/60 Hz, 50 W

8 dB max., 6 dB typ.

Minus 20 dBc max. at 2 W Minus 73 dBc typ.



RF Input RF Output	Type N female on front panel Type N female on front panel
Cooling	Forced air (self-contained fans)
Weight	4.5 kg (11 lb.)
Size (WxHxD)	26 x 11.4 x 28.2 cm / 10.25 x 4.5 x 11.1 in.
Export classifica	tion EAR99



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For Sales, call: 215.723.8181

For an Applications Engineer, call: 800.933.8181

arworld.us

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**Find it Fast** Contents

**RF Solid State** 

**Universal Series** 

Solid State Pulse Microwave

TWT

**Modulation Capability** 

Third Order Intercept Point

Primary Power (selected automatically)

Noise Figure Harmonic Distortion

Spurious

**Systems** Cho

ambers	Antennas

Accessories	Contact
Accessories	

**AR Companies** 

Frequency Range 10 kHz – 1000 MHz Power Range **1 – 500 W** 

**Modulation Capability** 

Third Order Intercept Point

Primary Power (selected automatically)

Noise Figure

Spurious

Harmonic Distortion

## **5U1000** 10 kHz - 1000 MHz 5 W CW

Rated Output Power		5 W min.
Input for Rated Output		1 milliwatt max.
Power Output		@ 3 dB compression Typ. 5 W / min. 4.5 W
Power Output		@ 1 dB compression Typ. 4 W / min. 3.5 W
Flatness		±1.3 dB typ., ±1.5 dB max.
Frequency Response	10 kHz –	1000 MHz instantaneously
Gain (at max. setting)		37 dB min.
Gain Adjustment (continu	ous range)	20 dB min.
Input Impedance		50 ohms, VSWR 2:1 max.
Output Impedance		50 ohms, nominal

#### **Mismatch Tolerance**

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

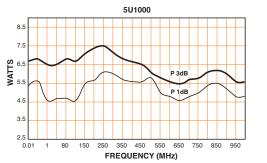
#### Modulation Capability

Will faithfully repro	duce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	46 dBm typ.
Noise Figure	8 dB max., 6 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 3.5 W
Spurious	Minus 73 dBc typ.
Primary Power (selected autom	17
	90 – 264 VAC 50/60 Hz, 70 W



	26 x 11.4 x 28.2 cm / 10.25 x 4.5 x 11.1 in.
Size (WxHxD)	
Weight	4.5 kg (11 lb.)
Cooling	Forced air (self-contained fans)
RF Input RF Output	Type N female on front panel Type N female on front panel

Connotoro



10U1000
10 kHz – 1000 MHz
10 W CW

Rated Output Power	15 W typ., 10 W min
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Typ. 15 W / min. 10 W
Power Output	@ 1 dB compression Typ. 12 W / min. 10 W
Flatness	±1 dB typ., ±1.5 dB max.
Frequency Response	10 kHz – 1000 MHz instantaneously
Gain (at max. setting)	40 dB min.
Gain Adjustment (continuou	s range) 20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance Will operate without dam	age or oscillation when connected to out the aid of foldback circuitry.

Will faithfully reproduce AM, FM, or pulse modulation

appearing on the input signal.

Minus 20 dBc max. at 10 W

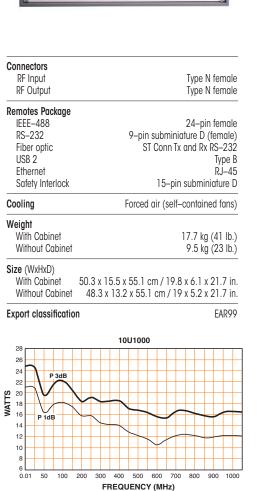
Minus 73 dBc typ.

100 - 240 VAC

50/60 Hz, 150 W

50 dBm typ.

8 dB typ.



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		Product Catalog	g   2022 F	or Sales, call:	215.723.8181	For an A	Applications E	Engineer, call	: 800.933.8181	arworld.	us	32
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	<b>AR</b> Companies

Frequency Range 10 kHz – 1000 MHz

Power Range 1 - 500 W

## 2501000 10 kHz - 1000 MHz 25 W CW

Rated Output Power		30 W typ., 25 W min.
Input for Rated Output		1 milliwatt max.
Power Output		@ 3 dB compression Typ. 30 W / min. 25 W
Power Output		@ 1 dB compression Typ. 25 W / min. 20 W
Flatness		±1 dB typ., ±1.5 dB max.
Frequency Response	10 kHz –	1000 MHz instantaneously
Gain (at max. setting)		44 dB min.
Gain Adjustment (continue	ous range)	20 dB min.
Input Impedance		50 ohms, VSWR 2:1 max.
Output Impedance		50 ohms, nominal

#### Mismatch Tolerance

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry

#### Modulation Capability

Will faithfully repro	duce AM, FM, or pulse modulatior appearing on the input signal
Third Order Intercept Point	52 dBm typ
Noise Figure	8 dB typ
Harmonic Distortion	Minus 20 dBc max. at 20 W

Spurious Minus 73 dBc typ.

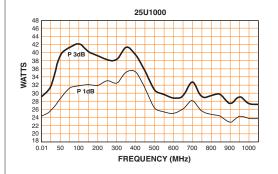
Primary Power (selected automatically)

100 – 240 VAC 50/60 Hz, 200 W



Turno Ni formaria
Type N female
Type N female
24-pin female
9-pin subminiature D (female)
ST Conn Tx and Rx RS-232
Туре В
RJ-45
15–pin subminiature D
Forced air (self-contained fans)
17.7 kg (41 lb.)
9.5 kg (23 lb.)
50.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in
48.3 x 13.2 x 55.1 cm / 19 x 5.2 x 21.7 in

Export classification



## 50U1000 10 kHz - 1000 MHz 50 W CW

70 W typ., 50 W min.
1 milliwatt max.
@ 3 dB compression Typ. 70 W / min. 50 W
@ 1 dB compression Typ. 60 W / min. 45 W
±1.5 dB typ., ±2 dB max.
10 kHz – 1000 MHz instantaneously
47 dB min.
us range) 20 dB min.
50 ohms, VSWR 2:1 max
50 ohms, nominal
nage or oscillation when connected to hout the aid of foldback circuitry.

Third Order Intercept Point	57 dBm typ.
Noise Figure	8 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 45 W
Spurious	Minus 73 dBc typ.



Connectors RF Input	Tupo N fomalo
RF Output	Type N female Type N female
Remotes Package	
IEEE-488	24–pin female
RS-232	9-pin subminiature D (female)
Fiber optic	ST Conn Tx and Rx RS-232
USB 2	Туре В
Ethernet	RJ-45
Safety Interlock	15–pin subminiature D
Cooling	Forced air (self-contained fans)
Weight	
With Cabinet	17.7 kg (41 lb.)
Without Cabinet	9.5 kg (23 lb.)
Size (WxHxD)	
	D.3 x 15.5 x 55.1 cm / 19.8 x 6.1 x 21.7 in
Without Cabinet	48.3 x 13.2 x 55.1 cm / 19 x 5.2 x 21.7 in
Export classification	EAR99
110	50U1000
105	
90	
80 75 70	P 3dB

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9	Prod	uct Catalog	<b>2022</b> For Sa	iles, call: 215.	723.8181   For	an Appl	ications Engi	neer, call: 800	0.933.8181	arworld.us		33
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

EAR99

Frequency Range 10 kHz – 1000 MHz Power Range 1 - 500 W

## **100U1000A** 10 kHz – 1000 MHz 100 W CW

Rated Output Power		120 W typ., 100 W min.
Input for Rated Output		1 milliwatt max.
Power Output		@ 3 dB compression Typ. 120 W / min. 100 W
Power Output		@ 1 dB compression Typ. 100 W / min. 85 W
Flatness		±1.5 dB typ., ±2 dB max.
Frequency Response	100 kHz –	1000 MHz instantaneously
Gain (at max. setting)		50 dB min.
Gain Adjustment (continue	ous range)	20 dB min.
Input Impedance		50 ohms, VSWR 2:1 max.
Output Impedance		50 ohms, nominal

#### Mismatch Tolerance

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

#### Modulation Capability

Will faithfully repro	duce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	60 dBm typ.
Noise Figure	8.5 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 100 W

	Minus 30 dBc typical at 100 W
Spurious	Minus 73 dBc typ.
Primary Power (selected automatic	rallv)

Primary Power (selected dulomatically)

100 – 240 VAC 50/60 Hz, 700 W SLIM 170 150

130

110

90 70

50



Connectors							-			,		
RF Input RF Output											nal nal	
· · ·	.15								5 1 1	ICI	nui	c
Remotes Package	24-pin fe									,		
IEEE-488		0			le							
RS-232		9-	pin		om onr							
Fiber optic USB 2			3	I U	0111	11X	ar	u i	(X I			-
Ethernet											pe I-4	
Safety Interlock				1	5-	nin	SU	hm	ini			~
												_
Cooling		For	ced	air	r (Se	elf-	-CO	nta	ine	d f	ans	5)
Weight												
With Cabinet							3	35	٢g	(77	' Ib	.)
Without Cabinet	24 kg (52 lb.)											
Size (WxHxD)												-
· /	x 20.5 x	(74	.90	cm	/1	9.8	3 x	8.1	хć	29	5 ii	n.
	48.3 x 1				·							
Formant almostfication						-						_
Export classification										E/	R9	9
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250				, 								_
230	+++			+		+	+				$\square$	-
210				_					-	-		

0.10 50 100 200 300 400 500 600 700 800 900 1000

FREQUENCY (MHz)

## **150U1000** 10 kHz – 1000 MHz 150 W CW

00 MHz: 170 W typical, 150 W minimum
DdBm): 1 mW maximum
npression:
00 MHz: 170 W typical, 150 W minimum
npression:
00 MHz: 140 W typical, 125 W minimum
±1.5 dB typical, ±2 dB maximum
10kHz – 1000 MHz instantaneously
g): 52 dB minimum
20 dB minimum
50 ohms, VSWR 2:1 maximum
50 ohms nomina
Will operate without damage or when connected to any load impedance without the aid of foldback circuitry
Will faithfully reproduce e modulation appearing on input signal
58 dBm typical
8.5 dB typical
Minus 20 dBc maximum at 125 W; minus 20 dBc typical at 140 W
Minus 73 dBc typica
100 – 240 VAC, 50/60Hz, 900 W



Connectors:	
RF Input:	N female
RF Output:	N female
Remotes Package:	
IEEE-488:	24–pin female
RS-232:	9-pin subminiature D (female)
Fiber optic:	ST Conn Tx and Rx RS-232
USB 2:	Туре Е
Ethernet:	RJ-45
Safety Interlock:	15–pin subminiature D
Cooling:	Forced air (self contained fans)
Accoustical Noise @ 1 M	eter
Front:	42 dBA
Side:	46 dBA
Rear:	57 dBA
Weight:	
With Cabinet	58.9 kg (130 lbs)
Without Cabinet	46.2 kg (102 lbs)
Size (W x H x D): 19" 6U	Rack:
· · ·	x 28 x 74.9 cm (19.8 x 11.2 x 29.5 in)
	.3 x 27.9 x 74.9 cm (19 x 11 x 29.5 in)
EXPORT CLASSIFICATION:	FAR99
400	0U1000 Typical Output Power
350	
250	

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Freq. (MHz) P1dB —P3dB —PSAT

5 9 0° 0° 0°

		Product Catalog	<b>3   2022</b> Fo	or Sales, call:	215.723.8181	For an A	Applications E	ingineer, call	800.933.8181	arworld	.us	34
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	<b>AR</b> Companies

Frequency Range 10 kHz – 1000 MHz

Power Range **1 – 500 W** 

## **250U1000A** 10 kHz – 1000 MHz 250 W CW

Rated Output	Power	
·	.01 – 250Mł	Hz: 300 W typical, 280 W minimum
	250 – 700Mł	Hz: 300 W typical, 250 W minimum
	700 – 1000 Mł	Hz: 225 W typical, 210 W minimum
Input for Rate	d Output	1 milliwatt max.
Power Output		@ 3 dB compression
	.01 – 250Mł	Hz: 300 W typical, 270 W minimum
	250 – 700Mł	Hz: 300 W typical, 240 W minimum
	700 – 1000 Mł	Hz: 225 W typical, 190 W minimum
Power Output		@ 1 dB compression
	.01 – 250Mł	Hz: 250 W typical, 240 W minimum
	250 – 700Mł	Hz: 250 W typical, 200 W minimum
	700 – 1000 Mł	Hz: 225 W typical, 175 W minimum
latness		±1.5 dB typ., ±2 dB max.
requency Res	sponse 1	0 kHz – 1000 MHz instantaneously
<b>Gain</b> (at max.	setting)	54 dB min.
Gain Adjustme	ent (continuous r	range) 20 dB min.
Input Impedar	ice	50 ohms, VSWR 2:1 max.
Output Impede	ance	50 ohms, nominal
Mismatch Tole		

Will operate without damage or oscillation when connected to	
any load impedance without the aid of foldback circuitry.	

#### Modulation Capability

	oduce AM, FM, or pulse modulation appearing on the input signa				
Third Order Intercept Point	62 dBm typ.				
Noise Figure	8.5 dB typ.				



Harmonic Distortion	Minus 20 dBc max. at 200 W
Spurious	Minus 20 dBc typical at 250 W
•	Minus 73 dBc typ.
Primary Power (selected autom	natically) 100 – 240 VAC 50/60 Hz, 1,150 W
Connectors	Tuno Ni fomalo
RF Input RF Output	Type N female Type N female
Remotes Package	
IEEE-488 RS-232 Fiber optic USB 2 Ethernet	24–pin female 9–pin subminiature D (female) ST Conn Tx and Rx RS–232 Type B RJ–45
Safety Interlock	15–pin subminiature D
Cooling	Forced air (self-contained fans)
Weight With Cabinet Without Cabinet	58.9 kg (130 lb.) 46.2 kg (102 lb.)
Size (W x H x D): 19" 6U Rack:	
	x 74.9 cm (19.8 x 11.2 x 29.5 in) 7.9 x 74.9 cm (19 x 11 x 29.5 in)
Export classification	EAR99
250U1000A	Typical Output Power
000 000 000 000 000 000 000 000 000 00	
100 100 5 <sup>15</sup> 5 <sup>16</sup> 4 <sup>16</sup>	° 5° 5° 5° 6° 5° 4° 4° 5° 5° 6° 6° 5°

Freq. (MHz) -P1dB -P3dB -PSAT

## **500U1000** 100 kHz -1000 MHz 500 W CW

		app	earing on the input sign
Modulation (			I, FM, or pulse modulatio
above wh operate w	ated power w ich may limit	to 250 watts ge or oscillati	ck up to 6.0:1 mismatch reflected power. Will on with any magnitude dance.
Output Impe	dance		50 ohms, nomin
Input Impedo	ince	5	0 ohms, VSWR 2:0:1 ma
Gain Adjustn	nent (continue	ous range)	20 dB mi
<b>Gain</b> (at max	. setting)		57 dB mi
Frequency R	esponse	100 kHz – 1	1000 MHz instantaneous
Flatness		±2.0 dB	typical, ±2.5 dB maximu
	350 - 650	OMHz: 450 wo	atts typical, 400 watts mi atts typical, 325 watts mi atts typical, 275 watts mi
Power Outpu			@ 1 dB compressio
	350 - 650	OMHz: 500 wo	atts typical, 500 watts mi atts typical, 375 watts mi atts typical, 300 watts mi
Power Outpu	t		@ 3 dB compression
Input for Rate	ed Output		1 mW Mo
			atts typical, 400 watts mi atts typical, 325 watts mi
		)MHz: 650 wa	atts typical, 500 watts mi

8 dB typ.



Harmonic Distortion	<-20 dBc for the output power at 1dB compression minimum limit
	<-17 dBc for the output power at 3dB compression minimum limit
Spurious	Minus 73 dBc typ.
Primary Power (sele	cted automatically)
	200 – 240 VAC 50/60 Hz, 2100 W
Connectors RF Input RF Output	Type N female Type N female
Remotes Package IEEE-488 RS-232 Fiber optic USB 2 Ethernet Safety Interlock	24–pin female 9–pin subminiature D (female) ST Conn Tx and Rx RS–232 Type B RJ–45 15–pin subminiature D
Cooling	Forced air (self-contained fans)
Weight With Cabinet Without Cabinet	79.4 kg (175 lbs) 60.8 kg (134 lbs)
Size (WxHxD) With Cabinet Without Cabinet	0.3 x 38.1 x 74.9 cm (19.8 x 15 x 29.5 in) 48.3 x 35.6 x 74.9 cm (19 x 14.0 x 29.5 in)
Export classification	EAR99

9	Prod	luct Catalog	<b>2022</b> For Sa	lles, call: 215.	723.8181   For	an Appl	ications Engi	neer, call: 800	0.933.8181	arworld.us		35
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Noise Figure

# **Microwave Amplifiers**

9 rt/microwave i	instrumentation		6	
	Posts	200 Re: 00 100 Re: 00 R	<b>NOART</b>	
	ANT ARIBY LOCAL		ALLANGED BY OUTPUT	Ð
9				0
8				3

AR's microwave amplifiers are denoted as the "S" Series amplifiers, covering the 0.7 - 18 GHz frequency range. These amplifiers operate in frequency bands including; 0.7 - 6 GHz, 1 - 2.5 GHz, and 6 to 18 GHz. Each band covers multiple power levels offering the highest available power for a specific frequency range. In addition to EMC testing, these amplifiers are particularly suited to Telecommunications testing requirements such power drivers for Digital Predistortion, High Temperature Operating Life and Production Burn-in Systems.

arworld.us

Accessories

Contents

**Find it Fast** 

Product Catalog

**RF Solid State** 

2022

**Universal Series** 

For Sales, call: 215.723.8181

Microwave

**Solid State Pulse** 

TWT

**Chambers** Antennas

For an Applications Engineer, call: 800.933.8181

**Systems** 

Contact

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Frequency Range 0.7 - 18 GHz

Power Range 15 - 1000 W

## 15\$1G6 0.7 - 6 GHz 15 W CW

Rated Power Output	15 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Nominal 20 W / min. 15 W
Power Output	@ 1 dB compression Nominal 15 W / min. 12 W
Flatness	±1.5 dB typ. / ±2 dB max.
Frequency Response	0.7–6 GHz instantaneously
Gain (at max. setting)	43 dB min.
Gain Adjustment (continuous range)	10 dB min. (4096 stepsremote)
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms, nominal

on when connected to will operate without damage or osc any load impedance without the aid of foldback circuitry.

### Modulation Capability

Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.

Point 48 dBm typ.
10 dB typ.
Minus 20 dBc max. at 15 W (1–6 GHz) Minus 20 dBc max. at 15 W (0.7–6 GHz)
Minus 73 dBc typ.



Primary Power (selected autor	natically)			
, ,	90 – 132, 180 – 264 VAC 50/60 Hz, single phase 210 W max.			
Connectors RF input RF output Standard Remote Interfaces	Type N female on front panel Type N female on front panel Included			
Remote Interfaces IEEE-488 RS-232 RS-232 (fiber optic) USB 2 Type B Ethernet	24–pin female 9–pin Subminiature D (female) Type ST RJ–45			
Safety Interlock	15–pin Subminiature D			
Cooling	Forced air (self-contained fans)			
Weight With Cabinet Without Cabinet	15.9 kg (35 lb.) 10.2 kg (22.5 lb.)			
	5 x 37.6 cm / 19.8 x 6.1 x 14.8 in. 12.7 x 37.6 cm / 19 x 5 x 14.8 in.			
Export Classification:	155196			
SLWM 5000000000000000000000000000000000000	30. 35. 40. 45. 50. 55. 60			

FREQUENCY (GHz)

## 30S1G6C 1 - 6 GHz 30 W CW

Rated Power Output	30 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Nominal 45 W / min. 35 W
Power Output Small Signal Gain Flatness	@ 1 dB compression Nominal 35 W / min. 25 W
	$\pm 1.5$ dB typ. / $\pm 2$ dB max.
Frequency Response	1.0 – 6 GHz instantaneously
Gain (at max. setting)	46 dB min.
Gain Adjustment (continuous range	e) 10 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance Will operate without damage or c any load impedance without the	
	e AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	54 dBm typ.
Noise Figure	10 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 30 W
Spurious	Minus 73 dBc typ.



Primary Power (selected auto	omatically)
	100 – 240 VAC 47-63 Hz, single phase 400 W max.
<b>Connectors</b> RF input RF output	Type N female Type N female
Remote Interfaces IEEE-488 RS-232 RS-232 (fiber optic) USB 2 Ethernet	24–pin female 9–pin Subminiature D (female) Type ST Type B RJ–45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self–contained fans)
Weight With Cabinet Without Cabinet	18.2 kg (40 lb.) 12.5 kg (27.5 lb.)
	17 x 65.3 cm / 20.1 x 6.7 x 25.7 in. 13.4 x 65.3 cm / 19 x 5.3 x 14.8 in.
Export Classification:	EAR99
TYPICAL 240 H	HARMONIC & 30 W OUTPUT
Image: Section of the sectio	Marking Harrison

(9	Pr	oduct Catalog	2022 For	Sales, call: 21	5.723.8181   Fo	r an Ap	plications Enç	gineer, call: 8	00.933.8181	ar	world.us	

Contents	Find it Fast
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**RF Solid State Universal Series** 

Microwave Solid State Pulse TWT

**Systems** 

Chambers

Antennas

Accessories

Contact

**AR Companies** 

37

Frequency Range 0.7 - 18 GHz

Power Range 15 - 1000 W

## 75\$1G6C 1 – 6 GHz 75 W CW

Rated Power Output	75 W min. (0.7–6 GHz)
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Nominal 80 W / min. 65 W
Power Output	@ 1 dB compression Nominal 60 W / min. 50 W
Flatness	±1.5 dB typ. / ±2.5 dB max.
Frequency Response	0.7 – 6 GHz instantaneously
Gain (at max. setting)	48 dB min.
Gain Adjustment (continuous range)	) 10 dB min. (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms, nominal
Miamatah Talaranga	

### Mismatch Tolerance

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

### Modulation Capability

Will faith	, fully reproduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept	Point 56 dBm typ.
Noise Figure	10 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 60 W (0.7 – 6 GHz)
Spurious	Minus 73 dBc typ.
Phase Linearity	±1 deg/100 MHz, typ.



	d automati	<i>.</i> 90		180 – 250 VAC z, single phase 550 W max.
Connectors RF		Туре	N female	on front panel
Remote Interfaces IEEE-488 RS-232 RS-232 (fiber optic) USB 2 Ethernet			9–pin S	24–pin Subminiature D Type ST Type B RJ–45
Safety Interlock			15–pin S	Subminiature D
Cooling	F	orced o	ir (self–c	contained fans)
Weight With Cabinet Without Cabinet				.4 kg (62.5 lb.) .2 kg (44.5 lb.)
Size (WxHxD) With Cabinet 5 Without Cabinet			•••••	8 x 8 x 21.5 in 9 x 7 x 21.5 in
Export Classification:				3A001
	60S <sup>-</sup>	1G6		
SLLW 40 40 20			P sat P 1dB	

0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0 5.5 6.0 6.5 FREQUENCY (GHz)

## 125\$1G6C 1 - 6 GHz 125 W CW

Rated Power Output	125 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Nominal 125 W / min. 120 W
Power Output	@ 1 dB compression Nominal 115 W / min. 100 W
Flatness	±1.5 dB typ. / ±2.5 dB max.
Frequency Response	1.0 – 6 GHz instantaneously
Gain (at max. setting)	55 dB min.
Gain Adjustment (continuous rai	nge) 10 dB min. (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms, nominal
Mismatch Tolerance Will operate without dam connected to any load in foldback circuitry.	nage or oscillation when npedance without the aid of

aaranon	Capability
	Will faithfully reproduce AM, FM, or pulse modulation
	appearing on the input signal.

Third Order Intercept	Point 58 dBm typ.
Noise Figure	10 dB typ.
Harmonic Distortion	
	Minus 20 dBc max. at 125 W (1.0–6 GHz)
Spurious	Minus 73 dBc typ.

Minus /3 dBc typ.



Primary Power (selected automatica	ally)			
- ``	100 – 240 VAC			
	47-63 Hz, single phase, 1,100 W max			
Connectors	<b>T</b> 117 1			
RF	Type N female			
Remote Interfaces				
IEEE-488	24-pin			
RS-232	9–pin Subminiature			
RS-232 (fiber optic)	Type ST Type B			
Ethernet	RJ-45			
Safety Interlock	15-pin Subminiature D			
Cooling Fo	Forced air (self-contained fans)			
Weight				
With Cabinet	39.5 kg (65 lb.)			
Without Cabinet	22.7 kg (50 lb.)			
Size (WxHxD) With Cabinet 50.3 x 35.5 x 65 Without Cabinet 48.3 x 35.5 x 6 Export Classification:	.3 cm / 19.8 x 14.0 x 25.7 in. 55.3 cm / 19 x 14.0 x 25.7 in. 3A001			
TYPICAL 2** HARMONIC @	100 W OUTPUT			
-10				
-30				
*~~ \				
-55				
₩ 45 -39				

1500

1000 1500

	Pro	oduct Catalog	<b>2022</b> For	Sales, call: 21	5.723.8181   Fo	or an Ap	plications En	gineer, call: 8	00.933.8181	arworld.us		38
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 0.7 - 18 GHz

Power Range 15 - 1000 W

## 250S1G6C 1 - 6 GHz 250 W CW

Rated Power Output	250 W min.
Input for Rated Output	1 milliwatt max
Power Output	@ 3 dB compression Nominal 225 W / min. 325 W
Power Output	@ 1 dB compression Nominal 275 W / min. 250 W
Flatness	±1.5 dB typ. / ±2.5 dB max.
Frequency Response	1.0 – 6 GHz instantaneously
Gain (at max. setting)	58 dB min.
Gain Adjustment (continuous range	e) 10 dB min. (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms, nominal

### Mismatch Tolerance

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

### Modulation Capability

Will faithfully	reproduce AM, FM, or	pulse modulation
	appearing of	n the input signal.

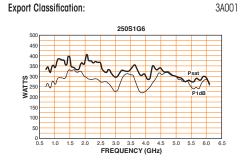
Third Order Intercept Point	60 dBm typ.
Noise Figure	10 dB typ.
Harmonic Distortion	
Entire Band at 200 W except 2-3 G	Hz; minus 20 dBc max
2-3 G	Hz; minus 18 dBc max
Spurious	Minus 73 dBc typ.

	Entire Bana at 200 w excep	t 2-3 GHZ; minus 20 abc r
		2-3 GHz; minus 18 dBc r
Spurio	us	Minus 73 dBc



Primary Power (selected au	tomatically
rimury rower (selected du	100 – 240 VAC
	47 – 63 Hz, single phase
	1,750 W max
Connectors	
RF	Type N female
Remote Interfaces	
IEEE-488	24-pin
RS-232	9-pin Subminiature
RS-232 (fiber optic)	Type ST
USB 2	Type B
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self–contained fans)
Weight	
With Cabinet	58. kg (129 lb.)
Without Cabinet	44.9 kg (99 lb.)
Size (WxHxD)	
With Cabinet 50.3 x	47 x 65.3 cm / 19.8 x 18.5 x 25.7 in
	11 F / F D / 10 17 F 0F 7 !

### Without Cabinet 48.3 x 44.5 x 65.3 cm / 19 x 17.5 x 25.7 in.



## 500S1G6C 1 - 6 GHz 500 W CW

Rated Power Output	500 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Nominal 525 W / min. 475 W
Power Output	@ 1 dB compression Nominal 450 W / min. 400 W
Flatness	±1.5 dB typ. / ±2.5 dB max.
Frequency Response	1 – 6 GHz instantaneously
Gain (at max. setting)	57 dB min.
Gain Adjustment (continuous ra	nge) 10 dB min.
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms, nominal
Mismatch Tolerance	

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry. However, mismatch above 6:1 may limit output to 250 W reflected power.

#### Modulation Capability

Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.

Third Order Intercept Point

#### Harmonic Distortion

Minus 20 dBc max. at 500 W (1 - 6 GHz); Minus 18 dBc typ. at 500 W (2 - 3 GHz)

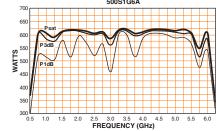
Primary Power (selected automatically)

200 - 260 VAC 50/60 Hz, single phase 3,800 W

63 dBm typ.



DE lossuit	Tuno N formalo, on your name
RF Input RF Output	Type N female on rear panel Type 7–16 DIN female on rear panel
Remote Interfaces IEEE-488 (GPIB) an ST Conn Tx, RS-232 USB 2 Ethernet	d RS–232 connector, rear Rx (fiber optic) RJ–45
Safety Interlock IEEE–488 (GPIB) Interf Allows control and r except keylock posit	monitoring of all front panel controls
Cooling	Forced air (self–confained fans)
•	, , , , , , , , , , , , , , , , ,
Cooling Weight Size (WxHxD)	136 kg (300 lb.)
Weight	Forced air (self-contained fans) 136 kg (300 lb.) 50.3 x 127 x 61 cm / 19.8 x 50 x 24 in. 3A001



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Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	<b>AR</b> Companies

Frequency Range 0.7 - 18 GHz

Power Range 15 - 1000 W

## 750S1G6C 1 - 6 GHz 750 W CW

Rated Power Output	750 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression 1 – 4.2 GHz; Nominal 750 W 4.2 – 6 GHz; Nominal 550 W
Power Output	@ 1 dB compression 1 – 4.2 GHz; Nominal 600 W 4.2 – 6 GHz; Nominal 450 W
Flatness	±1.5 dB typ. / ±2.5 dB max.
Frequency Response	1 – 6 GHz instantaneously
Gain (at max. setting)	59 dB min.
Gain Adjustment (continuous range	e) 10 dB min.
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms, nominal

### **Mismatch Tolerance**

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry. However, mismatch above 3:1 may limit output to 200 W reflected power.

### Modulation Capability

Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal. Third Order Intercept Point 67 dBm typ. Harmonic Distortion Minus 20 dBc max. at 600 W (1-6 GHz); Minus 18 dBc typ. at 600 W (2–3 GHz) Primary Power (selected automatically) 200 - 260 VAC 50/60 Hz, single phase

3.800 W

Connectors RF Input	Type N female on rear panel
RF Output	Type 7–16 DIN female on rear panel
Remote Interfaces IEEE–488 (GPIB) c ST Conn Tx, RS–23	
	Type B
USB 2 Ethernet Safety Interlock IEEE–488 (GPIB) Inter	RJ–45 15–pin Subminiature D, rea
Ethernet Safety Interlock IEEE-488 (GPIB) Inter	RJ-45 15-pin Subminiature D, rea erface and RS-232 d monitoring of all front panel controls sition control
Ethernet Safety Interlock IEEE–488 (GPIB) Inte Allows control and except keylock po	RJ-45 15-pin Subminiature D, rear erface and RS-232 d monitoring of all front panel controls sition control Forced air (self-contained fans)
Ethernet Safety Interlock IEEE-488 (GPIB) Inte Allows control and except keylock po Cooling Weight Size (WxHxD)	RJ-45 15–pin Subminiature D, rea erface and RS-232 d monitoring of all front panel controls

10 15 40 Frequency (GHz)

.

## 1000S1G6C 1 - 6 GHz 1,000 W CW

Rated Power Output	1,000 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression – 5 GHz; Nominal 1,000 W / min. 900 W 5 – 6 GHz; Nominal 800 W / min. 600 W
Power Output	@ 1 dB compression 1 – 5 GHz; Nominal 850 W / min. 750 W 5 – 6 GHz; Nominal 650 W / min. 550 W
Flatness	±1.5 dB typ. / ±2.5 dB max.
Frequency Response	1 – 6 GHz instantaneously
Gain (at max. setting)	64 dB min.
Gain Adjustment (cont	inuous range) 10 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
to any load impeda	damage or oscillation when connected nce without the aid of foldback circuitry. above 6:1 may limit output to 250 W
Modulation Capability Will faithfu	ully reproduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept F	Point 68 dBm typ.

Minus 20 dBc max. at 800 W (1-6 GHz);

Minus 18 dBc typ. at 800 W (2-3 GHz)

200 – 240 VAC

• 51 47-63 Hz, single phase

8,500 W

High Voltage Version	380 – 415 VAC 47-63 Hz 8,500 W
Connectors RF Input RF Output	Type N female on rear panel Type 7–16 DIN female on rear panel
ST Conn Tx, RS-232 R	
USB 2 Ethernet RF Sample	Type B RJ-45 Type N
IEEE-488 (GPIB) Interface Allows control and me except keylock position	onitoring of all front panel controls
Weight	273 kg (600 lb.)
Size (WxHxD) 57.3	x 136 x 95.5 cm / 22.6 x 53.5 x 37.6 in.
Export Classification:	3A001

Pro	oduct Catalog	2022 For	Sales, call: 21	5.723.8181   Fc	or an Ap	plications En	gineer, call: 8	00.933.8181	arworld.us	;	
Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Co

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45 50 53 60 85

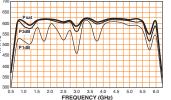
Harmonic Distortion

**Primary Power** 

Low Voltage Version

**Companies** 

40



Frequency Range **0.7 – 18 GHz** 

Power Range **15 – 1000 W** 

### **2000S1G2z8** 1 - 2.8 GHz 2000 W CW

Rated Power Output		2,000 W min.
Input for Rated Output 1 milliw		
Power Output	1 – 2.8 GHz; Nomi	@ 3 dB compression inal 2,400 W / min. 1,800 W
Power Output	1 – 2.8 GHz; Nomi	@ 1 dB compression inal 1,800 W / min. 1,500 W
Flatness		±1.5 dB typ. / ±2.5 dB max.
Frequency Response		1 – 2.8 GHz instantaneously
Gain (at max. setting)		67 dB min.
Gain Adjustment (continuous range)		10 dB min.
Input Impedance		50 ohms, VSWR 2:1 max.
Output Impedance		50 ohms, nominal

### **Mismatch Tolerance**

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry. However, mismatch above 6:1 may limit output to 1,000 W reflected power.

### Modulation Capability

Will faithfully repr	oduce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	70 dBm typ.
Harmonic Distortion	Minus 20 dBc max. at 1,500 W
Primary Power Low Voltage Version	200 – 240 VAC



	47 – 63 Hz, single phase 8.500 W
High Voltage Version	380 – 415 VAC
•	47 – 63 Hz
	8,500 W
Connectors	
RF Input	Type N female on rear panel
RF Output	Type 7–16 DIN female on rear panel
Remote Interfaces	
( )	RS–232 connector, rear
ST Conn Tx, RS–232 R	
USB 2 Ethernet	Type B RJ-45
RF Sample	Type N
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
<mark>Safety Interlock</mark> IFFF–488 (GPIB) Interfa	15–pin Subminiature D, rear ce and RS–232
IEEE–488 (GPIB) Interfa	ce and RS-232 onitoring of all front panel controls on control
IEEE-488 (GPIB) Interfa Allows control and m except keylock positio	ce and RS-232 onitoring of all front panel controls on control Forced air (self-contained fans)
IEEE-488 (GPIB) Interfa Allows control and m except keylock position Cooling Weight	ce and RS-232 onitoring of all front panel controls on control Forced air (self-contained fans)
IEEE-488 (GPIB) Interfa Allows control and m except keylock positio Cooling Weight Size (WxHxD)	ce and RS-232 onitoring of all front panel controls on control Forced air (self-contained fans) 363 kg (800 lb.)
IEEE-488 (GPIB) Interfa Allows control and m except keylock positio Cooling Weight Size (WxHxD)	ce and RS-232 onitoring of all front panel controls on control Forced air (self-contained fans) 363 kg (800 lb.)
IEEE-488 (GPIB) Interfa Allows control and m except keylock positio Cooling Weight Size (WxHxD) 57.3 x 1	ce and RS-232 onitoring of all front panel controls on control Forced air (self-contained fans) 363 kg (800 lb.) 193.8 x 103.1 cm / 22.6 x 76.3 x 40.6 in

3- Pres WV WY VV

## **125S1G2z8** 1 – 2.5 GHz 125 W CW

Rated Power Output	140 W typ., 125 W mir		
Input for Rated Output	1 milliwatt max		
Power Output	@ 3 dB compressior Typ. 130 W, min. 115 W		
Power Output	@ 1 dB compression Typ. 110 W, min. 90 W		
Flatness	±1.5 dB typ. / ±2 dB max		
Frequency Response	1 – 2.5 GHz instantaneously		
Gain (at max. setting)	54 dB min		
Gain Adjustment (continuous rang	e) 20 dB min		
Input Impedance	50 ohms, VSWR 2:1 max		
Output Impedance	50 ohms, nomina		
Mismatch Tolerance Will operate without damage or any load impedance without the			
Modulation Capability Will faithfully reproduce AM, FM appearing on the input signal.	, or pulse modulation		
Third Order Intercept Point	60 dBm typ		
Noise Figure	12 dB max.; 10 dB typ		
Harmonic Distortion	Minus 20 dBc max. at 100 V Minus 30 dBc typ. at 100 V		
Spurious	Minus 73 dBc typ		
Primary Power (selected automation	cally) 100 – 240 VAC 50/60 H: 650 V		



Connectors RF input RF output	Type N female Type N female
Remote Interfaces IEEE-488 RS-232 Fiber optic: USB 2 Ethernet Safety Interlock	24–pin female 9–pin Subminiature D (female) ST Conn Tx and Rx RS–232 Type B RJ–45 15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Acoustical Noise @ 1 Met Weight With Cabinet	er Front: 60 dBA Side: 59 dBA Rear: 66 dBA 36.7 kg (81 lb.)
Without Cabinet	25.4 kg (56 lb.)
	x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in. 3.3 x 17.7 x 74.9 cm / 19 x 7 x 29.5 in. Storage Temperature     –20°C/+50°C
Export Classification:	EAR99
170 155 140 125 110	125S1G225

1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2 2.1 2.2 2.3 2.4 2.5

FREQUENCY (GHz)



Frequency Range 0.7 - 18 GHz

Power Range 15 - 1000 W

## 250S1G2z5B 1 - 2.5 GHz 250 W CW

Rated Power Output	300 W typ., 250 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Typ. 275 W, min. 250 W
Power Output	@ 1 dB compression Typ. 225 W, min. 200 W
Flatness	±1.5 dB typ. / ±2 dB max.
Frequency Response	1 – 2.5 GHz instantaneously
Gain (at max. setting)	56 dB min.
Gain Adjustment (continuous range)	) 20 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

### Mismatch Tolerance

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

### Modulation Capability

Will faithfully reprodu	ce AM, FM, or pulse modulation appearing on the input signal
Third Order Intercept Point	62 dBm typ
Noise Figure	12 dB max.; 10 dB typ

Harmonic Distortion	Minus 20 dBc max. at 200 W Minus 30 dBc typ. at 200 W
Spurious	Minus 73 dBc typ.
Primary Power (selected automatica	Illy) 100 – 240 VAC

**Find it Fast** 

50/60 Hz, single phase 1,200 W max.

Product Catalog

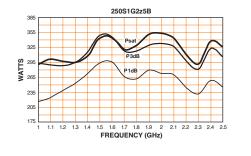
**RF Solid State** 

2022

**Universal Series** 



Connectors RF input RF output	Type N female on front panel Type N female on front panel
· ·	
Remote Interfaces	
IEEE-488	24-pin female
RS-232	9-pin Subminiature D (female)
Fiber optic:	ST Conn Tx and Rx RS-232
USB 2	Type B
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	
With Cabinet	42.6 kg (94 lb.)
Without Cabinet	31.3 kg (69 lb.)
Size (WxHxD)	
With cabinet	50.3 x 20.5 x 74.9 cm / 19.8 x 8.1 x 29.5 in
Without Cabinet	48.3 x 17.7 x 74.9 cm / 19 x 7 x 29.5 in
Export Classificatio	n: EAR99



Microwave

Solid State Pulse

TWT

**Systems** 

## 500S1G2z5A 1 - 2.5 GHz 500 W CW

Rated Power Output	550 W nominal, 500 W min.
Input for Rated Output	1 milliwatt max.
Power Output	@ 3 dB compression Nominal 550 W / min. 450 W
Power Output	@ 1 dB compression Nominal 400 W / min. 350 W
Flatness	±1.5 dB typ. / ±2 dB max. ±0.5 dB typ. with internal leveling
Frequency Response	1 – 2.5 GHz instantaneously
Gain (at max. setting)	57 dB min.
Gain Adjustment (continuous ro	ange) 20 dB min. (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

any load impedance without the aid of foldback circuitry.

### Modulation Capability

Will faithfully repro	duce AM, FM, or pulse modulation appearing on the input signal.
Third Order Intercept Point	66 dBm typ.
Noise Figure	10 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 350 W Minus 20 dBc typ. at 500 W
Spurious	Minus 73 dBc typ.
Phase Linearity	±1 deg/100 MHz, typ.



Primary	Power (selec	ted auton	natically)	100 – 240 VAC 50/60 Hz 2,250 W max.					
Connect	ors		RF input RF output	Type N female Type 7/16 female					
IEEE-4			0	24-pin female					
RS-23 Fiber USB 2 Etherr	Optic 2		•	9-pin Subminiature D (female) ST Conn Tx and Rx RS-232 Type B RJ-45					
Safety In	terlock		15	–pin Subminiature D					
Cooling			Forced air (	self–contained fans)					
Acoustic	al Noise @ 1	Meter		Front: 56 dBA Side: 57 dBA Rear: 64 dBA					
Weight	With Cabin Without Co	•••		64.9 kg (143 lb.) 50.3 kg (111 lb.)					
Size (Wx With co Withc				19.8 x 15 x 29.5 in) 1 (19 x 14 x 29.5 in)					
Environn	nental	St	orage Temperc	iture -20°C/+50°C					
Export C	lassification			EAR99					
	750 700 550 550 450	50	P-3dB P-1dB						

15 16 17 18 19 2 21 22 23 24 2 EREQUENCY (GHz)

Contact

**AR Companies** 

Accessories

For Sales, call: 215.723.8181	For an Appl	ications Engi	neer, call: 800	.933.8181		arworld.us		 42

Antennas

Chambers

Frequency Range 0.7 - 18 GHz

Power Range 15 - 1000 W

## 1000S1G2z5B 1 - 2.5 GHz 1000 W CW

Rated Power Output	1000 W min
Input for Rated Output (0 dBn	n) 1 milliwatt max
Power Output	@ 3 dB compression Nominal 1000 W / min. 925 W
Power Output	@ 1 dB compression Nominal 850 W / min. 725 W
Flatness	±1.5 dB typ. / ±2 dB max
Frequency Response	1 – 2.5 GHz instantaneously
Gain (at max. setting)	60 dB min
Gain Adjustment (continuous	range) 20 dB min (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms, nomina

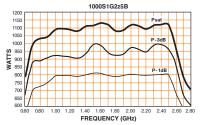
Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

Modulation Capability	Will faithfully reproduce AM, FM, or pulse
	modulation appearing on the input signal.

Third Order Intercept Point	69 dBm typ.
Noise Figure	10 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 800 W Minus 20 dBc typ. at 1000 W
Spurious	Minus 73 dBc typ.
Primary Power (selected automatic	ally) 200 – 240 VAC 50/60 Hz, single phase 4,200 W max.



Export Classification:	EAR99
Environmental Storage Temperature	-20°C/+50°C
Size (WxHxD) 56.1 x 97.8	8 x 82.5 cm / 22.1 x 38.5 x 32.5 in
Weight	131.5 kg (290 lb.)
Acoustical Noise @ 1 Meter	Front: 44 dBA Side: 68 dBA Rear: 72 dBA
Cooling	Forced air (self-contained fans)
Safety Interlock	15–pin Subminiature D
Ethernet	RJ-45
RS-232 (fiber optic) USB 2	Type ST Type B
RS-232	9-pin Subminiature D (female)
Remote Interfaces IEEE–488	24–pin female
RF output	Type 7/8 EIA female on rear panel
Connectors RF input	Type N female on rear panel



## 50S1G6AB 1 - 6 GHz 50 W CW

Rated Power Output	50 W min. (1 – 6 GHz				
Small signal gain flatness					
±	1 dB typical / ±2 dB maximum				
Frequency Response	1 – 6 GHz instantaneously				
Gain (at max. setting)	47 dB min				
Gain Adjustment (continuous rang	e) 15 dB min (4096 steps remote)				
Input Impedance	50 ohms, VSWR 2:1 max				
Output Impedance	50 ohms, nomina				
Mismatch Tolerance @ rated p <sub>out</sub>	3:1 at all load phase				
Modulation Capability Faithfully reproduce AM, FM, or p on the input signal	oulse modulation appearing				
Third Order Intercept Point	56 dBm typ				
Noise Figure	10 dB typ				
Harmonic Distortion -20 dBc typ.	at 40W, –15 dBc max. at 40W				
Spurious	Minus 73 dBc typ				
Phase linearity	1 deg/100 MHz, typica				
Drimany Dower (selected automatic	allu)				

Primary Power (selected automatically) 90 – 132, 180 – 250 VAC; 50 – 400 Hz, single phase; 500 W maximum

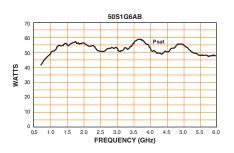
#### Connectors Type N female on front panel RF input RF output Type N female on front panel



Remote interfaces	
IEEE-488	24-pin
RS-232	9–pin Subminiature D
RS-232 (fiber optic)	Type ST
USB 2	Туре В
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self–contained fans)
Weight	
With cabinet	15.9 kg (35 lb.)
Without cabinet	10.2 kg (22.5 lb.)
Size (WxHxD)	
With cabinet 50.3	3 x 15.5 x 37.6 cm / 19.8 x 6.1 x 14.8 in
Without cabinet 48.	.3 x 12.7 x 37.6 cm / 19 x 5.25 x 14.8 in

### Export Classification

EAR99



(9	P	roduct Catalog	2022 For	or Sales, call: 215.723.8181		ales, call: 215.723.8181 For an Applications Engineer, call: 800.933.8181			arworld.us	43		
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 0.7 - 18 GHz

Power Range 15 - 1000 W

### 100S1G6AB 1 - 6 GHz 100 W CW

Rated Power Output	100 W min. (1 – 6 GHz)
Input for Rated Output	1 milliwatt max.
Small signal gain flatness ±1.5 dB	typical / ±2.5 dB maximum
Frequency Response	1 – 6 GHz instantaneously
Gain (at max. setting)	50 dB min.
Gain Adjustment (continuous range)	10 dB min. (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

### Mismatch Tolerance @ rated p<sub>out</sub>

Infinite VSWR. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

### Modulation Capability

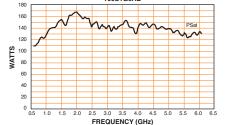
Faithfully reproduce AM, FM, or pulse modulation appearing
on the input signal

Third Order Intercept Point	56 dBm typ				
Noise Figure	10 dB typ.				
Harmonic Distortion	-15 dBc typical at rated power				
Spurious	Minus 73 dBc typ.				
Phase linearity	1 deg/100 MHz, typical				

Primary Power (selected automatically) 90 – 132, 180 – 250 VÁC; 50/60 Hz, single phase, 525 W maximum



Connectors	
RF input	Type N female on front panel
RF output	Type N female on front panel
Remote interfaces	
IEEE-488	24–pin
RS-232	9–pin Subminiature D
RS-232 (fiber opt	ic) Type ST
USB 2	Туре В
Ethernet	RJ-45
Safety Interlock	15-pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	
With cabinet	28.4 kg (62.5 lb.)
Without cabinet	20.2 kg (44.5 lb.)
Size (WxHxD)	
With cabinet	50.3 x 20.3 x 54.6 cm / 19.8 x 8 x 21.5 in
Without cabinet	48.3 x 17.8 x 54.6 cm / 19 x 7 x 21.5 in
Export classification	3A001
	100S1G6AB



## 20S6G18A-L 6 - 18 GHz 20 W CW

Rated Power Output	20 W min.				
Input for Rated Output	1 milliwatt max., 0 dE				
Power Output	@ 3 dB compression Nominal 25 W / min. 18 W				
Power Output	@ 1 dB compression Nominal 22 W / min. 15 W				
Power Gain Flatness (0 dBm IN)	±2 dB typ. / ±3 dB max				
Frequency Response	6 – 18 GHz instantaneously				
Gain (at max. setting)	43 dB min				
Gain Adjustment (continuous range	10 dB mi				
Input Impedance	50 ohms, VSWR 2.5:1 max				
Output Impedance	50 ohms, nominal				
Mismatch Tolerance Will operate without damage or any load impedance without	oscillation when connected to ut the aid of foldback circuitry				
, ,	e AM, FM, or pulse modulation appearing on the input signal				
Third Order Intercept Point	49 dBm typ.				

Primary Power (selected automatically) 90 – 132, 180 – 264 VAC

Minus 20 dBc max. at 20 W

50/60 Hz, single phase <700 W max.

Precision N female on front panel

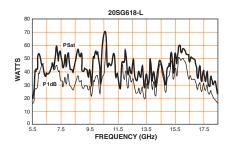
Precision N female on front panel



Remote Interfaces IEEE-488 RS-232 RS-232 (fiber optic) USB 2 Ethernet	24-pin female 9-pin Subminiature D (female) Type ST Type B RJ-45				
Safety Interlock	15–pin Subminiature D				
Cooling	Forced air (internal self-contained liquid)				
Weight w/cabinet: 31.75 kg (70 ll w/o cabinet: 20.4 kg (45 ll					
,	.3 x 20.6 x 62.2 cm / 19.8 x 8.1 x 24.5 in. : 48.3 x 17.8 x 62.2 cm / 19 x 7 x 24.5 in.				

Export Classification:





(9)	Prod	uct Catalog	<b>2022</b> For Sa	iles, call: 215.	723.8181   For	an Appl	ications Engi	neer, call: 800	0.933.8181	arworld.us		44
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Harmonic Distortion

Connectors

RF input RF output

Frequency Range 0.7 – 18 GHz

### 40S6G18A-L 6 - 18 GHz 40 W CW

Rated Power Output	40 W min.
Input for Rated Output	1 milliwatt max., 0 dBm
Power Output	@ 3 dB compression Nominal 45 W / min. 35 W
Power Output	@ 1 dB compression Nominal 30 W / min. 22 W
Power Gain Flatness (0 dBm IN)	±2 dB typ. / ±3 dB max.
Frequency Response	6 – 18 GHz instantaneously
Gain (at max. setting)	46 dB min.
Gain Adjustment (continuous range)	10 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max.
Output Impedance	50 ohms, nominal

### Mismatch Tolerance

Will operate without damage or oscillation when connected to any load impedance without the aid of foldback circuitry.

### Modulation Capability

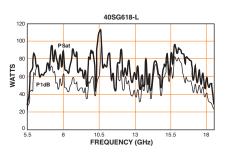
Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal.

Third Order Intercept Point	52 dBm typ.
Harmonic Distortion	Minus 20 dBc max. at 40 W
Primary Power (selected auto	omatically)
	100 – 240 VAC
	50/60 Hz, single phase
	<1,200 W max.
Connectors	
RF input	Precision N female on front panel
RF output	Precision N female on front panel



Remote Interfaces IEEE-488 RS-232 RS-232 (fiber optic) USB 2 Ethernet	24–pin female 9–pin Subminiature D (female) Type ST Type B RJ–45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (internal self-contained liquid)
Weight	w/cabinet: 35 kg (77 lb.) w/o cabinet: 25.9 kg (57 lb.)
1	2 x 20.6 x 63.2 cm / 19.8 x 8.1 x 24.9 in. : 48.3 x 18 x 62.5 cm / 19 x 7.1 x 24.6 in.

Export Classification:



(9	Pro	oduct Catalog	2022 For	Sales, call: 21	5.723.8181   Fo	or an Ap	plications En	gineer, call: 8	00.933.8181	arworld.us	S	45
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

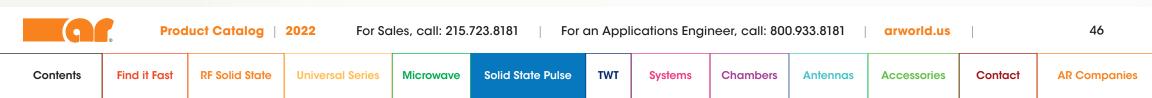
3A001

# Solid State Pulse Amplifiers

For automotive and military EMC radiated immunity susceptibility testing, as well as radar and communication applications, Solid State Pulsed Amplifiers offer high-power RF levels that rival those of TWTs. However, they offer higher reliability, better mismatch tolerance, much better harmonic distortion, and better MTBF (Mean Time Between Failure) than TWTs.



1300SP1G2



Frequency Range 1 - 4 GHz

Power Range 1 - 80 kW

### 1000SP0z8G2z5 0.8 - 2.5 GHz 1000 W Pulse

Rated Power Output	1000 W min				
Input for Rated Output	.0 milliwatt maximum				
Flatness	±2.5 dB maximum				
Frequency Response	0.8 – 2.5 GHz instantaneously				
Gain (at max. setting)	60 dB min.				
Gain Adjustment	Continuous Range 20 dB min., (4096 steps remote)				
Input Impedance	50 ohms, VSWR 2.0:1 max				
Output Impedance	50 ohms, nominal				
Mismatch Tolerance					

Will operate without damange or oscillation when connected to any load impedance Alarm and protection above 250 W reflected power. Load VSWR > 3:1 at 1 kW; > 6:1 at 500 W.

Pulse Capability	
Pulse Width	0.1 – 100 microseconds
Pulse Rate (PRF)	50 kHz max.
Duty Cycle	5% max.
RF Rise and Fall	30 ns max. (10% – 90%)
Delay	1 µs max. from pulse input to RF 90%
Pulse Width Distortion	±100 ns max.
(difference	e between TTL Input Gate and RF pulse)
Pulse Off Isolation	60 dB min.
Pulse Input	TTL level, 50 ohm nominal termination
Noise Figure	$\leq$ 12 dB typ.



 $\leq$  -15 dBc max. up to 1.4 GHz @ RF power  $\geq$  1600 W  $\leq -20$  dBc max. 2.5 GHz

Find it Fast



Spurious	-60 dBc typ.
Primary Power	100 – 264 VAC 50 – 60 Hz, single phase 700 W max.
Connectors	
RF input	Type N female on front panel
RF output RF output	Type 7–16 DIN female on front panel forward and reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces	
IEEE-488 Ethernet	24-pin on rear panel RJ-45 on rear panel
Safety Interlock	15-pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	43 kg (95 lb.)
Size (WxHxD)	
	50.3 x 19.8 x 71.4 cm, 19.8 x 7.8 x 28.1 in
Export Classification	3A999.d

## 2000SP0z8G2z5 0.8 - 2.5 GHz 2000 W Pulse

Rated Power Output	2000 W min.
Input for Rated Output	0 dBm max
Flatness	± 1.5 dB typ.; ± 2,5 dB max
Frequency Response	0.8 – 2.5 GHz instantaneously
Gain (at max. setting)	63 dB min
Gain Adjustment	20 dB min (4096 step)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortion (differen	50 kHz max 5% max 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% ±25 ns max ce between TTL Input Gate and RF pulse)
Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortion	and load impedance. 0.1 – 100 microseconds 50 kHz max 5% max 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% ±25 ns max ce between TTL Input Gate and RF pulse) 60 dB min. TTL level, 50 ohm nominal termination
Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortion (differen Pulse Off Isolation	0.1 – 100 microseconds 50 kHz max 5% max 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% ±25 ns max ce between TTL Input Gate and RF pulse) 60 dB min.
Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortion (differen Pulse Off Isolation Pulse Input Noise Figure Harmonic Distortion	0.1 – 100 microseconds 50 kHz max 5% max 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% ±25 ns max ce between TTL Input Gate and RF pulse) 60 dB min. TTL level, 50 ohm nominal termination



Primary Power	100 – 264 VAC 50 – 60 Hz, single phase 1000 W max.
Connectors RF input RF output RF output	Type N female on front panel Type 7–16 DIN female on front panel forward and reflected sample ports Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces IEEE-488 Ethernet	24–pin on rear panel RJ–45 on rear panel
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	35 kg (77 lb.)
Size (WxHxD)	48.3 x 17.8 x 68.2 cm / 19 x 7 x 26,85 in
Export Classification	3A999.d

~	 	

Product Catalog | 2022

Solid State Pulse

For Sales, call: 215.723.8181

Microwave

**Systems** 

TWT

For an Applications Engineer, call: 800.933.8181

**Antennas** Accessories

arworld.us

Contact **AR Companies** 

47

Frequency Range 1 - 4 GHz

Power Range 1 - 80 kW

### 0.8 - 2.5 GHz 4000 W Pulse

Rated Power Output	4000 W min.
Input for Rated Output	0 dBm max.
Flatness	± 1.5 dB typ.; ± 2,5 dB max.
Frequency Response	0.8 – 2.5 GHz instantaneously
Gain (at max. setting)	66 dB min.
Gain Adjustment	20 dB min (4096 step)
Input Impedance	50 ohms, VSWR $\leq$ 2:1 max.
Output Impedance	50 ohms, nominal

### **Mismatch Tolerance**

Will operate without damage or oscillation with anymagnitude and phase of source and load impedance.

### **Pulse Capability**

Noise Figure Harmonic Distortion	$\leq$ 12 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination
(differer) Pulse Off Isolation	nce between TTL Input Gate and RF pulse) 60 dB min.
Pulse Width Distortion	
Delay	1 µs max from pulse input to RF 90%
RF Rise and Fall	30 ns max. (10% – 90%)
Pulse Rate (PRF) Duty Cycle	50 kHz max. 5% max.
Pulse Width	0.1 – 100 microseconds
Dula - Wialth	0.1 100

 $\leq$  -20 dBc max. 2.5 GHz

Spurious

Size \_\_\_\_ Exp -60 dBc typ.



Primary Power	100 – 264 VAC 50 – 60 Hz, single phase 1800 W max.
Connectors	
RF input RF output	Type N female on front panel Type 7–16 DIN female on front panel
RF output	forward and reflected sample ports Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces	24-pin
Ethernet	RJ-45 on rear panel
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	86 kg (190 lb.)
Size (WxHxD)	
	48.3 x 48,8 x 77,5 cm / 19 x 19.2 x 30.5 in
Export Classificatio	<b>n</b> 3A999.d

### 8000SP0z8G2z5 0.8 - 2.5 GHz 8000 W Pulse

Rated Power Output	8000 W min.
Input for Rated Output	0 dBm max.
Flatness	± 1.5 dB typ.; ± 2,5 dB max.
Frequency Response	0.8 – 2.5 GHz instantaneously
Gain (at max. setting)	69 dB min.
Gain Adjustment	20 dB min (4096 step)
Input Impedance	50 ohms, VSWR $\leq$ 2:1 max.
Output Impedance	50 ohms, nominal
and phase of source of <b>Pulse Capability</b> Pulse Width Pulse Rate (PRF)	and load impedance. 0.1 – 100 microseconds 50 kHz max.
Duty Cycle RF Rise and Fall Delay Pulse Width Distortion	5% max. 30 ns max. (10%–90%) 1 µs max. from pulse input to RF 90% ±25 ns max. ce between TTL Input Gate and RF pulse)
Pulse Off Isolation Pulse Input	60 dB min. TTL level, 50 ohm nominal termination
Noise Figure	≤ 12 dB typ.
Harmonic Distortion ≤ -15 dBc m	ax. up to 1.4 GHz @ RF power ≥ 1600 W ≤ −20 dBc max. 2.5 GHz
Spurious	-60 dBc typ.



Primary Power	100 – 264 VAC 50 – 60 Hz, single phase 2500 W max.
Connectors RF input RF output RF output	Type N female on front panel Type 7–16 DIN female on front panel forward and reflected sample ports Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces IEEE-488 Ethernet	24–pin RJ–45 on rear panel
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self–contained fans)
Weight	125 kg (276 lb.)
Size (WxHxD)	48.3 x 48,8 x 77,5 cm / 19 x 19.2 x 30.5 in
Export Classificatio	<b>n</b> 3A999.d

Product Catalog 2022 For Sales, call: 215.723.8181 For an Applications Engineer, call: 800.933.8181 48 arworld.us Contents Find it Fast **RF Solid State** Solid State Pulse TWT **AR Companies Universal Series** Microwave **Systems Chambers Antennas** Accessories Contact

Frequency Range 1 – 4 GHz Power Range **1 - 80 kW** 

## **1300SP1G2** 1 - 2 GHz 1300 W Pulse

Rated Power Output	1,300 W min.
Input for Rated Output	1 milliwatt max.
Flatness	±1.5 dB typ. / ±2.5 dB max.
Frequency Response	1 – 2 GHz instantaneously
Gain (at max. setting)	61.2 dB min.
Gain Adjustment Continuous	Range 20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
Outnut Immediance	EQ obmo nominal
Output Impedance Mismatch Tolerance	50 ohms, nominal
Mismatch Tolerance Output pulse width fold exceeding 650 W. Will	back protection at peak reflected power
Mismatch Tolerance Output pulse width fold exceeding 650 W. Will any magnitude and ph Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortion	back protection at peak reflected power operate without damage or oscillation with

### Harmonic Distortion

15 dBc max. up to 1.2 GHz@800W; -20 dBc max. 1.2 GHz-2 GHz



Spurious	Minus 60 dBc typ
Primary Power	100 – 264 VAC 50/60 Hz, single phase 500 W max
Connectors RF input RF output RF output forward	Type N female on front pane Type 7–16 DIN female on front pane and reflected sample ports Type N female on rear pane
Pulse input	Type BNC female on rear panel
Remote Interfaces IEEE-488 Ethernet	24-pir RJ-45
	15–pin Subminiature D
Safety Interlock	
Cooling	•
	Forced air (self-contained fans) 40 kg (88 lb.)
Cooling	Forced air (self-contained fans)

## **2000SP1G2** 1 – 2 GHz 2000 W Pulse

Rated Power Output	2000 W min.
Input for Rated Output	1 milliwatt max.
Flatness	±1.5 dB typ. / ±2.5 dB max.
Frequency Response	1 – 2 GHz instantaneously
Gain (at max. setting)	63 dB min.
Gain Adjustment Continuou	s Range 20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
power exceeding 100	50 ohms, nominal oldback protection at peak reflected 00 W. Will operate without damage or nagnitude and phase of source and load
Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortior ±25 ns max. (	.1 – 50 microseconds 50 kHz max. 6% max. 30 ns max. (10% – 90%) 1 μs max. from pulse input to RF 90% difference between TTL Input Gate and RF pulse)
Pulse Off Isolation Pulse Input	60 dB min. TTL level, 50 ohm nominal termination
Noise Figure	12 dB typ.
Harmonic Distortion -15 dBc max. up to	) 1.2 GHz; –20 dBc max. 1.2 GHz – 2 GHz
Spurious	Minus 60 dBc typ.



Primary Power	100 – 264 VAC 50/60 Hz, single phase 800 W max.
Connectors	
RF input	Type N female on front panel
RF output	Type 7–16 DIN female on front panel
RF output forward	and reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces IEEE-488 Ethernet	24-pin RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	42 kg (93 lb.)
Size (WxHxD)	
. ,	50.3 x 20.3 x 76.2 cm / 19.8 x 8 x 30 in.
Export Classification	3A999.d

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Frequency Range 1 - 4 GHz

Power Range 1 - 80 kW

## 4000SP1G2 1 - 2 GHz 4000 W Pulse

Rated Power Output	4000 W min.
Input for Rated Output	1 milliwatt max.
Flatness	±1.5 dB typ. / ±2.5 dB max.
Frequency Response	1 – 2 GHz instantaneously
Gain (at max. setting)	66 dB min.
Gain Adjustment Continuous Range	20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

### **Mismatch Tolerance**

Output pulse width foldback protection at peak reflected power exceeding 2000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

### **Pulse Capability**

	0.1 50 1
Pulse Width	0.1 – 50 microseconds
Pulse Rate (PRF)	50 kHz max.
Duty Cycle	6% max.
RF Rise and Fall	30 ns max. (10% to 90%)
Delay	1 µs max. from pulse input to RF 90%
Pulse Width Distortion	
±20 ns max	. (difference between TTL Input Gate and
	RF pulse)
Pulse Off Isolation	60 dB min.
Pulse Input	TTL level, 50 ohm nominal termination
Noise Figure	12 dB typ.
Harmonic Distortion	
-15 dBc up to	1.2 GHz@2,500W; -20 dBc up to 2 GHz
Spurious	Minus 60 dBc typ.

Find it Fast



Cooling Forced air (self-contained fans
RF output     Type 7–16 DIN female on front pane       RF output     forward and reflected sample port       Pulse input     Type N female on rear pane       Pulse input     Type BNC female on rear pane       Remote Interfaces     24–pi       IEEE–488     24–pi       Ethernet     RJ–4       Safety Interlock     15–pin Subminiature I       Cooling     Forced air (self–contained fans
RF output     forward and reflected sample port       Pulse input     Type N female on rear pane       Pulse input     Type BNC female on rear pane       Remote Interfaces     24-pi       IEEE-488     24-pi       Ethernet     RJ-4       Safety Interlock     15-pin Subminiature I       Cooling     Forced air (self-contained fans
Type N female on rear pane           Pulse input         Type BNC female on rear pane           Remote Interfaces         24-pi           IEEE-488         24-pi           Ethernet         RJ-4           Safety Interlock         15-pin Subminiature I           Cooling         Forced air (self-contained fans
Pulse input         Type BNC female on rear pane           Remote Interfaces IEEE-488         24-pin           Ethernet         RJ-4           Safety Interlock         15-pin Subminiature I           Cooling         Forced air (self-contained fans
IEEE-488     24-pi       Ethernet     RJ-4       Safety Interlock     15-pin Subminiature I       Cooling     Forced air (self-contained fans
Ethernet RJ-4: Safety Interlock 15-pin Subminiature I Cooling Forced air (self-contained fans
Safety Interlock         15-pin Subminiature I           Cooling         Forced air (self-contained fans
Cooling Forced air (self-contained fans
<b>Weight</b> 170 kg (375 lb.
Size (WxHxD) 50.3 x 55 x 72 cm / 19.8 x 21.7 x 28.3 ir
Export Classification 3A999.

## 8000SP1z2G1z4 1 - 2 GHz 8000 W Pulse

Rated Power Output	8000 W min.
Input for Rated Output	1 milliwatt max.
Flatness	±1.5 dB typ. / ±2 dB max.
Frequency Response	1 – 2 GHz instantaneously
Gain (at max. setting)	69 dB min.
Gain Adjustment Continuou	us Range 20 dB min., (4096 steps remote)
Input Impedance	50 ohms
Output Impedance	50 ohms, nominal
power. No foldback of power. If protection i Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay	tion above 3,800W minimum reflected or automatic leveling control on reflected s activated, RF output is forced "off". 0.1 – 50 microseconds 50 kHz max. 6% max. 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90%
Pulse Width Distortio (differe Pulse Off Isolation Pulse Input	n ±25 ns max. nce between TTL Input Gate and RF pulse) 60 dB min. TTL level, 50 ohm nominal termination
Noise Figure	12 dB typ.
Harmonic Distortion	Minus 20 dBc max. at 5000 W Minus 15 dBc max at 5000 W <1.2 GHz Minus 20 dBc max at 5000 W ≥1.2 GHz
Spurious	Minus 60 dBc typ.



Primary Power	100 – 264 VAC 50/60 Hz, single phase 2,500 W max.
Connectors	
RF input	Type N female on front panel
RF output	7/16 DIN female on front panel
RF output forward and	reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces	
IEEE-488	24-pin
Ethernet	RJ-45
Safety Interlock	15-pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	120 kg (265 lb.)
Size (WxHxD)	
	).3 x 52 x 96.5 cm / 19.8 x 20.5 x 38 in.
Export Classification	3A999.d

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**RF Solid State Universal Series** 

Solid State Pulse Microwave

TWT **Systems** 

Frequency Range 1 - 4 GHz

Power Range 1 - 80 kW

### 1500SP1z2G1z4 1.2 - 1.4 GHz 1500 W Pulse

Rated Power Output	1,500 W min.		
Input for Rated Output 1 milliwatt max.			
Flatness	±1 dB typ./±2 dB max.		
Frequency Response	1.2 – 1.4 GHz instantaneously		
Gain (at max. setting)	61.8 dB min.		
Gain Adjustment Continuous	Range 20 dB min., (4096 steps remote)		
Input Impedance	50 ohms, VSWR 2:1 max.		
Output Impedance	50 ohms, nominal		
	back protection at peak reflected power operate without damage or oscillation y load impedance.		
Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle	0.1 – 50 microsecondss 50 kHz max. 6% max.		

Pulse Off Isolation

Harmonic Distortion

Pulse Input

**Noise Figure** 

Spurious



60 dB min.

8 dB max.

Minus 30 dBc max.

Minus 60 dBc typ.

TTL level, 50 ohm nominal termination

Primary Power	100 – 264 VAC 50/60 Hz, single phase 500 W max
Connectors	
RF input	Type N female on front panel
RF output	Type 7–16 DIN female on front panel
RF output forward an	nd reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces IEEE-488 Ethernet	24–pin RJ–45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	26 kg (58 lb.)
Size (WxHxD)	
	50.3 x 15 x 78 cm / 19.8 x 5.9 x 30.7 in
Export Classification	3A999 d

## 4000SP1z2G1z4 1.2 - 1.4 GHz 4000 W Pulse

Flatness       ±1 dB typ. / ±2 dB m         Frequency Response       1.2 – 1.4 GHz instantaneou         Gain (at max. setting)       66 dB m         Gain (at max. setting)       66 dB m         Gain Adjustment       Continuous Range 20 dB min., (4096 steps remo         Input Impedance       50 ohms, VSWR 2:1 m         Output Impedance       50 ohms, nomi         Mismatch Tolerance       Output pulse width foldback protection at peak reflected power exceeding 2000 W. Will operate without damage or oscillation with any magnitude and phase of source and loc impedance.         Pulse Capability       0.1 – 50 microsecor         Pulse Rate (PRF)       50 kHz m         Duty Cycle       6% m         RF Rise and Fall       30 ns max. (10% – 90         Delay       1 µs max. from pulse input to RF 94         Pulse Off Isolation       60 dB m         RF pulse Input       TTL level, 50 ohm nominal terminat         Noise Figure       15 dB f		
Frequency Response       1.2 – 1.4 GHz instantaneou         Gain (at max. setting)       66 dB m         Gain Adjustment       Continuous Range 20 dB min., (4096 steps remo         Input Impedance       50 ohms, VSWR 2:1 m         Output Impedance       50 ohms, nomi         Mismatch Tolerance       Output Impedance         Output gulse width foldback protection at peak reflected power exceeding 2000 W. Will operate without damage or oscillation with any magnitude and phase of source and loc impedance.         Pulse Capability         Pulse Capability         Pulse Rate (PRF)       50 kHz m         Duty Cycle       6% m         RF Rise and Fall       30 ns max. (10% – 90         Delay       1 µs max. from pulse input to RF 90         Pulse Off Isolation       60 dB m         RF pulse Input       TTL level, 50 ohm nominal terminat         Noise Figure       15 dB f	Input for Rated Output	1 milliwatt max.
Gain (at max. setting)       66 dB m         Gain Adjustment Continuous Range 20 dB min., (4096 steps remo- linput Impedance       50 ohms, VSWR 2:1 m         Output Impedance       50 ohms, nomi         Mismatch Tolerance       50 ohms, nomi         Output pulse width foldback protection at peak reflected power exceeding 2000 W. Will operate without damage or oscillation with any magnitude and phase of source and loc impedance.         Pulse Capability Pulse Width       0.1 – 50 microsecor 50 kHz m         Duty Cycle       6% m         RF Rise and Fall       30 ns max. (10% – 90 Delay         Pulse Width Distortion       ±25 ns m         (difference between TTL Input Gate and RF pul- RF pul- Pulse Off Isolation       60 dB m         Pulse Off Isolation       60 dB m         Noise Figure       15 dB f         Harmonic Distortion       Minus 30 dBc m	Flatness	±1 dB typ./±2 dB max
Gain Adjustment Continuous Range 20 dB min., (4096 steps remo         Input Impedance       50 ohms, VSWR 2:1 m         Output Impedance       50 ohms, nomi         Mismatch Tolerance Output pulse width foldback protection at peak reflected power exceeding 2000 W. Will operate without damage or oscillation with any magnitude and phase of source and loc impedance.         Pulse Capability Pulse Width       0.1 – 50 microsecor Pulse Rate (PRF)         Duty Cycle       6% m         RF Rise and Fall       30 ns max. (10% – 90 Delay         Dulae Width Distortion       ±25 ns m         (difference between TTL Input Gate and RF pul- RF pulse Input       Cod B m         Pulse Off Isolation       60 dB m         Pulse Input       TTL level, 50 ohm nominal terminat         Noise Figure       15 dB f	Frequency Response	1.2 – 1.4 GHz instantaneously
Continuous Range 20 dB min., (4096 steps remo         Input Impedance       50 ohms, VSWR 2:1 m         Output Impedance       50 ohms, nomi         Mismatch Tolerance       50 ohms, nomi         Output pulse width foldback protection at peak reflected power exceeding 2000 W. Will operate without damage or oscillation with any magnitude and phase of source and loc impedance.         Pulse Capability       Pulse Vidth         Pulse Rate (PRF)       50 kHz m         Duty Cycle       6% m         RF Rise and Fall       30 ns max. (10% – 90         Delay       1 µs max. from pulse input to RF 94         Pulse Off Isolation       60 dB m         Pulse Off Isolation       60 dB m         Pulse Input       TTL level, 50 ohm nominal terminat         Noise Figure       15 dB f	Gain (at max. setting)	66 dB min.
Output Impedance         50 ohms, nomi           Mismatch Tolerance         Output pulse width foldback protection at peak reflected power exceeding 2000 W. Will operate without damage or oscillation with any magnitude and phase of source and loc impedance.           Pulse Capability         Pulse Capability           Pulse Rate (PRF)         50 kHz m           Duty Cycle         6% m           RF Rise and Fall         30 ns max. (10% – 90           Delay         1 µs max. from pulse input to RF 90           Pulse Width Distortion         ±25 ns m           (difference between TTL Input Gate and RF pul         RF pulse lnput           Pulse Input         TTL level, 50 ohm nominal terminat           Noise Figure         15 dB f		s Range 20 dB min., (4096 steps remote)
Mismatch Tolerance         Output pulse width foldback protection at peak reflected         power exceeding 2000 W. Will operate without damage or         oscillation with any magnitude and phase of source and log         impedance.         Pulse Capability         Pulse Width       0.1 – 50 microsecor         Pulse Rate (PRF)       50 kHz m         Duty Cycle       6% m         RF Rise and Fall       30 ns max. (10% – 90         Delay       1 µs max. from pulse input to RF 90         Pulse Width Distortion       ±25 ns m         (difference between TTL Input Gate and RF pul         RF pulse Off Isolation       60 dB m         Pulse Input       TTL level, 50 ohm nominal terminat         Noise Figure       15 dB f	Input Impedance	50 ohms, VSWR 2:1 max.
Output pulse width foldback protection at peak reflected power exceeding 2000 W. Will operate without damage or oscillation with any magnitude and phase of source and loc impedance.         Pulse Capability         Pulse Capability         Pulse Width       0.1 – 50 microsecor         Pulse Rate (PRF)       50 kHz m         Duty Cycle       6% m         RF Rise and Fall       30 ns max. (10% – 90         Delay       1 µs max. from pulse input to RF 90         Pulse Width Distortion       ±25 ns m         (difference between TTL Input Gate and RF pulse         RF pulse Off Isolation       60 dB m         Pulse Input       TTL level, 50 ohm nominal terminat         Noise Figure       15 dB f	Output Impedance	50 ohms, nominal
Duty Cycle       6% m         RF Rise and Fall       30 ns max. (10% – 90         Delay       1 µs max. from pulse input to RF 90         Pulse Width Distortion       ±25 ns m         (difference between TTL Input Gate and RF pulle         Pulse Off Isolation       60 dB m         Pulse Input       TTL level, 50 ohm nominal terminat         Noise Figure       15 dB f         Harmonic Distortion       Minus 30 dBc m		
RF Rise and Fall       30 ns max. (10% – 90         Delay       1 µs max. from pulse input to RF 90         Pulse Width Distortion       ±25 ns m         (difference between TTL Input Gate and RF pulse         Pulse Off Isolation       60 dB m         Pulse Input       TTL level, 50 ohm nominal terminat         Noise Figure       15 dB f         Harmonic Distortion       Minus 30 dBc m		0.1 – 50 microseconds
Delay       1 µs max. from pulse input to RF 90         Pulse Width Distortion       ±25 ns m         (difference between TTL Input Gate and RF pul         RF pulse         Pulse Off Isolation         Pulse Input         TTL level, 50 ohm nominal terminat         Noise Figure       15 dB t         Harmonic Distortion       Minus 30 dBc m	Pulse Width Pulse Rate (PRF)	50 kHz max.
Pulse Width Distortion       ±25 ns m (difference between TTL Input Gate and RF pul- RF pul- Pulse Off Isolation         Pulse Off Isolation       60 dB m         Pulse Input       TTL level, 50 ohm nominal terminat         Noise Figure       15 dB i         Harmonic Distortion       Minus 30 dBc m	Pulse Width Pulse Rate (PRF) Duty Cycle	50 kHz max. 6% max.
RF pulse     RF pulse       Pulse Off Isolation     60 dB m       Pulse Input     TTL level, 50 ohm nominal terminat       Noise Figure     15 dB f       Harmonic Distortion     Minus 30 dBc m	Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall	50 kHz max. 6% max. 30 ns max. (10% – 90%)
Pulse Off Isolation     60 dB m       Pulse Input     TTL level, 50 ohm nominal terminat       Noise Figure     15 dB f       Harmonic Distortion     Minus 30 dBc m	Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay	50 kHz max. 6% max. 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90%
Noise Figure 15 dB 1 Harmonic Distortion Minus 30 dBc m	Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortior	50 kHz max. 6% max. 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% 1 ±25 ns max. nce between TTL Input Gate and RF pulse)
Harmonic Distortion Minus 30 dBc m	Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortior (differer Pulse Off Isolation	50 kHz max. 6% max. 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% n ±25 ns max. nce between TTL Input Gate and RF pulse) RF pulse) 60 dB min.
	Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortior (differer Pulse Off Isolation	6% max. 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% 1 ±25 ns max.
Countiente Mit (O ID )	Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortior (differen Pulse Off Isolation Pulse Input	50 kHz max. 6% max. 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% n ±25 ns max hce between TTL Input Gate and RF pulse) RF pulse) 60 dB min. TTL level, 50 ohm nominal termination
Spurious Minus 60 dBc 1	Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortior (differer Pulse Off Isolation Pulse Input Noise Figure	50 kHz max. 6% max. 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% n ±25 ns max. nce between TTL Input Gate and RF pulse) RF pulse) 60 dB min.



Drimany Douron	100 0(4)/40
Primary Power	100 – 264 VAC
	50/60 Hz, single phase 600 W max
	000 ₩ 1114.
Connectors	
RF input	Type N female on front panel
RF output	Type 7–16 DIN female on front panel
RF output forward and	l reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces	
IEEE-488	24-pin
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	35 kg (76 lb.)
Size (WxHxD)	
	3 x 20.8 x 68.2 cm / 19.8 x 8.2 x 24.7 in.
Export Classification	3A999.d

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Frequency Range 1 – 4 GHz

Power Range 1 - 80 kW

### 5300SP1z2G1z4 1.2 - 1.4 GHz 5300 W Pulse

Rated Power Output	5300 W min.
Input for Rated Output	0 milliwatt max.
Flatness	±1 dB typ. / ±2 dB max.
Frequency Response	1.2 – 1.4 GHz instantaneously
Gain (at max. setting)	67.3 dB min.
Gain Adjustment	20 dB min (4096 step)
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms, nomina

### Mismatch Tolerance

Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

Puls	e Ca	papi	lity
------	------	------	------

Pulse Width	0.1 – 50 µs
Pulse Rate (PRF)	50 kHz max
( )	
Duty Cycle	6% max.
RF Rise and Fall	30 ns max. (10% – 90%)
Delay	≤1 µs max. from pulse input to RF 90%
Pulse Width Distortion	±25 ns max
(difference	ce between TTL Input Gate and RF pulse)
Pulse Off Isolation	60 dB min.
Pulse Input	TTL level, 50 ohm nominal termination
Noise Figure	≤ 8 dB
Harmonic Distortion	≤ -30 dBc
Spurious	≤ -60 dBc
Primary Power	100 – 264 VAC
	50/60 Hz, single phase
	1300 W max.



Connectors				
RF input	Type N female on front panel			
RF output	Type 7–16 DIN female on front panel			
RF output forward and	reflected sample ports			
	Type N female on rear panel			
Pulse input	Type BNC female on rear panel			
Remote Interfaces				
IEEE-488	24-pin			
Ethernet	RJ-45			
Remote interface RS 23	2 9 pins D Subminiature			
Safety Interlock	15–pin Subminiature D			
Cooling	Forced air (self–contained fans)			
Weight	52 kg / 115 lbs			
Size (WxHxD) 48.	3 x 30,1 x 78.2 cm / 19 x 11,9 x 30.8 in			
Export Classification	3A999.d			

## 6000SP1z2G1z4 1.2 - 1.4 GHz 8000 W Pulse

Rated Power Output	6000 W min.
Input for Rated Output	1 milliwatt max.
Flatness	±1 dB typ. / ±2 dB max.
Frequency Response	1.2 – 1.4 GHz instantaneously
Gain (at max. setting)	69 dB min.
Gain Adjustment Continuo	us Range 20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
Pulse Capability Pulse Width	0.1 – 50 microsecondss
Pulse Rate (PRF)	50 kHz max
Duty Cycle RF Rise and Fall Delay Pulse Width Distortic	
Pulse Off Isolation Pulse Input	nce between TTL Input Gate and RF pulse) 60 dB min. TTL level. 50 ohm nominal termination
Noise Figure	
Harmonic Distortion	8 dB typ. Minus 30 dBc max
Spurious	Minus 60 dBc typ.



Primary Power	100 – 264 VAC
	50/60 Hz, single phase
	4000 W max.
Connectors	
RF input	Type N female on front panel
RF output	Type 7–16 DIN female on front panel
RF output forward c	ind reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces	
IEEE-488	24-pin
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	90 kg (198.5 lb.)
Size (WxHxD)	
× /	50.3 x 51.6 x 79 cm / 19.8 x 20.3 x 31 in.
Export Classification	3A999

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Frequency Range 1 - 4 GHz

Power Range 1 - 80 kW

### 9000SP1z2G1z4 1.2 - 1.4 GHz 9000 W Pulse

Rated Power Output	8000 W min.
Input for Rated Output	1 milliwatt max.
Flatness	±1 dB typ. / ±2 dB max.
Frequency Response	1.2 – 1.4 GHz instantaneously
Gain (at max. setting)	69 dB min.
Gain Adjustment Continuous Ran	ge 20 dB min., (4096 steps remote)
	F0   1/0/1/D 0 1

Input Impedance 50 ohms, VSWR 2:1 max. 50 ohms, nominal Output Impedance

### **Mismatch Tolerance**

Output pulse width foldback protection at peak reflected power exceeding 4000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

Pulse Capability
Pulse Width
Dulas Data (DDD)

ruise oupublility	
Pulse Width	0.1 – 50 microsecondss
Pulse Rate (PRF)	50 kHz max.
Duty Cycle	6% max.
RF Rise and Fall	30 ns max. (10% to 90%)
Delay	$\leq$ 1 µs max. from pulse input to RF 90%
Pulse Width Distortion	±25 ns max.
(differend	ce between TTL Input Gate and RF pulse)
Pulse Off Isolation	60 dB min.
Pulse Input	TTL level, 50 ohm nominal termination
Noise Figure	8 dB typ.
Harmonic Distortion	Minus 30 dBc max.
Spurious	Minus 60 dBc typ.



Primary Power	100 – 264 VAC
	50/60 Hz, single phase
	4000 W max
Connectors	
RF input	Type N female on front pane
RF output	Type 7–16 DIN female on front pane
RF output forward and	I reflected sample ports
	Type N female on rear pane
Pulse input	Type BNC female on rear pane
Remote Interfaces	
IFFF-488	24-pir
Fthernet	R.I-45
	15 1 0 1 1 1 5
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	90 kg (198.5 lb.)
Size (WxHxD)	
	0.3 x 51.6 x 79 cm / 19.8 x 20.3 x 31 in
	0.5 X 51.0 X / 7 611/ 17.0 X 20.5 X 51 11

### 12000SP1z2G1z4 1.2 - 1.4 GHz 12000 W Pulse

Rated Power Output	12000 W min.
Input for Rated Output	1 milliwatt max.
Flatness	±1 dB typ. / ±2 dB max.
Frequency Response	1.2 – 1.4 GHz instantaneously
Gain (at max. setting)	70.8 dB min.
Gain Adjustment Continuo	us Range 20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
load impedance. Pulse Capability	
Pulse Width Pulse Rate (PRF)	0.1 – 50 microsecondss 50 kHz max
Duty Cycle	6% max.
RF Rise and Fall	30 ns max. (10% to 90%)
Delay Pulse Width Distortio	≤1 µs max. from pulse input to RF 90% n +25 ns max
	n ±25 ns max. ence between TTL Input Gate and RF pulse)
Pulse Off Isolation	60 dB min.
Pulse Input	TTL level, 50 ohm nominal termination
Noise Figure	8 dB typ.
Harmonic Distortion	Minus 30 dBc max
Spurious	Minus 60 dBc typ.



Primary Power	100 – 264 VAC 50/60 Hz, single phase 2600 W max.
Connectors	
RF input	Type N female on front panel
RF output	Type 7–16 DIN female on front panel
RF output forward o	ind reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces	
IEEE-488	24–pin
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self–contained fans)
Weight	94 kg (207 lb.)
Size (WxHxD)	
. /	50.3 x 50.8 x 90 cm / 19.8 x 20 x 35.4 in.
Export Classification	3A999

9	Pro	oduct Catalog	2022 For	Sales, call: 21	5.723.8181   Fo	or an Ap	plications En	gineer, call: 8	00.933.8181	arworld.us	s	53
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 1 - 4 GHz

Power Range 1 - 80 kW

### 18000SP1z2G1z4 1.2 - 1.4 GHz 8000 W Pulse

Rated Power Output	8000 W min.
Input for Rated Output	1 milliwatt max.
Flatness	±1 dB typ. / ±2 dB max.
Frequency Response	1.2 – 1.4 GHz instantaneously
Gain (at max. setting)	72.6 dB min.
Gain Adjustment Continuous Rang	e 20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
Mismatch Tolerance	

Output pulse width foldback protection at peak reflected power exceeding 4000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance.

Pu	se	Ca	pa	bil	ity	
	Duil	001	٨/:.	4+1		

Spurious	Minus 60 dBc typ.
Harmonic Distortion	Minus 30 dBc max.
Noise Figure	8 dB typ.
Pulse Off Isolation Pulse Input	60 dB min. TTL level, 50 ohm nominal termination
	ce between TTL Input Gate and RF pulse)
Pulse Width Distortion	±25 ns max.
Delay	≤1 µs max. from pulse input to RF 90%
RF Rise and Fall	30 ns max. (10% to 90%)
Pulse Rate (PRF) Duty Cycle	50 kHz max. 6% max.
Pulse Width	0.1 – 50 microsecondss



Primary Power	100 – 264 VAC 50/60 Hz, single phase 3700 W max.
Connectors	
RF input	Type N female on front panel
RF output	Type 7–16 DIN female on front panel
RF output forward	and reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear pane
Remote Interfaces IEEE-488 Ethernet	24–pin RJ–45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	105 kg (232 lb.)
Size (WxHxD)	
	50.3 x 50.8 x 90 cm / 19.8 x 20 x 35.4 in

## 80000SP1z2G1z4 1.2 - 1.4 GHz 80000 W Pulse

Rated Power Output	80000 W min.
Input for Rated Output	0 dBm max
Pulse Droop:	–0.8dB max @80000W for a 50µs pulse
Flatness	±1.5 dB typical; ±2.5 dB maximum
Frequency Response	1.2 – 1.4 GHz instantaneously
Gain (at max. setting)	79 dB min
Gain Adjustment Continuo	us Range 20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 maximum
Output Impedance	50 ohms, nomina
	lamage or oscillation with any e of source and load impedance.
Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortion Pulse Off Isolation	between TTL Input Gate and RF pulse) 60 dB minimum
Pulse Input	TTL level, 50 ohm nominal termination
Noise Figure	8 dB typ



Spurious       ≤ - 60 dBc typ.         Primary Power       100 - 264 VAC, 50- 60 Hz, single phase, 16 kW maximum         Connectors       RF         RF       See Model Configurations         RF output forward and reflected sample ports       Type N female, rear         PULSE INPUT       Type BNC female, rear         PULSE INPUT       Type BNC female, rear         RF-232       9 pin subminiature D         Ethernet       RJ-45         Safety Interlock       15-pin Subminiature D         Cooling       Forced air (self-contained fans)         Weight       1660 kg / 3660 lbs         Size (WxHxD)       60 x 186.3 x 90 cm / 23.6 x 73.3 x 35.4 in         Export Classification       3A999.d	Harmonic Distortio	<b>n</b> –30 dBc
single phase, 16 kW maximum         Connectors         RF       See Model Configurations         RF output forward and reflected sample ports       Type N female, rear         PULSE INPUT       Type BNC female, rear         PULSE INPUT       Type BNC female, rear         Remote Interfaces       24 pin         IEEE-488       24 pin         RS-232       9 pin subminiature D         Ethernet       RJ-45         Safety Interlock       15-pin Subminiature D         Cooling       Forced air (self-contained fans)         Weight       1660 kg / 3660 lbs         Size (WxHxD)       60 x 186.3 x 90 cm / 23.6 x 73.3 x 35.4 in	Spurious	≤ - 60 dBc typ.
RF       See Model Configurations         RF output forward and reflected sample ports       Type N female, rear         PULSE INPUT       Type BNC female, rear         Remote Interfaces       24 pin         IEEE-488       24 pin         RS-232       9 pin subminiature D         Ethernet       RJ-45         Safety Interlock       15-pin Subminiature D         Cooling       Forced air (self-contained fans)         Weight       1660 kg / 3660 lbs         Size (WxHxD)       60 x 186.3 x 90 cm / 23.6 x 73.3 x 35.4 in	Primary Power	
Type N female, rear         PULSE INPUT       Type BNC female, rear         Remote Interfaces       24 pin         IEEE-488       24 pin         RS-232       9 pin subminiature D         Ethernet       RJ-45         Safety Interlock       15-pin Subminiature D         Cooling       Forced air (self-contained fans)         Weight       1660 kg / 3660 lbs         Size (WxHxD)       60 x 186.3 x 90 cm / 23.6 x 73.3 x 35.4 in	RF	v
IEEE-488         24 pin           RS-232         9 pin subminiature D           Ethernet         RJ-45           Safety Interlock         15-pin Subminiature D           Cooling         Forced air (self-contained fans)           Weight         1660 kg / 3660 lbs           Size (WxHxD)         60 x 186.3 x 90 cm / 23.6 x 73.3 x 35.4 in	·	Type N female, rear
Cooling         Forced air (self-contained fans)           Weight         1660 kg / 3660 lbs           Size (WxHxD)         60 x 186.3 x 90 cm / 23.6 x 73.3 x 35.4 in	IEEE-488 RS-232	9 pin subminiature D
Weight         1660 kg / 3660 lbs           Size (WxHxD)         60 x 186.3 x 90 cm / 23.6 x 73.3 x 35.4 in	Safety Interlock	15–pin Subminiature D
Size (WxHxD)         60 x 186.3 x 90 cm / 23.6 x 73.3 x 35.4 in	Cooling	Forced air (self-contained fans)
	Weight	1660 kg / 3660 lbs
Export Classification 3A999.d	Size (WxHxD)	60 x 186.3 x 90 cm / 23.6 x 73.3 x 35.4 in
	Export Classificatio	<b>n</b> 3A999.d

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Contents	Find it Fast	RF Solid State	<b>Universal Series</b>	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 1 - 4 GHz

Power Range 1 - 80 kW

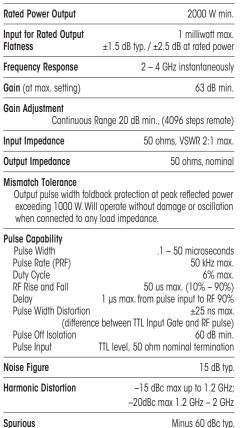
### 2 – 4 GHz 1000 W Pulse

Rated Power Output	1000 W min.
Input for Rated Output	1 milliwatt max.
Flatness	±1.5 dB typ. / ±2.5 dB at rated power
Frequency Response	2 – 4 GHz instantaneously
Gain	60 dB min.
Gain Adjustment Continuou	s Range 20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
Pulse Capability Pulse Width	0.1 – 50 microseconds
Pulse Rate (PRF) Duty Cycle	50 kHz max. 6% max.
RF Rise and Fall Delay Pulse Width Distortion	30 ns max (10% – 90%) ≤1 µs from pulse input to RF 90%
(differer	nce between TTL Input Gate and RF pulse)
Pulse Off Isolation Pulse Input	60 dB min. TTL level, 50 ohm nominal termination
Noise Figure	15 dB typ
Harmonic Distortion	$\leq$ -15dBc up to 2.3GHz@700 W; $\leq$ -20dBc up to 4 GHz
Spurious	Minus 60 dBc typ.



Primary Power	100 – 264 VAC
	50/60 Hz, single phase 700 W max.
Connectors	
RF input	Type N female on front panel
RF output	Type 7–16 DIN female on front panel
RF output forward and	I reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear pane
Remote Interfaces	
IFFF-488	24-pin
Fthernet	R.I-45
2	
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	37 kg (82 lb.)
Size (WxHxD)	
	50.3 x 22.9 x 68 cm / 19.8 x 9 x 26.8 in

## 2000SP2G4 2 - 4 GHz 2000 W Pulse



Minus 60 dBc typ.



Primary Power	100 – 264 VAC 50/60 Hz, single phase 1000 W max.
Connectors	
RF input	Type N female on front panel
RF output	Type 7–16 DIN female on front panel
	rd and reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces IEEE–488 Ethernet	24-pin RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self–contained fans)
Weight	45 kg (99 lb.)
Size (WxHxD)	
	50.3 x 19.8 x 88.4 cm / 19.8 x 7.8 x 34.8 in.
Export Classificati	<b>on</b> 3A999.d

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Frequency Range 1 - 4 GHz

Power Range 1 - 80 kW

## 5000SP2G4 2 – 4 GHz 5000 W Pulse

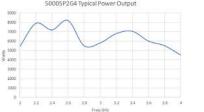
1 milliwatt max. 25000W for a 50µs pulse ypical; ±2.5 dB maximum 2 – 4 GHz instantaneously	
ypical; ±2.5 dB maximum 2 – 4 GHz instantaneously	
2 – 4 GHz instantaneously	
,	
/ 7 JD	
67 dB min.	
nin., (4096 steps remote)	
50 ohms, VSWR 2:1 maximum	
50 ohms, nominal	

Output pulse width foldback protection at peak reflected power exceeding 2500 watts. Will operate without damage or oscillation when connected to any load impedance.

Pulse Capability	
Pulse Width	0.1–50 microseconds
Pulse Rate (PRF)	50 kHz maximum
Duty Cycle	6% maximum.
RF Rise and Fall	30 ns max (10% to 90%).
Delay 1	us maximum from pulse input to RF 90%
Pulse Width Distortion	±20 ns maximum (difference
	between TTL Input Gate and RF pulse)
Pulse Off Isolation	60 dB minimum
Pulse Input	TTL level, 50 ohm nominal termination
Noise Figure	15 dB typ.



Harmonic Distortion	-15dBc up to
	2.3GHz@3200W
	-20dBc up to 4 GHz
Spurious	Minus 60 dBc typ
Primary Power	100–264 VAC, 50/60 Hz
	single phase, 2000 watts maximum
Connectors	
RF	See Model Configurations
RF output forward and refle	cted sample ports
	Type N female, rear
PULSE INPUT	Type BNC female, rear
Remote Interfaces	
IEEE-488	24 pin
RS-232	9 pin subminiature D
Ethernet	RJ-45
Safety Interlock	15-pin Subminiature D
Cooling	Forced air (self–contained fans)
Weight	See Model Configurations
Size (WxHxD)	See Model Configurations
Export Classification	3A999.d



## 7000SP2G4 2 - 4 GHz 7000 W Pulse

Rated Power Output	7000 W min.
Input for Rated Output	0 dBm max.
Pulse Droop:	–0.8dB max @5000W for a 50µs pulse
Flatness	±1.5 dB typical; ±2.5 dB maximum
Frequency Response	2 – 4 GHz instantaneously
Gain (at max. setting)	69.5 dB min.
Gain Adjustment Continuou	s Range 20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 maximum
Output Impedance	50 ohms, nominal
Will operate without do and phase of source a	mage or oscillation with any magnitude nd load impedance.
Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay 1 Pulse Width Distortion Pulse Off Isolation Pulse Input	0.1 – 50 microseconds 50 kHz maximum 6% maximum. 30 ns max (10% – 90%). µs maximum from pulse input to RF 90% ±20 ns maximum (difference between TTL Input Gate and RF pulse) 60 dB minimum TTL level. 50 ohm nominal termination
Noise Figure	15 dB typ.
	to ub typ.



Harmonic Distortion	-15dBc up to
	2.3 GHz@3200 W;
	-20 dBc up to 4 GHz
Spurious	$\leq$ - 60 dBc typ.
Primary Power	100 – 264 VAC, 50 – 60 Hz,
	single phase, 2800 watts maximum
Connectors	
RF	See Model Configurations
RF	output forward and reflected sample ports
	Type N female, rear
PULSE INPUT	Type BNC female, rear
Remote Interfaces	
IEEE-488	24 pin
RS-232	9 pin subminiature D
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	102 kg / 225 lbs
Size (WxHxD)	48.3 x 48,8 x 77,5 cm / 19 x 19.2 x 30.5 in
Export Classification	a 3A999.d
•	

Pro	duc	t C	al

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Accessories

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**RF Solid State** 

**Universal Series** Microwave

Solid State Pulse

TWT **Systems** 

**Chambers** 

**Antennas** 

**AR Companies** Contact

Frequency Range 1 – 4 GHz

Power Range 1 - 80 kW

### 8000SP2z7G3z1 2 – 4 GHz 5000 W Pulse

Rated Power Output	5000 W min.
Input for Rated Output	1 milliwatt max.
Pulse Droop:	–0.8dB max @5000W for a 50µs pulse
Flatness	±1.5 dB typical; ±2.5 dB maximum
Frequency Response	2 – 4 GHz instantaneously
Gain (at max. setting)	67 dB min.
Gain Adjustment Continuou	s Range 20 dB min., (4096 steps remote)
nput Impedance 50 ohms, VSWR 2:1 maximu	
Output Impedance	50 ohms, nominal
Mismatch Tolerance	

Output pulse width foldback protection at peak reflected power exceeding 2500 watts. Will operate without damage or oscillation when connected to any load impedance.

Pulse Capability	
Pulse Width	0.1 – 50 microseconds
Pulse Rate (PRF)	50 kHz maximum
Duty Cycle	6% maximum.
RF Rise and Fall	30 ns max (10% – 90%).
Delay	1 µs maximum from pulse input to RF 90%
Pulse Width Distortio	n ±20 ns maximum (difference
	between TTL Input Gate and RF pulse)
Pulse Off Isolation	60 dB minimum
Pulse Input	TTL level, 50 ohm nominal termination
Noise Figure	15 dB typ.



Harmonic Distortion	-15dBc up to
	2.3GHz@3200W;
	-20dBc up to 4 GHz
Spurious	Minus 60 dBc typ.
Primary Power	100 – 264 VAC, 50/60 Hz,
	single phase, 2000 watts maximum
Connectors	
RF	See Model Configurations
RF	output forward and reflected sample ports
	Type N female, rear
PULSE INPUT	Type BNC female, rear
Remote Interfaces	
IEEE-488	24 pin
RS-232	9 pin subminiature D
Ethernet	RJ-45
Safety Interlock	15-pin subminiature D
Cooling	Forced air (self-contained fans)
Weight	See Model Configurations
Size (WxHxD)	See Model Configurations
Export Classification	3A999 d

## 10000SP2G4 2 – 4 GHz 10000 W Pulse

Rated Power Output	10000 W
Input for Rated Output	1 milliwatt max.
Flatness	±2.5 dB typ. / ±1.5 dB max.
Frequency Response	2 – 4 GHz instantaneously
Gain (at max. setting)	70 dB min.
Gain Adjustment Continuou	us Range 20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
load impedance.	ny magnitude and phase of source and
Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortio com Pulse Off Isolation Pulse Input	1 μs-50 microseconds 50 kHz max. 6% max. 50 ns max. (10% - 90%) 600 ns max. from pulse input to RF 90% n ±100 ns max. (50% points of output pulse width) pared to 50% points of input pulse width) 60 dB min. TTL level, 50 ohm nominal termination
Noise Figure	15 dB typ.

 $\leq \!\!\!-15$  dBc up to 2.3 GHz @  $\geq \!\!\!6,400$  W;  $\leq \!\!\!-20$  dBc up to 4 GHz Harmonic Distortion



Spurious	Minus 60 dBc typ.
Primary Power	
	100 – 264 VAC
	50/60 Hz, single phase
	3800 W max
Connectors	
RF input	Type N female on rear pane
RF output	Type 7–16 DIN female on rear pane
RF output	forward and reflected sample ports
	Type N female on rear pane
Pulse input	Type BNC female on rear pane
Remote Interfaces	
IEEE-488	24-pir
Ethernet	RJ-45
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	125 kg (276 lb.)
Size (WxHxD)	
. ,	60 x 68 x 90 cm / 23.6 x 26.8 x 35.4 in
Export Classification	3A999.c

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Frequency Range 1 – 4 GHz

Power Range 1 - 80 kW

## 15000SP2G4 2 – 4 GHz 15000 W Pulse

Rated Power Output	15000 W
Input for Rated Output	0 dBm max.
Flatness	±1.5 dB typ.; ±2,5 dB max.
Frequency Response	2 – 4 GHz instantaneously
Gain (at max. setting)	71.8 dB min.
Gain Adjustment	20 dB (4096 step)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal

Mismatch Tolerance Will operate without damage or oscillation with any

magnitude and phase of source and load impedance.

Pulse Capability	0.1 50				
Pulse Width	0.1 – 50 µ:				
Pulse Rate (PRF)	50 kHz max.				
Duty Cycle	6% max.				
RF Rise and Fall	30 ns max. (10% – 90%)				
Delay	≤ 1µs from pulse trig. input to RF 90%				
Pulse Width Distortion	±25 ns max. (difference				
	between TTL input gate and RF pulse)				
Pulse Off Isolation	60 dB min.				
Pulse Input	TTL level, 50 ohm nominal termination				
Noise Figure	15 dB typ.				
Harmonic Distortion					
≤ -15 d	Bc up to 2,3 GHz @ RF power $\ge$ 9,500 W				
	$\leq$ -20 dBc up to 4 GHz				
Spurious	≤ -60 dBc				



Primary Power	3 phases 100 – 264 VAC				
7,300 watts max. total 3	50/60 H phases; 2600W max. on one phase				
Connectors					
RF input	Type N female on rear pane				
RF output	EIA 7/8" female on rear pane				
RF output	forward and reflected sample ports				
	Type N female on rear pane				
Pulse input	BNC on rear panel				
Remote Interfaces					
EEE-488	24 pins on rear panel				
Ethernet	RJ45 on rear panel				
Remote interface RS 232	9 pins D Subminiature				
Safety Interlock	15–pin Subminiature D				
Cooling	Forced air (self–contained fans)				
Weight	440 kg / 970 lbs				
Size (WxHxD) 60 x 15	59,6 x 90 cm / 23.6 x 62.8 x 35.4 in				
Export Classification	3A999.d				

## 20000SP2G4 2 – 4 GHz 20000 W Pulse

20000 W
0 dBm max.
±2.5 dB typ. / ±1.5 dB max.
2 – 4 GHz instantaneously
73 dB min.
0 dB min., (4096 steps remote)
50 ohms, VSWR 2:1 max.
50 ohms, nominal
r oscillation with any magnitude impedance. 1 µs – 50 microseconds 50 kHz max
50 ns max. 50 ns max. (10% – 90%) nax. from pulse input to RF 90% ±100 ns max.
0% points of output pulse width 0% points of input pulse width) 60 dB min. el, 50 ohm nominal termination
≤ 15 dB typ.
≤−15 dBc up to 2.3 GHz @ 6,400 W; $≤$ −20 dBc up to 4 GHz
Minus 60 dBc typ.



Primary Power	3 phases 400 VAC
13 kVA max,	50/60 Hz, single phase total on 3 phases; 5 kVA max. on one phase
Connectors	
RF input	Type N female on rear panel
RF output	Type 7–16 DIN female on rear panel
RF output	forward and reflected sample ports
·	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces	
IEEE-488	24-pin
Ethernet	RJ-45
Safety Interlock	15-pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	500 kg / 1102 lbs
Size (WxHxD)	
	60 x 220 x 100 cm / 23.6 x 86.6 x 39,4 in
Export Classification	3A999.d

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Frequency Range **1 – 4 GHz**  Power Range **1 - 80 kW** 

### **4000SP2z7G3z1** 2.7 - 3.1 GHz

4000 W Pulse

Rated Power Output 4000 W m						
Input for Rated Output	0 dBm max.					
Flatness	±1 dB typ. / ±2 dB max.					
Frequency Response	2.7 – 3.1 GHz instantaneously					
Gain (at max. setting)	65 dB min.					
Gain Adjustment Continuous Ra	nge 20 dB min., (4096 steps remote)					
Input Impedance	50 ohms, VSWR 2:1 max.					
Output Impedance 50 ohms, not						
power exceeding 1,500 V	ck protection at peak reflected V. Will operate without damage or ed to any load impedance.					
	0.1 50 mission and					

Pulse Capability	
Pulse Width	0.1 – 50 microseconds
Pulse Rate (PRF)	50 kHz max.
Duty Cycle	6% max.
RF Rise and Fall	30 ns max. (10% – 90%)
Delay	1 µs max. from pulse input to RF 90%
Pulse Width Distortion	±20 ns max.
(difference	e between TTL Input Gate and RF pulse)
Pulse Off Isolation	60 dB min.
Noise Figure	8 dB typ.
Spurious	Minus 60 dBc typ.
Primary Power	
	100 – 264 VAC
	50/60 Hz, single phase
	2000 W max.



Connectors	
RF input	Type N female on front panel
RF output	Type 7–16 DIN female on front panel
RF output	forward and reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces	
IEEE-488	24–pin
Ethernet	RJ-45
0.4.1.1.1.1.1	
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	52 kg / 115 lbs
Size (WxHxD)	
	48.3 x 30,1 x 78.2 cm / 19 x 11,9 x 30.8 in
	n 3A999.d

## **12000SP2z7G3z1** 2.7 - 3.1 GHz 12000 W Pulse

	12000 W min.
Rated Power Output	12000 W IIIII.
Input for Rated Output	1 milliwatt max.
Flatness	±1 dB typ./±2 dB max.
Frequency Response	2.7 – 3.1 GHz instantaneously
Gain (at max. setting)	71 dB min.
Gain Adjustment Continuous Ra	ange 20 dB min., (4096 steps remote)
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, nominal
	ack protection at peak reflected power perate without damage or oscillation oad impedance.
exceeding 500 W. Will op when connected to any I Pulse Capability Pulse Width Pulse Rate (PRF)	perate without damage or oscillation oad impedance. 0.1 – 50 microseconds 50 kHz max.
exceeding 500 W. Will op when connected to any I Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortion	oerate without damage or oscillation oad impedance. 0.1 – 50 microseconds 50 kHz max. 6% max. 30 ns max. (10% – 90%) 1 μs max. from pulse input to RF 90% ±20 ns max. between TTL Input Gate and RF pulse)
exceeding 500 W. Will op when connected to any I Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortion (difference	perate without damage or oscillation oad impedance. 0.1 – 50 microseconds
exceeding 500 W. Will or when connected to any I Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortion (difference Pulse Off Isolation	oad impedance. 0.1 – 50 microseconds 50 kHz max. 6% max. 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% ±20 ns max. between TTL Input Gate and RF pulse) 60 dB min. 8 dB typ
exceeding 500 W. Will op when connected to any I Pulse Capability Pulse Width Pulse Rate (PRF) Duty Cycle RF Rise and Fall Delay Pulse Width Distortion (difference Pulse Off Isolation Noise Figure	orate without damage or oscillation oad impedance. 0.1 – 50 microseconds 50 kHz max. 6% max. 30 ns max. (10% – 90%) 1 µs max. from pulse input to RF 90% ±20 ns max. between TTL Input Gate and RF pulse) 60 dB min.

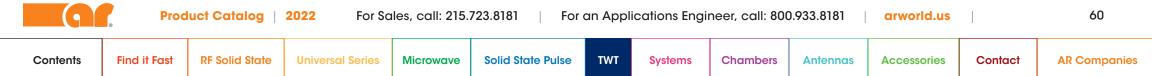


Primary Power	100 – 264 VAC 50/60 Hz, single phase 6000 W max.
Connectors	
RF input	Type N female on front panel
RF output	Type 7–16 DIN female on front panel
RF output forward	d and reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Remote Interfaces IEEE-488	24-pin
Safety Interlock	15–pin Subminiature D
Cooling	Forced air (self-contained fans)
Weight	114 kg (252 lb.)
Size (WxHxD)	
	50.3 x 53.3 x 81.3 cm / 19.8 x 21 x 32 in.
Export Classificatio	<b>n</b> 3A999.d

	Pro	<b>2022</b> For	For Sales, call: 215.723.8181 For an Applications Engineer, call: 800.933.8181 arv					arworld.us	<b>s</b>	59		
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

CW and Pulse Microwave TWT amplifiers offer up to 20000 W and are compliant with the most stringent specifications and standards.





Frequency Range 2.5 - 50 GHz

Power Range 40 W - 20 kW

### 300T2G8 2.5 - 7.5 GHz 300 W CW

Nomina	ndamental), CW @ Out   © 1 dB Compression	put Connector 350 W / min. 300 W 75 W min.
Flatness	±12 dB max, equalize	d for ±5 dB max. at rated power
Frequency	Response	2.5 – 7.5 GHz instantaneously
Input for R	ated Output	1 milliwatt max.
Gain (at m	ax. setting)	55 dB min.
Gain Adjus	stment (continuous ran	ge) 35 dB min.
Input Impe	edance	50 ohms, VSWR 2:1 max.
Output Im	pedance	50 ohms, VSWR 2.5:1 typ.

### **Mismatch Tolerance**

Output power foldback protection at reflected power exceeding 60 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Video Pulse Capability

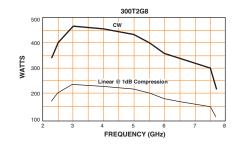
Pulse Width	05 microseconds min.
Pulse Rate (PRF)	100 kHz max.
RF Rise and Fall	30 ns max. (10% – 90%)
Delay	300 ns max. from pulse input to RF 90%
Pulse width distortion	±30 ns max. (50% points of output
	pulse width compared to 50%
	points of input pulse width)

### Noise Power Density

(pulse on) Minus 75 dBm/Hz max., Minus 80 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.



Harmonic Distort	ion Mir	Minus 3 dBc max., Minus 4.5 dBc typ.				
Primary Power		190 – 260 VAC 50/60 Hz, single phase 3 kVA max. Type N female on rear panel Type N female on rear panel Type N female on rear panel DB–15 female on rear panel BNC–female on rear panel				
-		190 – 260 VAC				
		50/60 Hz, single phase				
		3 kVA max.				
Connectors						
RF input		Type N female on rear panel				
RF output		Type N female on rear panel				
RF output samp	ole port	Type N female on rear panel				
Interlock		DB-15 female on rear panel				
Video		BNC-female on rear panel				
GPIB		IEEE-488 female on rear panel				
Cooling						
•	(self–contai	ned fans), air entry and exit in rear.				
Weight		54 kg (120 lb.)				
Size (WxHxD)	50.3 x 29	9.7 x 68.6 cm / 19.8 x 11.7 x 27 in				
Size (WxHxD)	50.3 x 29	9.7 x 68.6 cm / 19.8 x 11.7 x 27				



## 500T2G8 2.5 - 7.5 GHz 500 W CW

Power (fundamental), CW @ Output Connector							
Nominal Linear @ 1 dB Compression	541 W / min. 500 W 125 W min.						
· · ·	lized for ±5 dB max. at rated power						
Frequency Response	2.5 – 7.5 GHz instantaneously						
Input for Rated Output 1 milliwatt							
Gain (at max. setting)57 dBGain Adjustment (continuous range)35 dB							
					Input Impedance	50 ohms, VSWR 2:1 max	
Output Impedance	50 ohms, VSWR 2.5:1 typ.						

### **Mismatch Tolerance**

Output power foldback protection at reflected power exceeding 100 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Video Pulse Capability

Pulse Width	05 microseconds min.
Pulse Rate (PRF)	100 kHz max.
RF Rise and Fall	30 ns max. (10% – 90%)
Delay	300 ns max. from pulse input to RF 90%
Pulse width distortion	±30 ns max. (50% points of output
	pulse width compared to 50%
	points of input pulse width)

### Noise Power Density

(pulse on) Minus 85 dBm/Hz max., Minus 95 dBm/Hz typ. Minus 140 dBm/Hz typ. (pulse off)

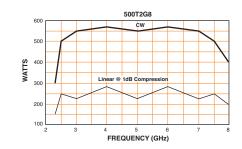


Harmonic Distortion	Minus 3 dBc max., Minus 3.5 dBc typ.					
Primary Power						
	208 VAC ± 10%					
	50/60 Hz, three phase					
	3.5 kVA max					
Connectors						
RF input	Type N female on rear pane					
RF output	7–16 DIN female on rear pane					
RF output sample port	Type N female on rear pane					
Interlock	DB-15 female on rear pane					
Video	BNC-female on rear pane					
GPIB	IEEE-488 female on rear pane					

### Cooling

Forced air (self-contained fans), air entry and exit in rear.

Weight	55 kg (120 lb.)
Size (WxHxD)	50.8 x 25.4 x 68.6 cm / 20 x 10 x 27 in.



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Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range **2.5 – 50 GHz** 

Power Range **40 W – 20 kW** 

### **1000T2G8B** 2.5 - 7.5 GHz 1000 W CW

Power (fundamental), CW, @ Output Connector Nominal 1.100 W / min. 900 W 2.5 – 2.7 GHz						
1,100	W / min. 900 W, 2.5 – 2.7 GHz,					
P. Comprossion	1000 W, 2.7 – 7.5 GHz 250 W min.					
D COMPLESSION	230 ₩ 11111.					
Flatness $\pm 8 \text{ dB}$ max., equalized for $\pm 3 \text{ dB}$ max. at rated power						
oonse	2.5 – 7.5 GHz instantaneously					
Output	1 milliwatt max.					
etting)	60 dB min.					
<b>nt</b> (continuous rar	nge) 35 dB min.					
e	50 ohms, VSWR 2:1 max.					
nce	50 ohms, VSWR 2.5:1 typ.					
	1,100 3 Compression dB max., equalize <b>bonse</b> <b>Output</b> etting) <b>it</b> (continuous ran <b>ie</b>					

### **Mismatch Tolerance**

Output power foldback protection at reflected power exceeding 200 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### **Noise Power Density**

Minus 80 dBm/Hz max., Minus 90 dBm/Hz typ.

### Harmonic Distortion

Minus 15 dBc max., Minus 17 dBc typ.

### **Primary Power**

190 – 255 VAC 50/60 Hz, three phase, delta (4 wire) 8 kVA max.



### Connectors

RF input	Type N female on rear p	anel
RF output Type WRD-250	) d30 waveguide flange on rear p	anel
RF output sample port	Type N female on rear p	anel
Interlock	DB-15 female on rear p	anel
GPIB	IEEE-488 female on rear p	anel

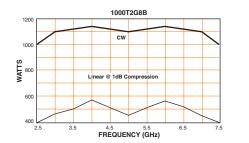
### Cooling

Weight

Forced air (self-contained fans), air entry and exit in rear.

		29	95 kg	(650	lb.)	
 = /	 					

Size (WxHxD) 56 x 160 x 82.3 cm / 22.1 x 63 x 32.4 in.



### **1500T2G8A** 2.5 – 7.5 GHz 1700 W CW

Power (fundamental), CW, @ Output	Connector					
Nominal 2000 W / min. 1,600 W, 2.5 –						
	1,700 W, 3 – 7.5 GHz					
Linear @ 1 dB Compression	400 W min					
Flatness ±8 dB max., equalized for	r ±6 dB max. at rated power					
Frequency Response						
2.	5 – 7.5 GHz instantaneously					
Input for Rated Output	1 milliwatt max					
Gain (at max. setting)	62 dB min					
Gain Adjustment (continuous range)	35 dB min					
Input Impedance	50 ohms, VSWR 2:1 max					
Output Impedance	50 ohms, VSWR 2.5:1 typ					
Mismatch Tolerance						

#### Mismatch Tolerance

Output power foldback protection at reflected power exceeding 300 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Noise Power Density

Minus 85 dBm/Hz max., Minus 95 dBm/Hz typ.

#### Harmonic Distortion

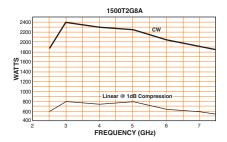
Minus 15 dBc max., Minus 17 dBc typ.

### Primary Power

190 – 255 VAC 50/60 Hz, three phase, delta (4 wire) 11 kVA max.



Connectors	
RF input	Type N female on rear panel
RF output Type	WRD-250 d30 waveguide flange on rear panel
RF output samp	le ports (forward and reflected)
	Type N female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel
Cooling	
Forced air	(self-contained fans), air entry and exit in rear.
Weight	296 kg (650 lb.)
Size (WxHxD)	56 x 160 x 82.3 cm / 22.1 x 63 x 32.4 in.



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Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 2.5 - 50 GHz

Power Range 40 W - 20 kW

## 200T4G8 4 – 8 GHz 200 W CW

undamental), CW, @ Output Connector 262 W / min. 200 W sion 100 W min.
±6 dB max. at rated power
4 – 8 GHz instantaneously
1 milliwatt max.
53 dB min.
ous range) 35 dB min.
50 ohms, VSWR 2:1 max.
50 ohms, VSWR 2.5:1 typ.

### **Mismatch Tolerance**

Output power foldback protection at reflected power exceeding 40 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Noise Power Density

Minus 64 dBm/Hz max., Minus 70 dBm/Hz typ.

#### Harmonic Distortion

Minus 4 dBc max., Minus 7 dBc typ.

#### **Primary Power**

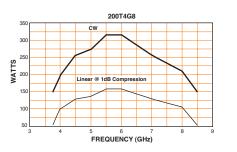
190 - 260 VAC 50/60 Hz, single phase 2 kVA max



Connectors	
RF input	Type N female on rear panel
RF output	Type N female on rear panel
RF output sample port	Type N female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel
Cooling	

Forced air (self-contained fans), air entry and exit in rear.

Weight	54 kg (120 lb.)
Size (WxHxD)	50.3 x 29.7 x 68.6 cm / 19.8 x 11.7 x 27 in.



## 250T6G18 6 - 18 GHz 250 W CW

Power Nominal	(fundamental), CW @ Output Connector 300 W / min. 250 W
Flatness	±6 dB max. at rated power
Frequency Response	6 – 18 GHz instantaneously
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	54 dB min.
Gain Adjustment (conti	nuous range) 35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max
Output Impedance	50 ohms, VSWR 2.5:1 typ.

### **Mismatch Tolerance**

Output power foldback protection at reflected power exceeding 50 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Video Pulse Capability

Pulse Width 1 microseconds min. Pulse Rate (PRF) 100 kHz max. RF Rise and Fall 30 ns max. (10% - 90%) 300 ns max. from pulse input to RF 90% Delay Pulse width distortion ±30 ns max. (50% points of output pulse width compared to 50% points of input pulse width)

#### Noise Power Density

(pulse on) Minus 65 dBm/Hz max., Minus 70 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.

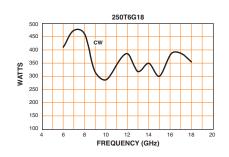
#### Harmonic Distortion

Minus 5 dBc max., Minus 8 dBc typ.



#### Primary Power 190-260 VAC, 50/60 Hz, single phase, 2 kVA max. Connectors RF input Type N female on rear panel Type WRD-650 waveguide flange on rear panel RF output RF output sample port Type N female on rear panel DB-15 female on rear panel Interlock BNC-female on rear panel Video GPIB IEEE-488 female on rear panel Cooling Forced air (self-contained fans), air entry and exit in rear. Weight 53 kg (115 lb.) Size (WxHxD)

50.3 x 29.7 x 68.6 cm / 19.8 x 11.7 x 27 in.



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Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range **2.5 – 50 GHz** 

Power Range **40 W – 20 kW** 

## **500T6G18** 6 - 18 GHz 500 W CW

(No Cabinet)

Export Classification

Rated Power Output (6 - 18 GH	Z)
Minimum	500 W
Typical	600 W
Flatness (maximum @ rated pov	ver) ±7 dB max.
Input for Rated Output	1 milliwatt max.
Gain Adjustment (continuous ro	inge) 35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max
Output Impedance	50 ohms, VSWR 2.5:1 typ.
Harmonic Distortion	Minus 15 dBc max
Connectors	
RF input RF output RF output sample ports Interlock	N, female, rear WRD–650 waveguide, rear N, female, rear 15–pin subminiature D, female
Cooling	Forced air (self–contained fans)
Weight	91 kg (201 lb.)
Size (WxHxD) 50.3 x 37.0	6 x 76.2 cm / 19.8 x 14.8 x 32 in.

50.3 x 35.6 x 71.1 cm / 19.8 x 14 x 28in.

EAR99



## **250T8G18** 7.5 – 18 GHz 250 W CW

Power (fundamental), CW @ 0	Dutput Connector			
Nominal	300 W / min. 250 W			
Linear @ 1 dB Compression	70 W min.			
Flatness $\pm 12$ dB max., equalized for $\pm 5$ dB max. at rated p				
Frequency Response 7.5 –18 GHz instantaneo				
Input for Rated Output	1 milliwatt max.			
Gain (at max. setting)	54 dB min.			
Gain Adjustment (continuous	range) 35 dB min.			
Input Impedance	50 ohms, VSWR 2:1 max.			
Output Impedance	50 ohms, VSWR 2.5:1 typ.			

### Mismatch Tolerance

Output power foldback protection at reflected power exceeding 50 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Video Pulse Capability

 Pulse Width
 05 microseconds min.

 Pulse Rate (PRF)
 100 kHz max.

 RF Rise and Fall
 30 ns max. (10% – 90%)

 Delay
 300 ns max. from pulse input to RF 90%

 Pulse width distortion
 ±30 ns max. (50% points of output pulse width compared to 50% points of input pulse width)



### **Noise Power Density**

(pulse on) Minus 70 dBm/Hz max., Minus 72 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.

### Harmonic Distortion

Below 10 GHz, Minus 5 dBc max., Minus 7 dBc typ. 10–12 GHz, Minus 8 dBc max., Minus 12 dBc typ. Above 12 GHz, Minus 20 dBc max., Minus 30 dBc typ.

### Primary Power

190 – 260 VAC, 50/60 Hz, single phase, 2.5 kVA max.

### Connectors

RF input RF output		Type N female	on rear panel
	Type WRD-750D24	waveguide flange	on rear panel
RF output	sample port	Type N female	on rear panel
Interlock		DB-15 female	on rear panel
Video		BNC-female	on rear panel
GPIB		IEEE-488 female	on rear panel

#### Cooling

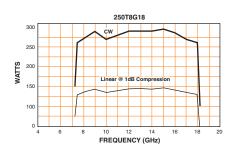
Weight

Forced air (self-contained fans), air entry and exit in rear.

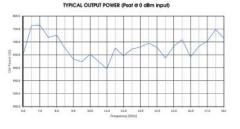
53 kg (115 lb.)

Size (WxHxD)

50.3 x 29.7 x 68.6 cm / 19.8 x 11.7 x 27 in.



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Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies



Frequency Range **2.5 – 50 GHz** 

Power Range 40 W - 20 kW

## **500T8G18** 7.5 - 18 GHz 500 W CW

Power (fundamental), CW, @ Output Connector			
Nominal	543 W / min. 500 W		
Linear @ 1 dB Compression	125 W min.		
Flatness ±11 dB max., equalized	d for ±3 dB max. at rated power		
Frequency Response	7.5 – 18 GHz instantaneously		
Input for Rated Output	1 milliwatt max.		
Gain (at max. setting)	57 dB min.		
Gain Adjustment (continuous rang	ge) 35 dB min.		
Input Impedance	50 ohms, VSWR 2:1 max.		
Output Impedance	50 ohms, VSWR 2.5:1 typ.		

### **Mismatch Tolerance**

Output power foldback protection at reflected power exceeding 100 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Noise Power Density

Minus 70 dBm/Hz max., Minus 72 dBm/Hz typ.

### Harmonic Distortion

Minus 20 dBc/Hz max., Minus 22 dBc/Hz typ.

### Primary Power

208 VAC  $\pm$  10%, 50/60 Hz, three phase, 4 kVA max.

### Connectors

 RF input
 Type N female on rear panel

 RF output
 Type WRD-750D24 waveguide flange on rear panel

 RF output sample port
 Type N female on rear panel

 GPIB
 IEEE-488 female on rear panel

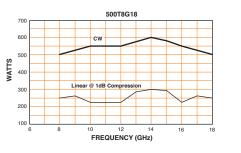
 Interlock
 DB-15 female on rear panel



 Weight
 91 kg (200 lb.)

 Size (WxHxD)
 Kite

50.3 x 40.6 x 68.6 cm / 19.8 x 16 x 27 in.



## **1000T8G18B** 7.5 - 18 GHz 1000 W CW

Power (fundamental), CW, @ Ou	Itput Connector		
Nominal	1,100 W		
Minimum 1000 W 7.	5 – 17 GHz, 925 W 17 – 18 GH		
Linear @ 1 dB Compression	250 W min.		
Flatness			
	ed for $\pm 3$ dB max. at rated power		
Frequency Response	7.5 – 18 GHz instantaneously		
Input for Rated Output	1 milliwatt max.		
Gain (at max. setting)	60 dB min.		
Gain Adjustment (continuous rar	nge) 35 dB min.		
Input Impedance	50 ohms, VSWR 2:1 max		
Output Impedance	50 ohms, VSWR 2.5:1 typ.		
Mismatch Toloranco			

#### Mismatch Tolerance

Output power foldback protection at reflected power exceeding 200 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Noise Power Density

Minus 70 dBm/Hz max., Minus 72 dBm/Hz typ.

### Harmonic Distortion

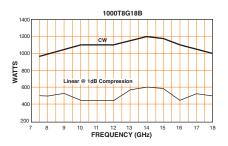
Minus 20 dBc max., Minus 27 dBc typ.

### Primary Power

190–255 VAC 50/60 Hz, three phase, delta (4 wire) 8 kVA max.



Connectors RF input RF output Type WRD-750 RF output sample port Interlock	Type N female on rear panel D24 waveguide flange on rear panel Type N female on rear panel DB–15 female on rear panel
GPIB	IEEE-488 female on rear panel
Cooling Forced air (self-contai	ned fans), air entry and exit in rear.
Weight	295 kg (650 lb.)



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Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 2.5 - 50 GHz

Power Range 40 W - 20 kW

## 1500T8G18 7.5 – 18 GHz 1500 W CW

Power (fundamental), CW, @ Output Nominal Linear @ 1 dB Compression	t Connector 2000 W / min. 1,500 W 375 W min.
Flatness	r 16 dP may at rated power
	r ±6 dB max. at rated power
Frequency Response 7	.5 – 18 GHz instantaneously
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	62 dB min.
Gain Adjustment (continuous range)	35 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, VSWR 2.5:1 typ.

### Mismatch Tolerance

Output power foldback protection at reflected power exceeding 300 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### **Noise Power Density**

Minus 70 dBm/Hz max., Minus 72 dBm/Hz typ.

### Harmonic Distortion

Minus 20 dBc max., Minus 27 dBc typ.

### Primary Power

190 - 255 VAC 50/60 Hz, three phase, delta (4 wire) 16 kVA max.



#### Connectors RF input Type N female on rear panel RF output Type WRD-750D24 waveguide flange on rear panel RF output sample ports (forward and reverse) Type N female on rear panel Interlock DB-15 female on rear panel GPIB IEEE-488 female on rear panel

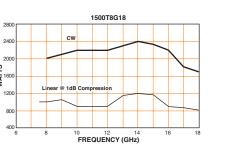
Cooling Forced air (self-contained fans), air entry and exit in rear.

546 kg (1,200 lb.)

#### Size (WxHxD) (2 cabinets) 56 x 160 x 84 cm / 22.1 x 63 x 33 in. per cabinet

Weight

WATT



### 40T18G26A 18 - 26.5 GHz 40 W CW

Power (fundamental), CW, @ Ou	utput Connector
Nominal	45 W / min. 40 W
Linear @ 1 dB Compression	10 W min.
Flatness	±8 dB max.
Frequency Response	18 – 26.5 GHz instantaneously
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	46 dB min.
Gain Adjustment (continuous rar	nge) 35 dB min.
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms, VSWR 2.5:1 typ

### **Mismatch Tolerance**

Output power foldback protection at reflected power exceeding 10 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Video Pulse Capability

Delay

Pulse Width	0.1 microseconds min.
Pulse Rate (PRF)	10 kHz max.
Duty Cycle	

Some restrictions apply. Contact AR with application requirements.

RF Rise and Fall 30 ns max. (10% - 90%) 300 ns max from pulse input to RF90% Pulse Width Distortion

30 ns max (50% points of output pulse width compared to 50% points of input pulse width) Noise Power Density (pulse off) Minus 140 dBm/Hz typ. Pulse Off Isolation 80 dB min., 90 dB typ. Pulse Input

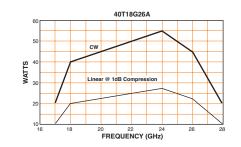
> TTL Level, 50 Ohm nominal termination, high level enables RF when video pulsing mode is selected.



Harmonic Distortion	–15 dBc max
Primary Power	
	99 – 260 VAC
	50/60 Hz, single phase
	850 VA max
Connectors	
RF input	Type K female on rear pane
RF output Type WR	-42 waveguide flange on rear pane
RF output sample port	Type K female on rear pane
Interlock	DB-15 female on rear pane
GPIB	IEEE-488 female on rear pane
Cooling	
•	nined fans), air entry and exit in rear
Weight	30 kg (65 lb.)

Size (WxHxD)

50.3 x 16.5 x 68.6 cm / 19.8 x 6.5 x 27 in.



9	Product Catalog   2022				or Sales, call: 215.723.8181   For an Applications Engineer, call: 800.933.8181					arworld.us		66
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 2.5 - 50 GHz

Power Range 40 W - 20 kW

### 130T18G26z5B 18 - 26.5 GHz 130 W CW

Power (fundamental), CW, @ Ou Nominal Linear @ 1 dB Compression	tput Connector 150 W / min. 130 W 30 W min.
Flatness	±9 dB max.
Frequency Response	18 – 26.5 GHz instantaneously
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	52 dB min.
Gain Adjustment (continuous rar	nge) 35 dB min.
Input Impedance	50 ohms, VSWR 2:1 max.
Output Impedance	50 ohms, VSWR 2.5:1 typ.

### **Mismatch Tolerance**

Output power foldback protection at reflected power exceeding 20 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### **Noise Power Density**

Minus 70 dBm/Hz max., Minus 75 dBm./Hz typ.

#### Harmonic Distortion

Minus 15 dBc max., Minus 20 dBc typ.

#### **Primary Power**

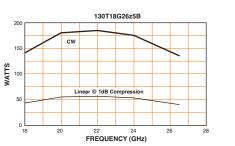
190 - 260 VAC 50/60 Hz, single phase 0.8 kVA max.



#### Connectors RF input Type K female on rear panel Type WR-42 waveguide flange on rear panel RF output RF output sample port Type K female on rear panel Interlock DB-15 female on rear panel GPIB IEEE-488 on rear panel Video BNC female on rear panel Cooling Forced air (self-contained fans), air entry and exit in rear. Weight 36 kg (80 lb.)

Size (WxHxD)

50.3 x 16.5 x 68.6 cm / 19.8 x 6.5 x 27 in.



### 200T18G26z5A 18 - 26.5 GHz 200 W CW

Power (fundamental), CW, @ Output	Connector				
Nominal Linear @ 1 dB Compression	225 W / min. 200 W 50 W min.				
Flatness	±10 dB max.				
Frequency Response 18	3–26.5 GHz instantaneously				
Input for Rated Output	1 milliwatt max.				
Gain (at max. setting)	53 dB min.				
Gain Adjustment (continuous range)	35 dB min.				
Input Impedance	50 ohms, VSWR 2:1 max				
Output Impedance	50 ohms, VSWR 2.5:1 typ.				

### **Mismatch Tolerance**

Output power foldback protection at reflected power exceeding 40 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Video Pulse Capability

Pulse Width	0.1 microseconds min.
Pulse Rate (PRF)	10 kHz max.
Duty Cycle	

Some restrictions apply. Contact AR with application requirements.

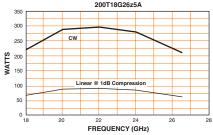
RF Rise and Fall 100 ns max. (10% - 90%) Delay 500 ns max from pulse input to RF90% Pulse Width Distortion

200 ns max (50% points of output pulse width compared to 50% points of input pulse width) Noise Power Density (pulse off) Minus 140 dBm/Hz typ. Pulse Off Isolation 80 dB min., 90 dB typ. Pulse Input

> TTL Level, 50 Ohm nominal termination, high level enables RF when video pulsing mode is selected.



Noise Power Density Minus	70 dBm/Hz max., Minus 75 dBm/Hz typ.
Harmonic Distortion	
	Minus 20 dBc max., Minus 30 dBc typ.
Primary Power	
	190 – 260 VAC 50/60 Hz, single phase 3 kVA max.
Connectors	
RF input RF output Type RF output sample port Interlock GPIB	Type K female on rear panel WR–42 waveguide flange on rear panel Type K female on rear panel DB–15 female on rear panel IEEE–488 on rear panel
Cooling Forced air (self-c	ontained fans), air entry and exit in rear.
Weight	91 kg (200 lb.)
Size (WxHxD)	50.3 x 43 x 81 cm / 19.8 x 17 x 32 in.
	200718G26754



(9	Pr	oduct Catalog	2022 For	Sales, call: 21	5.723.8181   F	or an Ap	plications En	gineer, call: 8	00.933.8181	arworld.us	5	67
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	TWT	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range **2.5 – 50 GHz** 

Power Range **40 W - 20 kW** 

130T26z5G40B

26.5 - 40 GHz

130 W CW

### **40T26G40A** 26.5 - 40 GHz 40 W CW

Power (fundamental), CW, @ Output Connector									
Nominal	45 W / min. 40 W								
Linear @ 1 dB Compression	10 W min.								
Flatness	±8 dB max.								
Frequency Response	26.5 – 40 GHz instantaneously								
Input for Rated Output	1 milliwatt max.								
Gain (at max. setting)	46 dB min.								
Gain Adjustment (continuous ra	nge) 35 dB min.								
Input Impedance	50 ohms, VSWR 2:1 max.								
Output Impedance	50 ohms, VSWR 2.5:1 typ.								

### **Mismatch Tolerance**

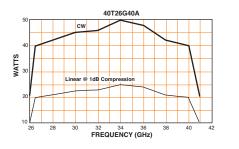
Output power foldback protection at reflected power exceeding 10 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Noise Power Density

Minus 60 dB	3m/Hz max., Minus 70 dBm/Hz typ.
Harmonic Distortion	–15 dbc max.
Primary Power	
	99 – 260 VAC
	50/60 Hz, single phase
	850 VA max.
Connectors	
RF input	Type K female on rear panel
RF output Type WR-2	28 waveguide flange on rear panel
RF output sample port	Type K female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 on rear panel



Cooling Forced air	r (self–contained fans), air entry and exit in rear.
Weight	30 kg (65 lb.)
Size (WxHxD)	50.3 x 16.5 x 68.6 cm / 19.8 x 6.5 x 27 in.



Power (fundamental), CW, @ Ou	utput Connector					
Nominal	150 W / min. 130 W					
Linear @ 1 dB Compression	30 W min.					
Flatness	±10 dB max.					
Frequency Response	26.5 – 40 GHz instantaneously					
Input for Rated Output	1 milliwatt max.					
Gain (at max. setting)	52 dB min.					
Gain Adjustment (continuous rai	nge) 35 dB min.					
Input Impedance	50 ohms, VSWR 2:1 max					
Output Impedance	50 ohms, VSWR 2.5:1 typ.					

### Mismatch Tolerance

Output power foldback protection at reflected power exceeding 20 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Noise Power Density

Minus 70 dBm/Hz max., Minus 75 dBm./Hz typ.

#### Harmonic Distortion

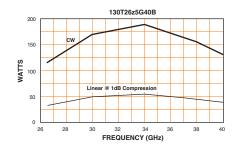
Minus 15 dBc max., Minus 20 dBc typ.

#### Primary Power

190 – 260 VAC 50/60 Hz, single phase 0.8 kVA max.



Connectors	
RF input	Type K female on rear panel
RF output	Type WR-28 waveguide flange on rear panel
RF output samp	le port Type K female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 on rear panel
Forced air	(self-contained fans), air entry and exit in rear.
	(self–contained fans), air entry and exit in rear. 36 kg (80 lb.)
Forced air	· · ·



(9)	Prod	luct Catalog	<b>2022</b> For Sa	les, call: 215.7	23.8181 For	an Appli	ications Engir	neer, call: 800	0.933.8181	arworld.us		68
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 2.5 - 50 GHz

Power Range 40 W - 20 kW

### 200T26z5G40A 26.5 - 40 GHz 200 W CW

Power (fundamental), CW, @ Output Connector				
Nominal	225 W / min. 200 W			
Linear @ 1 dB Compression	50 W min.			
Flatness	±10 dB max.			
Frequency Response	26.5 – 40 GHz instantaneously			
Input for Rated Output	1 milliwatt max.			
Gain (at max. setting)	53 dB min.			
Gain Adjustment (continuous ran	nge) 35 dB min.			
Input Impedance	50 ohms, VSWR 2:1 max.			
Output Impedance	50 ohms, VSWR 2.5:1 typ.			

#### Mismatch Tolerance

Output power foldback protection at reflected power exceeding 40 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

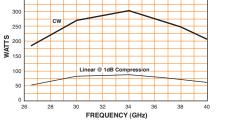
### Video Pulse Capability

Pulse Width	0.1 microseconds min.
Pulse Rate (PRF)	10 kHz max.
Duty Cycle	
Some restrictions a	pply. Contact AR with application
	requirements.
RF Rise and Fall	100 ns max. (10% – 90%)
Delay 500 ns	max from pulse input to RF90%
Pulse Width Distortion	
200 ns max (5	50% points of output pulse width
compared to	50% points of input pulse width)
Noise Power Density (pulse of	<li>f) Minus 140 dBm/Hz typ.</li>
Pulse Off Isolation	80 dB min., 90 dB typ.
Pulse Input	
TTL Lovel EO Ohn	a nominal termination, high lovel

TTL Level, 50 Ohm nominal termination, high level enables RF when video pulsing mode is selected.

## ..... henenen -

### Noise Power Density Minus 70 dBm/Hz max., Minus 75 dBm./Hz typ. Harmonic Distortion Minus 20 dBc max., Minus 30 dBc typ. **Primary Power** 190 – 260 VAC 50/60 Hz, single phase 3 kVA max. Connectors RF input Type K female on rear panel RF output Type WR-42 waveguide flange on rear panel Type K female on rear panel RF output sample port DB-15 female on rear panel Interlock GPIB IEEE-488 on rear panel Cooling Forced air (self-contained fans), air entry and exit in rear. Weight 91 kg (200 lb.) Size (WxHxD) 50.3 x 43 x 81 cm / 19.8 x 17 x 32 in. 200T2675G40A 35



## 70T40G50 40 - 50 GHz 70 W CW

Power (fundamental), CW, @ Outp	ut Flange
Minimum	70 W, 40 GHz – 45 GHz
	50 W, 45 GHz – 50 GHz
Flatness	±3 dB max. at rated power
Frequency Response	40 – 50 GHz instantaneously
Input for Rated Output	1 milliwatt max
Gain (at maximum setting)	47 dB min.
Gain Adjustment (continuous range	e) 35 dB min.
Input Impedance	50 ohms, VSWR 2:1 max
Output Impedance	50 ohms, VSWR 2.5:1 typ

### Mismatch Tolerance

Output power foldback protection at reflected power exceeding 20 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

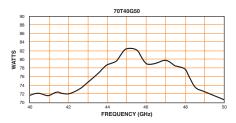
Spurious Response (non-harmonic) Minus 15 dBc typ. (excluding harmonics)

#### **Primary Power**

190 - 260 VAC 50/60 Hz, single phase 1.5 kVA max.



Connectors	
RF input	Type 2.4 mm female on rear panel
RF output	
	-22 waveguide flange on rear panel, all tapped
RF output samp	ole ports (forward and reflected)
	Type 2.4 mm female on rear panel
Remote Interfac	ce IEEE-488
Interlock	DB-15 female on rear panel
Cooling Forced air	(self-contained fans), air entry and exit in rear.
Weight	42 kg (93 lb.)
Size (WxHxD)	48.26 x 16.5 x 76.2 cm / 19 x 6.5 x 30 in.
Export Classificat	ion EAR99



**AR Companies** 

(9	P	roduct Catalog	2022 For	Sales, call: 21	5.723.8181   F	or an App	olications Eng	gineer, call: 8	00.933.8181	arworld.us		69
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companie

Frequency Range **2.5 – 50 GHz** 

Power Range 40 W - 20 kW

4000TP2G4

4000 W Pulse

2 - 4 GHz

### **100T40G50** 40 - 50 GHz 100 W CW

Power (fundamental), CW, @ Output Connector				
Minimum	100 W			
Flatness	±8 dB max.			
Frequency Response	40 – 50 GHz instantaneously			
Input for Rated Output	1 milliwatt max.			
Gain Adjustment (continuous range	e) 35 dB min.			
Input Impedance	50 ohms, VSWR 2:1 max.			
Output Impedance	50 ohms, VSWR 2.5:1 typ.			

### Mismatch Tolerance

Output power foldback protection at reflected power exceeding 8 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Modulation Capability:

Will faithfully reproduce AM, FM, or pulse modulation appearing on the input signal. AM peak envelope power limited to specified power.

### Harmonic Distortion

### Primary Power

190 – 260 VAC 50/60 Hz, single phase 1.5 kVA max.

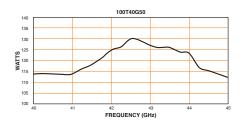
Minus 22 dBc typ.

### Connectors

RF input RF output	Type WR-	Type 2.4 mm female on rear panel -22 waveguide flange on rear panel
RF output	sample ports	Type 2.4 mm female on rear panel
Interlock		DB-15 female on rear panel
GPIB		IEEE-488 female on rear panel



Cooling Forced air (sel	If-contained fans), air entry and exit in rear.
Weight	82 kg (180 lb.)
Size (WxHxD)	50.3 x 43 x 76 cm / 19.8 x 17 x 30 in.
Export Classification	EAR99



Power (fundamental), Peak Pulse, @ Output				
Nominal	5800 W / min. 4.7 kW			
Flatness	±10 dB max.			
Frequency Response	2 – 4 GHz			
Input for Rated Output	1 milliwatt max.			
Gain (at max. setting)	66 dB min.			
Gain Adjustment (continuous range)	35 dB min.			
Input Impedance	50 ohms, VSWR 2.5:1 max.			
Output Impedance	50 ohms, VSWR 2.5:1 typ.			

### Mismatch Tolerance

Output pulse width foldback protection at peak reflected power exceeding 1000 W. Will operate without damage with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Pulse Capability

ing Dower Density	
Pulse Input	TTL level, 50 ohm nominal termination
Pulse Off Isolation	80 dB min., 90 dB typ.
com	pared to 50% points of input pulse width)
±50 n	s max. (50% points of output pulse width
Pulse Width Distortion	1
Delay	300 ns max. from pulse input to RF 90%
RF Rise and Fall	35 ns max. (10% – 90%)
Duty Cycle	4% max.
Pulse Rate (PRF)	100 kHz max.
Pulse Width	07 – 50 microseconds

### Noise Power Density

(pulse on) Minus 57 dBm/Hz max., Minus 59 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.

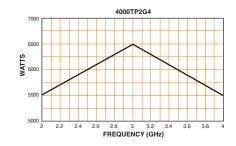


Harmonic Distortion	Minus 0 dBc max.
Primary Power	208 VAC ± 10%
	208 VAC ±10%
	Three phase, 50/60 Hz
	3 kVA max.
Connectors	
RF input	Type N female on rear panel
RF output	Type N female on rear panel
RF output forward sample port	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel

### Cooling

Forced air (self-contained fans), air entry and exit in rear

Weight	75 kg (165 lb.)
Size (WxHxD)	51 x 30.5 x 84 cm / 19.8 x 12 x 33 in.



(9)	Proc	luct Catalog	<b>2022</b> For Sa	les, call: 215.7	723.8181   For a	an Appl	ications Engir	neer, call: 800	.933.8181	arworld.us		70
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	<b>AR</b> Companies

Frequency Range 2.5 - 50 GHz

Power Range 40 W - 20 kW

### 6900TP2G4 2 - 4 GHz 6900 W Pulse

Power (fundamental), P Nominal	eak Pulse, @ Output 9000 W; Minimum, 6900 W
Flatness	±8 dB maximum, ±4 dB at rated power
Frequency Response	2 – 4 GHz
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	68 dB min.
Gain Adjustment (contin	uous range) 35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max.
Output Impedance	50 ohms, VSWR 2.5:1 typ.

### Mismatch Tolerance

Output pulse width foldback protection at peak reflected power exceeding 4000 watts. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

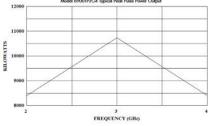
### Pulse Capability

Pulse Width	0.2 – 50 microseconds.
Pulse Rate (PRF)	100 kHz maximum
Duty Cycle	4% maximum.
RF Rise and Fall	70 ns max (10% – 90%).
Delay	500 ns maximum from pulse input to RF 90%
Pulse Width Disto	rtion
	FO as a minute (FOO) a sinte of a day to day

maximum (50% points of output pulse
red to 50% points of input pulse width)
80 dB minimum, 90 dB typical
TTL level, 50 ohm nominal termination



Noise Power Density	
	Minus 55 dBm/Hz (maximum); Minus 84
	dBm/Hz (typical)
	(pulse off) Minus 140 dBm/Hz (typical)
Harmonic Distortion	Minus 15 dBc max
Primary Power	See Model Configurations
Connectors	
RF input:	Type N female on rear panel
RF output:	Type DIN 7-16 female on rear panel
RF output sample ports	s (forward and reflected):
	Type N female on rear panel
Pulse input:	Type BNC female on rear panel
GPIB:	IEEE-488 female on rear panel
Interlock:	DB-15 female on rear panel
Cooling Forced air (self-	contained fans), air entry and exit in rear.
Weight	121 kg, 265 lbs
Size (WxHxD)	50.3 x 48 x 89 cm, 19.8 x 19 x 35 in
Model (	900TF2G4 Typical Peak Pulse Power Cultaut



### 12000TP2G4 2 - 4 GHz 12000 W Pulse

Pulse, @ Output 14000 W / min. 12000 W
±10 dB max., ±6 dB at rated power
2 – 4 GHz
1 milliwatt max.
70.8 dB min.
s range) 35 dB min.
50 ohms, VSWR 2.5:1 max
50 ohms, VSWR 2.5:1 typ

### Mismatch Tolerance

Output pulse width foldback protection at peak reflected power exceeding 3000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Pulse Capability

Pulse Width	0.1 – 40 microseconds
Pulse Rate (PRF)	20 kHz max.
Duty Cycle	4% max.
RF Rise and Fall	150 ns max. (10% – 90%)
Delay	500 ns max. from pulse input to RF 90%
Pulse Width Distorti	on
	ns max. (50% points of output pulse width mpared to 50% points of input pulse width)
Pulse Off Isolation	80 dB min., 90 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination

Minus 55 dBm/Hz max., Minus 70 dBm/Hz typ. (pulse on) (pulse off) Minus 140 dBm/Hz typ.



Harmonic Distortion	Minus 10 dBc max.
Primary Power	
	208 VAC ±10%
	Three phase, delta (4-wire), 50/60 Hz
	9 kVA max.
Connectors	
RF input	Type N female on rear panel
RF output	Type 7–16 DIN female on rear panel
RF output forward sar	nple ports
(forward and reflected	ed) Type N female on rear panel
Pulse input	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel
Cooling	
Forced air (self-	contained fans), air entry and exit in rear.
Weight	273 kg (600 lb.)
Size (WxHxD)	55.9 x 114 x 96.5 cm / 22 x 45 x 38 in.

### 12000TP2G4 18.000 17,000 16,000 LA 15,000 14.000 13,000

2 2.2 2.4 2.6 2.8 3 3.2 3.4 3.6 3.8

FREQUENCY (GHz)

Export Classification

12.000

3A999.d

9	Pro Pro	oduct Catalog	2022 For S	Sales, call: 21	5.723.8181   Fo	or an Ap	plications Eng	gineer, call: 8	00.933.8181	arworld.us		/1
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range **2.5 – 50 GHz** 

Power Range **40 W – 20 kW** 

### **2000TP2G8B** 2.5 – 7.5 GHz

2000 W Pulse

Power (fundamental), Peak Pulse, @ Output Connector Nominal 2,200 W / min. 2000					
	1	2,200 ₩ / 11111. 2000 ₩			
Flatness	±13 dB max., equalize	ed for $\pm 4$ dB max. at rated power			
Frequency	y Response	2.5 – 7.5 GHz instantaneously			
Input for	Rated Output	1 milliwatt max.			
<b>Gain</b> (at r	nax. setting)	63 dB min.			
Gain Adju	stment (continuous ran	nge) 35 dB min.			
Input Imp	edance	50 ohms, VSWR 2.5:1 max			
Output Im	ipedance	50 ohms, VSWR 2.5:1 typ.			

#### Mismatch Tolerance

Output pulse width foldback protection at peak reflected power exceeding 1000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

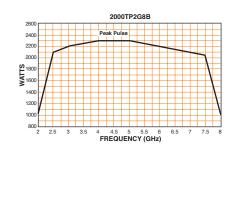
#### Pulse Capability

Pulse Width	07 – 30 microseconds
Pulse Rate (PRF)	100 kHz max
Duty Cycle	4% max
RF Rise and Fall	30 ns max (10% – 90%)
Delay	300 ns max. from pulse input to RF 90%
Pulse Width Distortio	n
±30	ns max (50% points of output pulse width
con	npared to 50% points of input pulse width)
	00 JD 00 JD +
Pulse Off Isolation	80 dB min., 90 dB typ

Harmonic Dist	ortion	Minus 0 dBc max., Minus 1.5 dBc typ.
(pulse off)		Minus 140 dBm/Hz typ.
(pulse on)	Minus	70 dBm/Hz max., Minus 72 dBm/Hz typ.



**Primary Power** 190 - 260 VAC Single phase, 50/60 Hz 1.2 kVA max. Connectors RF input Type N female on rear panel Type N female on rear panel RF output RF output sample port Type N female on rear panel Type BNC female on rear panel Pulse input Interlock DB-15 female on rear panel IEEE-488 female on rear panel GPIB Cooling Forced air (self-contained fans), air entry and exit in rear. Weight 53 kg (115 lb.) 50.3 x 25.4 x 82 cm / 19.8 x 10 x 32 in. Size (WxHxD)



### 8000TP2z7G3z1 2.7 - 3.1 GHz 8000 W Pulse

Power (fundamental), CW, @ Nominal Flatness Frequency Response	Output Connector 10000 W / min. 8000 W ±6 dB max. 2.7 – 3.1 GHz instantaneously
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	69 dB min.
Gain Adjustment (continuous	range) 35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max.
Output Impedance	50 ohms, VSWR 2.5:1 typ.
Mismatch Toloranoo	

### Mismatch Tolerance

Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

### Pulse Capability

Harmonic Distortion

N

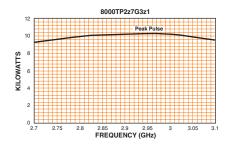
Pulse Width Pulse Rate (PRF)	0.1 – 40 microseconds 100 kHz max.
Duty Cycle	1% max.
RF Rise and Fall	50 ns max. (10% – 90%)
Delay	500 ns max. from pulse input to RF 90%
Pulse Width Distorti	n
	ns max. (50% points of output pulse width npared to 50% points of input pulse width)
Pulse Off Isolation	80 dB min., 90 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination
oise Power Density	us 55 dBm/Hz may Minus 80 dBm/Hz typ

(pulse on) Minus 55 dBm/Hz max., Minus 80 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.

Minus 20 dBc max.



Primary Power	190 – 255 VAC 50/60 Hz, three phase, delta (4 wire) 2 kVA max.
Connectors	
RF input	Type N female on rear panel
RF output	Type DIN 7–16 female on rear panel
RF output samp	le ports (forward and reflected)
	Type N female on rear panel
RF output	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel
Cooling Forced air	(self-contained fans), air entry and exit in rear.
Weight	61 kg (135 lb.)
Size (WxHxD)	50.3 x 26 x 88.9 cm / 19.8 x 10.3 x 35 in.



(9)	Prod	luct Catalog	<b>2022</b> For Sa	les, call: 215.7	723.8181   For a	an Appl	ications Engir	neer, call: 800	0.933.8181	arworld.us		72
Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	<b>AR</b> Companies

Frequency Range 2.5 - 50 GHz

Power Range 40 W - 20 kW

### 4000TP4G8 4 - 8 GHz 4000 W Pulse

Power (fundamental), Peak Pulse, @ Output           Nominal         5000 W / min. 3.8 kW from 4 - 4.5 GHz           4 kW from 4.5 - 7.5 GHz. 3.8 kW from 7.5 - 8 GHz				
Flatness	±10 dB min.			
Frequency Response	4 – 8 GHz			
Input for Rated Output	1 milliwatt max.			
Gain (at max. setting)	66 dB min.			
Gain Adjustment (continuous range)	35 dB min.			
Input Impedance	50 ohms, VSWR 2.5:1 max			
Output Impedance	50 ohms, VSWR 2.5:1 typ.			

#### Mismatch Tolerance

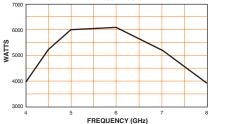
Output pulse width foldback protection at peak reflected power exceeding 1000 W. Will operate without damage with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Pulse Capability

Pulse Width	07 – 50 microseconds
Pulse Rate (PRF)	100 kHz max.
Duty Cycle	4% max.
RF Rise and Fall	35 ns max. (10% to 90%)
Delay	300 ns max. from pulse input to RF 90%
Pulse Width Distortion	1
±50 n	s max. (50% points of output pulse width
com	pared to 50% points of input pulse width)
Pulse Off Isolation	80 dB min., 90 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination



Noise Power Density (pulse on) Mi (pulse off)	nus 65 dBm/Hz max., Minus 75 dBm/Hz typ. Minus 140 dBm/Hz typ.
Harmonic Distortion	Minus 0 dBc max (Base Model), –20 dBc max (S2K option installed and active)
Primary Power	208 VAC ± 10% 50/60 Hz, three phase 2.5 kVA max
Connectors RF input RF output Type RF output forward s Pulse input Interlock GPIB	Type N female on rear panel e WRD–350 waveguide flange on rear panel sample port Type N female on rear panel Type BNC female on rear panel DB–15 female on rear panel IEEE–488 female on rear panel
Cooling Forced air (se	If-contained fans), air entry and exit in rear.
Weight	71 kg (155 lb.)
Size (WxHxD) See Model Cont	iguratons on spec sheet via <u>www.arworld.us</u>
7000	4000TP4G8



### 7400TP4G8 4 - 8 GHz 7400 W Pulse

Power (fundamental), Peak Nominal	x Pulse, @ Output 10000 W / min. 7,400 W
Flatness	±10 dB min., ±5 dB at rated power
Frequency Response	4 – 8 GHz
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	69 dB min.
Gain Adjustment (continuo	us range) 35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max.
Output Impedance	50 ohms, VSWR 2.5:1 typ.

#### Mismatch Tolerance

Output pulse width foldback protection at peak reflected power exceeding 2000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Pulse Capability

Pulse Width	0.2 – 50 microseconds
Pulse Rate (PRF)	100 kHz max.
Duty Cycle	4% max.
RF Rise and Fall	70 ns max. (10% – 90%)
Delay	500 ns max. from pulse input to RF 90%
Pulse Width Distortio	n
±50	ns max. (50% points of output pulse width
con	npared to 50% points of input pulse width)
Pulse Off Isolation	80 dB min., 90 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination

Minus 65 dBm/Hz max., Minus 85 dBm/Hz typ. (pulse on) (pulse off) Minus 140 dBm/Hz typ.

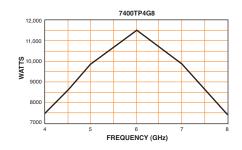


Harmonic Distor	tion Minus 12 dBc typ.
Primary Power	208 VAC ± 10% 50/60 Hz, three phase, delta (4 wire) 5 kVA max.
Connectors	
RF input	Type N female on rear panel
RF output	Type WRD-350 waveguide flange on rear panel
RF output forw	ard and reflected sample ports
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel

#### Cooling

Forced air (self-contained fans), air entry and exit in rear.

Weight	123 kg (270 lb.)
Size (WxHxD)	50.3 x 53 x 91 cm / 19.8 x 24 x 36 in.



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Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range 2.5 - 50 GHz

Power Range 40 W - 20 kW

### 12000TP4G8 4 - 8 GHz 12000 W Pulse

Power (fundamental), Peak Puls Nominal	se, @ Output 14000 W / min. 12000 W
Flatness ±	10 dB max., ±6 dB at rated power
Frequency Response	4 – 8 GHz
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	70.8 dB min.
Gain Adjustment (continuous ra	nge) 35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max.
Output Impedance	50 ohms, VSWR 2.5:1 typ.

#### Mismatch Tolerance

Output pulse width foldback protection at peak reflected power exceeding 3000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Pulse Capability

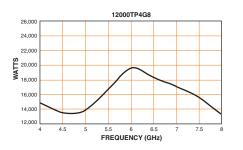
Pulse Width	0.1 – 40 microseconds
Pulse Rate (PRF)	20 kHz max.
Duty Cycle	4% max.
RF Rise and Fall	150 ns max. (10% – 90%)
Delay	500 ns max. from pulse input to RF 90%
Pulse Width Distortio	n
	ns max. (50% points of output pulse width pared to 50% points of input pulse width)
Pulse Off Isolation	80 dB min., 90 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination

#### (pulse on) Minus 55 dBm/Hz max., Minus 70 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.



Harmonic Distortion	Minus 10 dBc max.	
Primary Power	208 VAC ±109 Three phase, delta (4–wire), 50/60 H 9 kVA ma:	
Connectors		
RF input	Type N female on rear panel	
RF output	Type WRD-350 on rear panel	
RF output forward samp	le ports	
(forward and reflected)	) Type N female on rear panel	
Pulse input	Type BNC female on rear panel	
Interlock	DB-15 female on rear panel	
GPIB	IEEE-488 female on rear panel	
Cooling		
Forced air (self-co	ntained fans), air entry and exit in rear.	
Weight	273 kg (600 lb.)	
Size (WxHxD)	55.9 x 114 x 96.5 cm / 22 x 45 x 38 in.	

**Export Classification** 



### 1000TP8G18 7.5 - 18 GHz 1000 W Pulse

Power (fur Nomina	· ·	Pulse, @ Output Connector 1,800 W / min. 1000 W
Flatness	±8 dB max., equ	alized for $\pm 3$ dB max. at rated power
Frequency	Response	7.5 – 18 GHz instantaneously
Input for Rated Output		1 milliwatt max.
Gain (at max. setting)		60 dB min.
Gain Adjustment (continuous range)		s range) 35 dB min.
Input Impedance		50 ohms, VSWR 2.5:1 max
Output Impedance		50 ohms, VSWR 2.5:1 typ.

#### Mismatch Tolerance

Output pulse width foldback protection at peak reflected power exceeding 500 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Pulse Capability

aloo oapabililiy	
Pulse Width	07 – 100 microseconds
Pulse Rate (PRF)	100 kHz max.
Duty Cycle	4% max.
RF Rise and Fall	30 ns max. (10% – 90%)
Delay	300 ns max. from pulse input to RF 90%
Pulse Width Distortio	n
±30 I	ns max. (50% points of output pulse width
com	pared to 50% points of input pulse width)
Pulse Off Isolation	80 dB min. / 90 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination

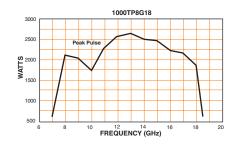
#### Noise Power Density

(pulse on) Minus 57 dBm/Hz max., Minus 58 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz tvp.



Harmonic Distortion Mir	nus 2 dBc max., Minus 3 dBc typ.
Primary Power	190 – 260 VAC 50/60 Hz, single phase 1.5 kVA max.
Connectors	
RF input	Type N female on rear panel
RF output Type WRD-750D24	waveguide flange on rear panel
RF output forward sample port	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel
Cooling Forced air (self-containe	d fans), air entry and exit in rear.

Weight	52 kg (115 lb.)
Size (WxHxD)	50.3 x 25.4 x 69 cm / 19.8 x 10 x 27 in.
Export Classification	3A999.d



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Frequency Range **2.5 – 50 GHz** 

Power Range **40 W - 20 kW** 

### **2000TP8G18** 7.5 - 18 GHz 2000 W Pulse

Power (fundamental), Peak Pulse, @ Output Connector Nominal 2,500 W / min. 2000 W							
Flatness ±8 dB max., equal	ized for $\pm 3$ dB max. at rated power						
Frequency Response 7.5 – 18 GHz instantaneous							
Input for Rated Output 1 milliwatt ma							
Gain (at max. setting)	63 dB min.						
Gain Adjustment (continuous r	ange) 35 dB min.						
Input Impedance	50 ohms, VSWR 2.5:1 max.						
Output Impedance	50 ohms, VSWR 2.5:1 typ.						

#### **Mismatch Tolerance**

Output pulse width foldback protection at average reflected power exceeding 1000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Pulse Capability

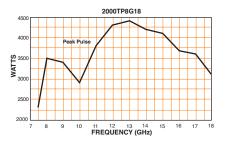
Pulse Width	07 – 30 microseconds
Pulse Rate (PRF)	100 kHz max.
Duty Cycle	4% max.
RF Rise and Fall	30 ns max (10% – 90%)
Delay	300 ns max. from pulse input to RF 90%
Pulse Width Distortion	1
±30	) ns max (50% points of output pulse width
COL	npared to 50% points of input pulse width)
Pulse Off Isolation	80 dB min. / 90 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination

#### Noise Power Density

(pulse on) Minus 55 dBm/Hz max., Minus 58 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.



Harmonic Distortion	Minus 18 dBc max., Minus 20 dBc typ.		
Primary Power	50/60 Hz, single phase		
Connectors RF input RF output Type WRD- RF output forward sam Pulse input Interlock GPIB	190 – 260 VAC 50/60 Hz, single phase 3 kVA max. Type N female on rear panel port Type N female on rear panel Type BNC female on rear panel DB–15 female on rear panel IEEE–488 female on rear panel IEEE–488 female on rear panel 28 female on rear panel 29 kg (170 lb.)		
Cooling Forced air (self-	contained fans), air entry and exit in rear.		
Weight	72 kg (170 lb.)		
Size (WxHxD) 50.3.	x 39.4 x 77.5 cm / 19.8 x 15.5 x 30.5 in.		
Export Classification	24000 -		



### **10000TP8G10** 8 - 10 GHz 10000 W Pulse

Power (fundamental), Peak Pulse, @	Output
Nominal	11000 W / min. 10000 W
Flatness	±6 dB min.
Frequency Response	8 – 10 GHz
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	70 dB min.
Gain Adjustment (continuous range)	35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max
Output Impedance	50 ohms, VSWR 2.5:1 typ

#### Mismatch Tolerance

Output pulse width foldback protection at peak reflected power exceeding 5000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Pulse Capability

07 – 40 microseconds
100 kHz max.
4% max.
30 ns max. (10% – 90%)
300 ns max. from pulse input to RF 90%
1
is max. (50% points of output pulse width
pared to 50% points of input pulse width)
80 dB min., 90 dB typ.
TTL level, 50 ohm nominal termination

#### Noise Power Density

(pulse on) Minus 65 dBm/Hz max., Minus 69 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.

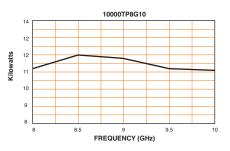


Harmonic Distortio	Minus 15 dBc max.
Primary Power	190 – 260 VAC
-	50/60 Hz single phase
	2.5 KVA max.
Connectors	
RF input	Type N precision female on rear panel
RF output	Type WR90 waveguide flange on rear panel
RF output forwar	d and reflected sample ports
	Type N precision female on rear panel
Pulse input	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	
IEEE-488 fema	le on rear panel

#### Cooling

Forced air (self-contained fans), air entry and exit in rear.

Weight	107 kg (235 lb.)
Size (WxHxD)	50.3 x 49 x 74 cm / 19.8 x 19 x 29 in.



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Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

Frequency Range **2.5 – 50 GHz** 

Power Range **40 W – 20 kW** 

### **4000TP8G12** 8 - 12 GHz 4000 W Pulse

Power (fundamental), Peak Pulse, @ Nominal	Output 5,500 W / min. 4,200 W
Flatness	±10 dB max.
Frequency Response	8 – 12 GHz
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	66 dB min.
Gain Adjustment (continuous range)	35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max.
Output Impedance	50 ohms, VSWR 2.5:1 typ.

#### **Mismatch Tolerance**

Output pulse width foldback protection at peak reflected power exceeding 1000 W. Will operate without damage with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Pulse Capability

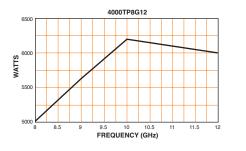
Pulse Width	07 – 50 microseconds
Pulse Rate (PRF)	100 kHz max.
Duty Cycle	4% max.
RF Rise and Fall	35 ns max. (10% – 90%)
Delay	300 ns max. from pulse input to RF 90%
Pulse Width Distort	on
±50	) ns max. (50% points of output pulse width
CO	mpared to 50% points of input pulse width)
Pulse Off Isolation	80 dB min., 90 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination

#### **Noise Power Density**

(pulse on) Minus 57 dBm/Hz max., Minus 59 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.



Harmonic Distortio	n Minus 10 dBc max.
Primary Power	208 VAC ± 10% or 190 – 260 VAC 50/60 Hz, three phase or single phase 3 kVA max.
Connectors	
RF input	Type N female on rear panel
RF output	Type WRD-90 waveguide flange on rear panel
RF output forwar	d sample port Type N female on rear panel
Pulse input	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel
Cooling	
Forced air (	self-contained fans), air entry and exit in rear
Weight	75 kg (165 lb.)
Size (WxHxD)	51 x 44.5 x 69 cm / 19.8 x 17.5 x 27 in



### 8300TP8G12 8 - 12 GHz 8300 W Pulse

Power (fundamental), Pea	k Pulse, @ Output
Nominal	10000 W / min. 8,300 W
Flatness	±10 dB max., ±5 dB at rated power
Frequency Response	8 – 12 GHz
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	69 dB min.
Gain Adjustment (continue	ous range) 35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max
Output Impedance	50 ohms, VSWR 2.5:1 typ.

#### **Mismatch Tolerance**

Output pulse width foldback protection at peak reflected power exceeding 4000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

Pulse Capability
Pulse Width

oise Power Density	
Pulse Input	TTL level, 50 ohm nominal termination
Pulse Off Isolation	80 dB min., 90 dB typ.
	pared to 50% points of input pulse width)
±50 r	ns max. (50% points of output pulse width
Pulse Width Distortion	n
Delay	500 ns max. from pulse input to RF 90%
RF Rise and Fall	70 ns max. (10% – 90%)
Duty Cycle	4% max.
Pulse Rate (PRF)	100 kHz max.
	0.2 00 11101030001103

0.2 - 50 microseconds

#### Noise Power Density

(pulse on) Minus 70 dBm/Hz max., Minus 73 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.



Harmonic Distortion	Minus 15 dBc max.
Primary Power	208 VAC ± 10% 50/60 Hz, three phase, delta (4 wire) 5 kVA max.
Connectors	
RF input	Type N precision female on rear panel
	Type WR-90 waveguide flange on rear panel
	and reflected sample ports
	Type N precision female on rear panel
Pulse input	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel

#### Cooling

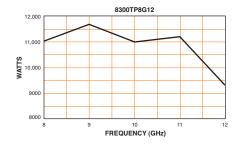
Weight

Forced air (self-contained fans), air entry and exit in rear.

121 kg (265 lb.)

Size (WxHxD)

50.3 x 43 x 84 cm / 19.8 x 17 x 33 in.



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Contents	Find it Fast	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	<b>AR</b> Companies

Frequency Range 2.5 - 50 GHz

Power Range 40 W - 20 kW

### 20000TP8G12 8 – 12 GHz 20000 W Pulse

Power (fundamental), Peak Pulse, @ Nominal	22000 W / min. 20000 W
Flatness ±10 dl	B max., ±6 dB at rated power
Frequency Response	8 – 12 GHz
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	73 dB min.
Gain Adjustment (continuous range)	35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max.
Output Impedance	50 ohms, VSWR 2.5:1 typ.

#### Mismatch Tolerance

Output pulse width foldback protection at peak reflected power exceeding 5000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Pulse Capability

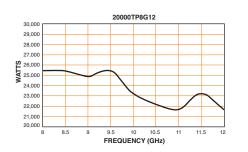
Pulse Width	0.1 – 40 microseconds
Pulse Rate (PRF)	20 kHz max.
Duty Cycle	4% max.
RF Rise and Fall	150 ns max. (10% – 90%)
Delay	500 ns max. from pulse input to RF 90%
Pulse Width Distortion	1
±50 r	is max. (50% points of output pulse width
com	pared to 50% points of input pulse width)
Pulse Off Isolation	80 dB min., 90 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination

#### Noise Power Density

(pulse on) Minus 65 dBm/Hz max., Minus 85 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.

Harmonic Distortion	Minus 19 dBc max
Primary Power	208 VAC ±10% Three phase, delta (4–wire), 50/60 Hz 12 kVA max
Connectors	
RF input	Type N female on rear panel
RF output	Type WRD-90 female on rear panel
RF output forward	sample ports
(forward and refl	ected) Type N female on rear panel
Pulse input	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel
Cooling Earoad air (so	If–contained fans), air entry and exit in rear.
Weight	575 kg (1,250 lb.)
Size (WxHxD) 5	7.5 x 196 x 82.5 cm / 22.6 x 77.2 x 32.5 in.

Export Classification



### 3000TP12G18 12 - 18 GHz 3000 W Pulse

Power (fundamental), Peak Pulse, @	•
Nominal	3,800 W / min. 3000 W
Flatness	±10 dB max.
Frequency Response	12 – 18 GHz
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	65 dB min.
Gain Adjustment (continuous range)	35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max
Output Impedance	50 ohms, VSWR 2.5:1 typ.

#### Mismatch Tolerance

Output pulse width foldback protection at peak reflected power exceeding 1000 W. Will operate without damage with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Pulse Capability

Pulse Width	07 – 50 microseconds
Pulse Rate (PRF)	100 kHz max.
Duty Cycle	4% max.
RF Rise and Fall	30 ns max. (10% – 90%)
Delay	300 ns max. from pulse input to RF 90%
Pulse Width Distortio	n
±30	ns max. (50% points of output pulse width
com	pared to 50% points of input pulse width)
Pulse Off Isolation	80 dB min., 90 dB typ.
Pulse Input	TTL level, 50 ohm nominal termination

Noise Power Density Minus 55 dBm/Hz max., Minus 65 dBm/Hz typ. (pulse on) (pulse off) Minus 140 dBm/Hz typ.



Harmonic Distortion	Minus 8 dBc max.
Primary Power	190 – 260 VAC 50/60 Hz, single phase 2 kVA max.
Connectors	
RF input	Type N female on rear panel
RF output Type	WR-62 waveguide flange on rear panel
RF output forward sam	ple port
	Type N female on rear panel
Pulse input	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel

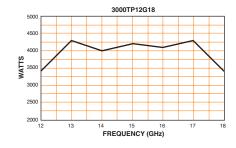
#### Cooling

Forced air (self-contained fans), air entry and exit in rear

Weight	52 kg (115 lb.)
	$50.2 \times 26 \times 91 \text{ om} / 10.9 \times 10 \times 21.0 \text{ in}$

Size (WxHxD)

50.3 x 26 x 81 cm / 19.8 x 10 x 31.9 in.



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Frequency Range **2.5 – 50 GHz**  Power Range **40 W – 20 kW** 

### **5700TP12G18** 12 - 18 GHz 5700 W Pulse

Power (fundamental), Peak Pulse, Nominal	@ Output 7000 W / min. 5700 W
Flatness ±10	dB min., ±5 dB at rated power
Frequency Response	12 – 18 GHz
Input for Rated Output	1 milliwatt max.
Gain (at max. setting)	67 dB min.
Gain Adjustment (continuous range	e) 35 dB min.
Input Impedance	50 ohms, VSWR 2.5:1 max.
Output Impedance	50 ohms, VSWR 2.5:1 typ.

#### **Mismatch Tolerance**

Output pulse width foldback protection at peak reflected power exceeding 3000 W. Will operate without damage or oscillation with any magnitude and phase of source and load impedance. May oscillate with unshielded open due to coupling to input. Should not be tested with connector off.

#### Pulse Capability

Pulse Input	TTL level, 50 ohm nominal termination			
Pulse Off Isolation	80 dB min., 90 dB typ.			
	npared to 50% points of input pulse width)			
±50 ns max. (50% points of output pulse width				
Pulse Width Distortio				
Delay	500 ns max. from pulse input to RF 90%			
RF Rise and Fall	70 ns max. (10% – 90%)			
Duty Cycle	4% max.			
Pulse Rate (PRF)	100 kHz max.			
Pulse Width	0.2 – 50 microseconds			

#### Noise Power Density

(pulse on) Minus 55 dBm/Hz max., Minus 80 dBm/Hz typ. (pulse off) Minus 140 dBm/Hz typ.



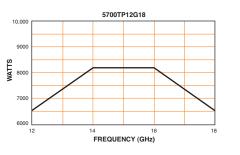
Harmonic Distorti	on Minus 15 dBc max.
Primary Power	208 ±10% VAC
	50/60 Hz, three phase, delta (4 wire) 5 kVA max.
Connectors	
RF input	Type N precision female on rear panel
RF output	Type WR-62 waveguide flange on rear panel
RF output forv	vard and reflected sample ports
	Type N precision female on rear panel
Pulse input	Type BNC female on rear panel
Interlock	DB-15 female on rear panel
GPIB	IEEE-488 female on rear panel

#### Cooling

Forced air (self-contained fans), air entry and exit in rear.

Weight	121 kg (265 lb.)

Size (WxHxD) 50.3 x 43 x 84 cm / 19.8 x 17 x 33 in.



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Test systems by AR can deliver a solution that integrates all your testing needs for radiated and conducted immunity, radiated and conducted emissions, and more. With a highly experienced team, we have the expertise to supply fully automated systems needed to test various EMC standards.



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### IEC 61000-4-3 Predefined Systems

### SSIEC3V3M

3 V/m field strength with up to a 3 meter test distance from 80 MHz - 6 GHz

System Frequency Rang	90 MHz – 6 GHz
CW Field Strength 5.4	//m (3 V/m w/ 80% AM per IEC 61000–4–3)
Test Distance	Up to 3 meters
UFA	1.5 x 1.5 meters per IEC 61000-4-3

#### Amplifier Configuration

Two RF amplifiers were chosen for this test system: Model 50W1000D: 80 – 1000 MHz, 50 W Model 15S1G6: 1 – 6 GHz, 15 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation and field uniformity: Model ATR80M6G: 80 – 1000 MHz Model ATT700M12G: 1 – 6 GHz bands.

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® 5 software which is preloaded and delivered on a new PC as part of overall system. Price includes a 1-year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000.AC power is filtered and distributed through an internal power distribution unit.All RF equipment input and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by AR Systems Engineers

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### SSIEC10V2M

10 V/m field strength with up to a 2 meter test distance from 80 MHz – 6 GHz

System Frequency Range	80 MHz – 6 GHz
CW Field Strength 18 V/m (10	V/m w/ 80% AM per IEC 61000-4-3
Test Distance	2 meters
UFA 1	.5 x 1.5 meters per IEC 61000-4-3

#### **Amplifier Configuration**

Two RF amplifiers were chosen for this test system: Model 50W1000D: 80 – 1000 MHz, 50 W Model 30S1G6: 1 – 6 GHz, 30 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation and field uniformity: Model ATR80M6G: 80 – 1000 MHz Model ATT700M12G: 1 – 6 GHz bands.

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® 5 software which is preloaded and delivered on a new PC as part of overall system. Price includes a 1-year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by AR Systems Engineers

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### SSIEC10V3M

10 V/m field strength with up to a 3 meter test distance from 80 MHz - 6 GHz

System Frequency Ra	80 MHz – 6 GHz				
CW Field Strength 18 V/m (10 V/m w/ 80% AM per IEC 61000-4-3					
Test Distance		3 meters			
UFA	1.5 x 1.5 m	eters per IEC 61000-4-3			

#### Amplifier Configuration

Two RF amplifiers were chosen for this test system: Model 150W1000B: 80 –1000 MHz, 150 W Model 75S1G6C: 1 – 6 GHz, 75 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation and field uniformity: Model ATR80M6G: 80 – 1000 MHz Model ATT700M12G: 1 – 6 GHz bands.

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® 5 software which is preloaded and delivered on a new PC as part of overall system. Price includes a 1-year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000.AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by AR Systems Engineers

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### SSIEC30V2M 30 V/m field strength with up to a 2 meter test distance from 80 MHz - 6 GHz

System Frequency Range	80 MHz – 6 GHz
CW Field Strength 54 V/m	n (30 V/m w/ 80% AM per IEC 61000–4–3
lest Distance	2 meters
JFA	1.5 x 1.5 meters per IEC 61000-4-3
Amplifier Configuration	

Two RF amplifiers were chosen for this test system: Model 500W1000C: 80 – 1000 MHz, 500 W Model 125S1G6C: 1 – 6 GHz, 125 W

Antenna Configuration provide optimal field generation and field uniformity: Model ATR80M6G: 80 – 1000 MHz Model ATT700M12G: 1 – 6 GHz bands.

#### **RF** Cable Configuration

S

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® 5 software which is preloaded and delivered on a new PC as part of overall system. Price includes a 1-year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

One week of installation, SAT and Training will be provided by AR Systems Engineers

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### SSIEC30V3M

30 V/m field strength with up to a 3 meter test distance from 80 MHz - 6 GHz

System Frequency Range	e 80 MHz – 6 GHz		
CW Field Strength 54 V/m (30 V/m w/ 80% AM per IEC 61000-4-			
Test Distance Up to 3 r			
UFA	1.5 x 1.5 meters per IEC 61000-4-3		

#### Amplifier Configuration

Two RF amplifiers were chosen for this test system: Model 500W1000C: 80 - 1000 MHz, 500 W Model 250S1G6C: 1 - 6 GHz, 250 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation and field uniformity: Model ATR80M6G: 80 - 1000 MHz bands Model ATT700M12G: 1 - 6 GHz bands

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® 5 software which is preloaded and delivered on a new PC as part of overall system. Price includes a 1-year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

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Export Classification

### SSISOV50V10K18G

50 V/m field strength for full vehicle testing from 10 kHz - 18 GHz

Syste	em Frequency Range	10kHz – 18 GHz
CW F	Field Strength	
50	0 V/m (50 V/m w/ 80% AM pe	ak conservation per ISO11451)
Test I	Distance	2 meters
Field	Probe Configuration	ATH6G18A Field Probe
UFA	0.5 meters on each side of re	ference point per ISO 11451 – 2
Ampl	Model 2500A225A: 10kHz–2 80–1000 MHz, 500 W	rere chosen for this test system 25MHz, 2500 W, 500W1000C: , 250S1G6C: 1 – 6GHz, 250 W 250T6G18: 6 – 18 GHz, 250 W
Anter	v	ated antennas for each amp to

provide optimal field generation/uniformity: FSA S35012/41: 10kHz - 30MHz, FSA S12014/5: 20 - 220MHz Model ATH200M2G: 200-2000MHz, ATH800M6G: 800 6000MHz, ATH6G18A: 6 - 18 GHz

#### **RF** Cable Configuration

Four sets (one for each amp/antenna) consisting of 2 and 12 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using Nexio BAT-EMC software which is preloaded and delivered on a new PC as part of overall system. Price includes a 1-year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by **AR Systems Engineers** 

Export Classification

# SSISOV50V20M18G

50 V/m field strength for full vehicle testing from 20 MHz - 18 GHz

System Frequency Range	20MHz – 18 GHz
CW Field Strength	
50 V/m (50 V/m w/ 80% AM peo	ak conservation per ISO 11451)
Test Distance	2 meters
Field Probe Configuration	4 FL8018 Field Probes
UFA 0.5 meters on each side of refe	erence point per ISO 11451 – 2
Amplifier Configuration	
Model 2500A2: 500W1000C: 80 – 1	ere chosen for this test system 25A: 10kHz–225MHz, 2500 W, 1000 MHz, 500 W, 250S1G6C: 250T6G18: 6 – 18 GHz, 250 W
provide optin	ted antennas for each amp to nal field generation/uniformity FSA S12014/5: 20 – 220MHz : 200–2000MHz, ATH800M6G:
800–600	00MHz,ATH6G18A: 6 – 18 GHz
RF Cable Configuration	
Four sets (one for each amp/anter meter lengths and designated bulkh	
Software Configuration	
System and testing will be controll software which is preloaded and c of overall system. Price includes a	lelivered on a new PC as part
Design approach	
Self-contained equipment rack wi	th internal pre-wired RF and

#### R

#### S

power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

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### SSISOV100V10K18G 100 V/m field strength for full vehicle testing from 10 kHz - 18 GHz

System Frequency Range	10kHz – 18 GHz
CW Field Strength	
100 V/m (100 V/m w/ 80% AM peak cor	nservation per ISO 11451)
Test Distance	2 meters
Field Probe Configuration 1 FL8200 a	nd 4 FL8018 Field Probes
UFA 0.5 meters on each side of reference	ce point per ISO 11451 – 2
Amplifier Configuration	
Four RF amplifiers were c	hosen for this test system:
Model 12500A	225A: 10 kHz – 225 MHz,
12500 W, 500W10000	C: 80 – 1000 MHz, 500 W,
250S1G6C: 1 – 6 GHz, 250 W, 250T	6G18: 6 – 18 GHz, 250 W
provide optimal fi	antennas for each amp to ield generation/uniformity:
FCV C32015/11-10/H2-30WH2 ECV	$101/1/5 \cdot 20 = 210  \mu \text{Hz}$

FSA S35012/41: 10kHz–30MHz, FSA S12014/5: 20 – 210 kHz Model ATH200M2G: 200-2000MHz, ATH800M6G: 800 - 6000 MHz, ATH6G18A: 6 - 18 GHz

#### **RF** Cable Configuration

Four sets (one for each amp/antenna) consisting of 2 and 12 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using Nexio BAT-EMC software which is preloaded and delivered on a new PC as part of overall system. Price includes a 1-year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

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### **SSISOV100V20M18G** 100 V/m field strength for full vehicle testing from 80 MHz-18 GHz

System I	Frequency Range	20 MHz – 18 GHz		
	<b>I Strength</b> ) V/m (100 V/m w/ 80% AM	peak conservation per ISO 11451)		
Test Dist		2 meters		
Field Pro	Field Probe Configuration 4 FL8018 Field Prob			
UFA	0.5 meters on each side of reference point per ISO 11451 – 2			

#### **Amplifier Configuration**

Four RF amplifiers were chosen for this test system: Model 10000A225B: 10 kHz – 225 MHz, 10000 W, 500W1000C: 80 – 1000 MHz, 500 W, 250S1G6C: 1 – 6 GHz, 250 W, 250T6G18: 6 – 18 GHz, 250 W

#### Antenna Configuration

Dedicated antennas for each amp to provide optimal field generation/uniformity: FSA S12014/5: 20 – 220 MHz Model ATH200M2G: 200 – 2000 MHz, ATH800M6G:800–6000MHz, ATH6G18A: 6 – 18 GHz

#### **RF Cable Configuration**

Four sets (one for each amp/antenna) consisting of 2 and 12 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using Nexio BAT-EMC software which is preloaded and delivered on a new PC as part of overall system. Price includes a 1-year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

One week of installation, SAT and Training will be provided by AR Systems Engineers

3A001

Export Classification

### **SSISOV200V10K18G** 200 V/m field strength for full vehicle testing from 10 kHz – 18 GHz

Syste	em Frequency Range	10 kHz – 18 GHz
CW F	ield Strength	
200	) V/m (200 V/m w/ 80% AM	M peak conservation per ISO 11451)
Test	Distance	2 meters
Field	Probe Configuration 1	FL8200 and 4 FL8018 Field Probes
UFA	0.5 meters on each side	of reference point per ISO 11451 - 2
	Model 10000A	ers were chosen for this test system 225B, 10 KHz – 225 MHz, 10000 W, MHz, 2000 W, 500S1G6: 1 – 6 GHz, 500 W, 200T4G8: 4 – 8 GHz, 200 W, 250T8G18: 7.5 – 18 GHz, 250 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation/uniformity: FSA S35012/41: 10 kHz – 30 MHz, FSA S12018–21: 30–100 MHz Model ATL80M1G: 80 – 1000 MHz, ATH200M1G: 200 – 1000 MHz, ATH800M6G: 800 – 6000 MHz, ATH4G8: 4 – 86 Hz, ATH7G18: 7.5 – 18 GHz

#### **RF** Cable Configuration

Four sets (one for each amp/antenna) consisting of 2 and 8 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using Nexio BAT–EMC software which is preloaded and delivered on a new PC as part of overall system. Price includes a 1–year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment inputs and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by AR Systems Engineers

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### **SSISOV200V30M18G** 200 V/m field strength for full vehicle testing

from 30 MHz – 18 GHz					
System Frequency Range 30 MHz – 18 GHz					
CW Field Strength 200 V/m (200 V/m w/ 80% AM peak conservation per ISO 11451)					
Test Distance 2 meters					
Field Probe Configuration 4 FL8018 Field Probes					
UFA 0.5 meters on each side of reference point per ISO 11451 - 2					

#### **Amplifier Configuration**

Four RF amplifiers were chosen for this test system: Model 12500A225A–L: 10kHz – 225 MHz,12500 W, 2000W1000D: 80 –1000 MHz, 2000 W, 500S1G6A: 1 – 6 GHz, 500 W, 200T4G8: 4 – 8 GHz, 200 W, 250T8G18: 7.5 – 18 GHz, 250 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation/uniformity: FSA \$12018-21: 30 - 100 MHz Model ATL80M1G: 80-1000 MHz, ATH200M1G: 200 - 1000 MHz, ATH800M6G: 800 - 6000 MHz, ATH4G8: 4 - 8 GHz, ATH7G18: 7.5 - 18 GHz

#### **RF** Cable Configuration

Four sets (one for each amp/antenna) consisting of 2 and 8 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using Nexio BAT-EMC software which is preloaded and delivered on a new PC as part of overall system. Price includes a 1-year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit.All RF equipment input and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by AR Systems Engineers

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### **SSISOC50V10K18G** 50 V/m field strength for vehicle component testing from 10 kHz – 18 GHz

System Frequency Range	10 kHz – 18 GHz
CW Field Strength	50 V/m
Test Distance	1 meters
Amplifier Configuration	

#### Amplifier Configuration

Three (3) RF amplifiers were chosen for this test system: Model 100A400A, Amplifier, 10 kHz – 400 MHz, 400 W CW Model 250W1000C: 80 – 1000 MHz, 250 W Model 75S1G6C, 1 – 6 GHz, 75 W

```
Antenna Configuration
Dedicated antennas for each amp to
provide optimal field generation:
Stripline Antenna, DC –1000 MHz
(Schwarzbeck TEMZ 5232 or equivalent)
Model ATR80M6G, Log-periodic Antenna, 80 MHz – 6 GHz
Model DRH–118. Horn Antenna, 1 – 18 GHz
```

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

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### ISO 11452-2 Predefined Systems

### SSISOC50V80M18G

50 V/m field strength for vehicle component testing from 80 MHz - 18 GHz

System Frequency Range	80MHz – 18 GHz
CW Field Strength	50 V/m
Test Distance	1 meters

#### Amplifier Configuration

Two (2) RF amplifiers were chosen for this test system: Model 250W1000C: 80 - 1000 MHz, 250 W Model 75S1G6C, 1 - 6 GHz, 75 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation: Model ATR80M6G, Log-periodic Antenna, 80 MHz - 6 GHz Model DRH-118, Horn Antenna, 1 - 18 GHz

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

One week of installation, SAT and Training will be provided by AR Systems Engineers

Export Classification

SSISOC100V10K18G 100 V/m field strength for vehicle component testing from 10 kHz - 18 GHz

System Frequency Range	10 kHz – 18 GHz
CW Field Strength	100 V/m
Test Distance	1 meters

#### Amplifier Configuration

Five (5) RF amplifiers were chosen for this test system: Model 100A400A: 10 kHz - 400 MHz, 100 W Model 2500A225A: 10 kHz - 225 MHz, 2500 W Model 500W1000C: 80 - 1000 MHz, 500 W Model 125S1G6C: 1 - 6 GHz, 125 W Model 20S6G18-L: 6 - 18 GHz, 20 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation: Stripline Antenna, DC -1000 MHz (Schwarzbeck TEMZ 5232 or equivalent) Model ATR80M6GM2, Log-periodic Antenna, 80 MHz - 6 GHz Model ATH800M6G, Horn Antenna, 1 – 6 GHz Model ATH6G18A, Horn Antenna, 6 – 18 GHz

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

**Universal Series** 

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by AR Systems Engineers

Export Classification

### SSISOC100V80M18G 100 V/m field strength for vehicle component testing from 80 MHz - 18 GHz

System Frequency Range	80 MHz – 18 GHz
CW Field Strength	100 V/m
Test Distance	1 meters

#### Amplifier Configuration

Four (4) RF amplifiers were chosen for this test system: Model 2500A225A: 10 kHz - 225 MHz, 2500 W Model 500W1000C: 80 - 1000 MHz, 500 W Model 125S1G6C: 1 - 6 GHz, 125 W Model 20S6G18-L: 6 - 18 GHz, 20 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation: Model ATR80M6G, Log-periodic Antenna, 80 MHz - 6 GHz Model ATH800M6G, Horn Antenna, 1 – 6 GHz Model ATH6G18A, Horn Antenna, 6 – 18 GHz

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Export Classification

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

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**Antennas** 

### SSISOC200V10K18G 200 V/m field strength for vehicle component testing from 10 kHz - 18 GHz

System Frequency Range	10 kHz – 18 GHz
CW Field Strength	200 V/m
Test Distance	1 meters

#### Amplifier Configuration

Five (5) RF amplifiers were chosen for this test system: Model 100A400A: 10 kHz - 400 MHz, 100 W, 2500A225B: 10 kHz - 225 MHz, 2500 W 500W1000C: 80 - 1000 MHz, 500W, 125S1G6C: 1 - 6 GHz, 125 W, 40S6G18-L: 6 - 18 GHz, 40 W

Dedicated antennas for each amp to Antenna Configuration provide optimal field generation: Stripline Antenna, DC -1000 MHz (Schwarzbeck TEMZ 5232 or equivalent) Antenna, 25 - 100 MHz, 3000W CW (TDK HPBR-2510) Model ATR80M6G, Log Periodic Antenna, 80 MHz - 6 GHz Model ATH800M6G, Horn Antenna, 1 – 6 GHz Model ATH6G18A, Horn Antenna, 6 – 18 GHz

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

One week of installation, SAT and Training will be provided by AR Systems Engineers

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### ISO 11452-2 Predefined Systems / MIL-STD-461 Predefined Systems

### SSISOC200V80M18G

200 V/m field strength for vehicle component testing from 80 MHz – 18 GHz

System Frequency Range	80 MHz – 18 GHz
CW Field Strength	200 V/m
Test Distance	1 meters

#### **Amplifier Configuration**

Four (4) RF amplifiers were chosen for this test system: Model 2500A225B: 10 kHz – 225 MHz, 2500 W Model 500W1000C: 80 – 1000 MHz, 500 W Model 125S1G6C: 1 – 6 GHz, 125 W Model 40S6G18–L: 6 – 18 GHz, 40 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation: Model ATR80M6G, Log Periodic Antenna, 80 MHz – 6 GHz Model ATH800M6G, Horn Antenna, 1 – 6 GHz Model ATH6G18A, Horn Antenna, 6 – 18 GHz

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

One week of installation, SAT and Training will be provided by AR Systems Engineers

3A001

Export Classification

Contents

### **SSMIL10V10K18G** 10 V/m field strength for military testing applications from 10 kHz – 18 GHz

System Frequency Range	10 kHz – 1 8 GHz
CW Field Strength	10 V/m
Test Distance	1 meters
Amplifier Configuration	
Two (2) RF amplifiers wer	re chosen for this test system
Model 50U100	00: 10 kHz – 1000 MHz, 50 W
	75S1G6C, 1 – 6 GHz, 75 W

 Antenna Configuration
 Dedicated antennas for each amp to provide optimal field generation:

 Model ATE10K100MM2: 10 kHz –1 00 MHz, E–Field Generator
 Model ATR80M6G: 80 MHz – 6 GHz Log Periodic

 Model DRH–118: 1 – 18 GHz Horn
 Model DRH–118: 1 – 18 GHz Horn

20S6G18-L, 16 - 18 GHz, 20 W

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit.All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

One week of installation, SAT and Training will be provided by AR Systems Engineers

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### SSMIL10V2M18G

10 V/m field strength for military testing applications from 2 MHz – 18 GHz

System Frequency Range	2 MHz – 18 GHz				
CW Field Strength	10 V/m				
Test Distance	1 meters				

#### Amplifier Configuration

Two (2) RF amplifiers were chosen for this test system: Model 50U1000: 10 kHz – 1000 MHz, 50 Watts 75S1G6C, 1 – 6 GHz, 75 W 20S6G18-L, 16 – 18 GHz, 20 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation: Stripline Antenna, DC –1000 MHz (Schwarzbeck TEMZ 5232 or equivalent)

Model ATR80M6G, Log-periodic Antenna, 80 MHz – 6 GHz Model DRH–118, Horn Antenna, 1 – 18 GHz

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set

#### Software Configuration

System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

One week of installation, SAT and Training will be provided by AR Systems Engineers

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### **SSMIL10V2M40G** 10 V/m field strength for military testing applications from 2 MHz – 40 GHz

System Frequency Range	2 MHz – 40 GHz
CW Field Strength	10 V/m
Test Distance	1 meters
Amplifier Configuration	

Two (2) RF amplifiers were chosen for this test system: Model 50U1000: 10 kHz–1000 MHz, 50 W 75S1G6C, 1 - 6 GHz, 75 W 20S6G18-L, 16 - 18 GHz, 20 W

Antenna Configuration Model ATE10K100MM2: 10 kHz–100 MHz, E–Field Generation: Model ATR80M6G: 80 MHz–6 GHz Log Periodic Model ATR80M6G: 80 MHz–6 GHz Log Periodic Model DRH–118: 1–18 GHz Horn Model AA18G26–20: 18–26.5 GHz Model AA26G40–20: 26.5–40 GHz

#### **RF** Cable Configuration

Three sets (one for each amp) consisting of 2 and 4 meter lengths and designated bulkhead feedthroughs for each set. One set included with AA1000.

#### Software Configuration

System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000M4. AC power is filtered and distributed through an internal power distribution unit.All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

One week of installation, SAT and Training will be provided by AR Systems Engineers

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s	Find it Fas	RF Solid State	Universal Series	Microwave	Solid State Pulse	тwт	Systems	Chambers	Antennas	Accessories	Contact	AR Companies

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### **SSMIL50V10K18G** 50 V/m field strength for

military testing applications from 10 kHz – 18 GHz

System Frequency Range	10 kHz – 18 GHz
CW Field Strength	50 V/m
Test Distance	1 meters

#### **Amplifier Configuration**

Four (4) RF amplifiers were chosen for this test system: Model 600A400, Amplifier, 10kHz – 400MHz, 600 W CW Model 150W1000B: 80 – 1000 MHz, 150 W Model 75S1G6C, 1 – 6 GHz, 75 W, RF Amplifier, 40S6G18, 6 – 18 GHz, 40 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation: Model ATE10K100MM2: 10 kHz–100 MHz, E–Field Generator Model ATR80M6G: 80 MHz – 6 GHz Log Periodic Model DRH–118: 1 – 18 GHz Horn

#### **RF Cable Configuration**

Three sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000M3. AC power is filtered and distributed through an internal power distribution unit.All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

One week of installation, SAT and Training will be provided by AR Systems Engineers

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### **SSMIL50V2M18G** 50 V/m field strength for military testing applications from 2 MHz – 18 GHz

System Frequency Range	2 MHz – 18 GHz				
CW Field Strength	50 V/m				
Test Distance	1 meters				

#### Amplifier Configuration

Four (4) RF amplifiers were chosen for this test system: Model 600A400, Amplifier, 10kHz – 400MHz, 600 W CW Model 150W1000B: 80 – 1000 MHz, 150 W Model 75S1G6C, 1 – 6 GHz, 75 W, RF Amplifier, 40S6G18, 6 – 18 GHz, 40 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation: Model ATE10K100MM2: 10 kHz – 100 MHz, E–Field Generator Model ATR80M6G: 80 MHz–6 GHz Log Periodic Model DRH–118: 1 – 18 GHz Horn

#### **RF Cable Configuration**

Three sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

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Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000M3. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by AR Systems Engineers

Export Classification

### SSMIL50V2M40G

50 V/m field strength for military testing applications from 2 MHz – 40 GHz

System Frequency Range	2 MHz – 40 GHz
CW Field Strength	50 V/m
Test Distance	1 meters

#### Amplifier Configuration

Three (3) RF amplifiers were chosen for this test system: Model 600A400, Amplifier, 10kHz – 400MHz, 600 W CW Model 150W1000B: 80–1000 MHz, 150 W Model 75S1G6C, 1 – 6 GHz, 75 W, RF Amplifier, 40S6G18, 6 – 18 GHz, 40 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation: Model ATP10K100MM2: 10 kHz – 100 MHz, E–Field Generator Model ATR80M6G: 80 MHz – 6 GHz Log Periodic Model DRH–118: 1 – 18 GHz Horn Model AA18G26–50: 18 – 26.5 GHz Model AA26G40–50: 26.5 – 40 GHz

#### **RF** Cable Configuration

Two sets (one for each amp/antenna) consisting of 2 and 5 meter (2 and 4 meters for up to 40 GHz) lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000M4. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by AR Systems Engineers

Export Classification

### **SSMIL200V10K18G** 200 V/m field strength for military testing applications from 10 kHz – 18 GHz

System Frequency Range	10 kHz – 18 GHz			
CW Field Strength	200 V/n			
Test Distance	1 meters			
Amplifier Configuration				

Four (4) RF amplifiers were chosen for this test system: Model 2500A225B: 10 kHz – 225 MHz, 2500 W, 500W1000C: 80 –1000 MHz, 500 W, 125S1G6C: 1 – 6 GHz, 125 W, 40S6G18–L: 6 – 18 GHz, 40 W

 Antenna Configuration
 Dedicated antennas for each amp to provide optimal field generation:

 Model ATE10K30MAM2, Field Generator, 10 kHz – 30 MHz
 Antenna, 25 – 100 MHz, 3000W CW (TDK HPBR–2510)

 Model ATR80M6GM2, Log–periodic Antenna, 80 MHz – 6 GHz, ATH200M2G, Horn Antenna, 200 MHz – 2 GHz, ATH800M6G,
 Horn Antenna, 1 – 6 GHz, ATH6G18A, Horn Antenna, 6 – 18 GHz

#### **RF Cable Configuration**

Four sets (one for each amp/antenna) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000M3. AC power is filtered and distributed through an internal power distribution unit.All RF equipment input and outputs are on rear-panel of devices.

#### Installation, Site Acceptance Testing (SAT) and Training

One week of installation, SAT and Training will be provided by AR Systems Engineers

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### MIL-STD-461 Predefined Systems

### SSMIL200V2M18G 200 V/m field strength for military testing applications from 2 MHz – 18 GHz

System Frequency Range	2 MHz – 18 GHz			
CW Field Strength	200 V/m			
Test Distance	1 meters			

#### **Amplifier Configuration**

Four (4) RF amplifiers were chosen for this test system: Model 2500A225B: 10 kHz – 225 MHz, 2500 W, 500W1000C: 80–1000 MHz, 500 W, 125S1G6C: 1 – 6 GHz, 125 W, 40S6G18–L: 6 – 18 GHz, 40 W

 Antenna Configuration
 Dedicated antennas for each amp to provide optimal field generation:

 Model ATE10K30MAM2, Field Generator, 10 kHz–30 MHz
 Antenna, 25 – 100 MHz, 3000W CW (TDK HPBR–2510)

 Model ATR80M6GM2, Log–periodic Antenna, 80 MHz – 6 GHz, ATH200M2G, Horn Antenna, 200 MHz – 2 GHz, ATH800M6G, Horn Antenna, 1 – 6 GHz, ATH6G18A, Horn Antenna, 6 – 18 GHz

#### **RF** Cable Configuration

Four sets (one for each amp) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Self-contained equipment rack with internal pre-wired RF and power with automatic RF switching via SCP2000M3. AC power is filtered and distributed through an internal power distribution unit. All RF equipment input and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by AR Systems Engineers

Export Classification

### **SSMIL200V2M40G** 200 V/m field strength for from 2 MHz – 40 GHz

System Frequency Range	2 MHz – 40 GH			
CW Field Strength	200 V/m			
Test Distance	1 meters			

#### Amplifier Configuration

Six (6) RF amplifiers were chosen for this test system: Model 2500A225B: 10 kHz–225 MHz, 2500 W Model 500W1000C: 80 – 1000 MHz, 500 W, 125S1G6C: 1 – 6 GHz, 125 W, 40S6G18–L: 6 –18 GHz, 40 W, 40T18G26A: 18 – 26.5 GHz, 40 W, 40T26G40A: 26.5 – 40 GHz, 40 W

Antenna Configuration Dedicated antennas for each amp to provide optimal field generation: Model ATE10K30MAM2, Field Generator, 10 kHz–30 MHz Antenna, 25–100 MHz, 3000W CW (TDK HPBR–2510) Model ATR80M6GM2, Log–periodic Antenna, 80 MHz – 6 GHz, ATH200M2G, Horn Antenna, 200 MHz – 2 GHz, ATH800M6G, Horn Antenna, 1 – 6 GHz, ATH6G18A, Horn Antenna, 6 –18 GHz, ATH18G27A: 18 – 26.5 GHz High Gain Horn, ATH26G40A: 26.5 – 40 GHz High Gain Horn

#### **RF** Cable Configuration

Four sets (one for each amp) consisting of 2 and 5 meter lengths and designated bulkhead feedthroughs for each set.

#### Software Configuration

System and testing will be controlled using emcware® software which is preloaded and delivered on a new laptop as part of overall system. Price includes a 1 year support contract.

#### Design approach

Export Classification

**Universal Series** 

Self-contained equipment racks with internal pre-wired RF and power with automatic RF switching via SCP2000. AC power is filtered and distributed through an internal power distribution unit.All RF equipment input and outputs are on rear-panel of devices.

Installation, Site Acceptance Testing (SAT) and Training One week of installation, SAT and Training will be provided by

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### **Conducted Immunity Testing**

### CI00402 10 kHz - 400 MHz 100 W

#### Complete Testing Solutions to the following standards:

MIL-STD-461 CS114, DO160 (Section 20) BCI Testing, EN/IEC 61000-4-6, IEC 60601-1-2, EN 50130-4, EN 61000-6-1/2, EN 55024, ISO 11452-4

#### Internal Test Specifications\*

MIL-STD-461 (CS114), DO160 (Sec 20 BCI Test), IEC/EN 60601-1-2, IEC/EN 50130-4, IEC/EN 61326, IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-4-6, CISPR 24/EN 55024, ISO 11452-4, EMC-CS-2009, GM GMW3097, BMW GS95002, Chrysler DC-11224, Renault 36-00-808

#### Signal Generator Specifications

Frequency Range/Resolution	n 9 kHz – 1.5 GHz / 01 Hz
Power Range/Resolution	-110 to +13 dBm / 01 dB
Modulation	AM, FM, Phase, Int Pulse, Ext Pulse

#### Spectrum Analyzer Specifications

Frequency Range/Resolution	9 kHz – 1.5 GHz / 1 Hz
RF Power CW (max) Atten = 30 dB	20 dBm
Resolution BW	10 Hz – 1 MHz
Video BW	1 Hz – 3 MHz
Amplitude Measurement Range	
-110 dBm	to +20 dBm in 1 dB steps
Preamplifier Gain	20 dB (nom)
Sweep Time, span> 100 Hz	10 msec - 1,500 sec

#### **RF Solid State Amplifier Specifications**

Frequency Range	9 kHz – 400 MHz
Power Rating At 1 dB com	100 W min. pression the power is 75 W min.
Harmonic Distortion	–20 dBc at 75 W

#### Mismatch Tolerance

100% of rated power without fold back. Will operate without damage or oscillation with any magnitude of source and load impedance.



#### Gain 50 dB min.

Connections	
RF Out	Type N (front)
Monitor Port In	Type N (front)
Signal Generator Out	Type N (rear)
RF Amp In/Out	Type N (rear)
Directional Coupler In	Type N (rear)
Pulse In	BNC (rear)
Communication	USB B (rear)
Directional Coupler Fwd Out	Type SMA (rear)
Directional Coupler Fwd In	Type SMA (rear)
Directional Coupler Rev Out	Type SMA (rear)
Directional Coupler Rev In	Type SMA (rear)

#### General

Power	115/230	VAC, 50/60 Hz, single phase 16 A
Breaker		2 pole, 20 A
Cooling		Active cooling, air ventilation
Environmental	Conditions	10°C – 40°C (50°F – 104°F)
Dimensions	50.3 x 53.3	3 x 55.1 cm (19.8 x 21 x 21.7 in.)
Weight		49.9 kg (110 lb.)

#### PC Requirements

Computer Intel Pentium	n 4, AMD Athlon 64 or better processor
Operating System	Windows, 7, 8, or 10
RAM	2 GB Minimum
Screen Resolution	1024 x 768
Ports	2 available USB 2 ports
Software Requirements	Microsoft Word/Excel 2007 or newer

### CI00403 10 kHz - 400 MHz 175 W

#### Complete Testing Solutions to the following standards:

MIL-STD-461 CS114, DO160 (Section 20) BCI Testing, EN/IEC 61000-4-6, IEC 60601-1-2, EN 50130-4, EN 61000-6-1/2, EN 55024, ISO 11452-4

#### Internal Test Specifications\*

MIL-STD-461 (CS114), DO160 (Sec 20 BCI Test), IEC/EN 60601-1-2, IEC/EN 50130-4, IEC/EN 61326, IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-4-6, CISPR 24/EN 55024, ISO 11452-4, EMC-CS-2009, GM GMW3097, BMW GS95002, Chrysler DC-11224, Renault 36-00-808

#### **Signal Generator Specifications**

Frequency Range/Resolution 9 kHz - 1.5 GHz / 01 Hz Power Range/Resolution -110 to +13 dBm / 01 dB Modulation AM, FM, Phase, Int Pulse, Ext Pulse

#### Spectrum Analyzer Specifications

Frequency Range/Resolution	9 kHz – 1.5 GHz / 1 Hz
RF Power CW (max) Atten = 30 dB	20 dBm
Resolution BW	10 Hz – 1 MHz
Video BW	1 Hz – 3 MHz
Amplitude Measurement Range	
-110 dBm 1	to +20 dBm in 1 dB steps
Preamplifier Gain	20 dB (nom)
Sweep Time, span> 100 Hz	10 msec - 1,500 sec

#### **RF Solid State Amplifier Specifications**

Frequency Range	9 kHz – 400 MHz
Power Rating	175 W min
At 1	dB compression the power is 125 W min.
Harmonic Distortion	-20 dBc at 150 W

#### Mismatch Tolerance

100% of rated power without fold back. Will operate without damage or oscillation with any magnitude of source and load impedance.



#### Gain 52.5 dB min.

#### Connections

RF Out	Type N (front)
Monitor Port In	Type N (front)
Signal Generator Out	Type N (rear)
RF Amp In/Out	Type N (rear)
Directional Coupler In	Type N (rear)
Pulse In	BNC (rear)
Communication	USB B (rear)
Directional Coupler Fwd Out	Type SMA (rear)
Directional Coupler Fwd In	Type SMA (rear)
Directional Coupler Rev Out	Type SMA (rear)
Directional Coupler Rev In	Type SMA (rear)

#### General

Power	115/230 VAC, 50/60 Hz, single phase 16 A
Breaker	2 pole, 20 A
Cooling	Active cooling, air ventilation
Environmenta	Conditions $10^{\circ}\text{C} - 40^{\circ}\text{C} (50^{\circ}\text{F} - 104^{\circ}\text{F})$
Dimensions	128.9 x 56.1 x 91.4 cm / 52.5 x 22.1 x 36 in
Weight	72.6 kg (160 lb)

#### PC Requirements

Computer Intel Pentium	4, AMD Athlon 64 or better processor
Operating System	Windows, 7, 8, or 10
RAM	2 GB Minimum
Screen Resolution	1024 x 768
Ports	2 available USB 2 ports
Software Requirements	Microsoft Word/Excel 2007 or newer

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### **CI01000** 100 kHz -1000 MHz 250 W

Complete Testing Solutions to the following standards: EN/IEC 61000-4-6, IEC 60601-1-2, EN 50130-4, EN 61000-6-1/2, ISO 11452-4

#### Internal Test Specifications\*

IEC/EN 60601-1-2, IEC/EN 50130-4, IEC/EN 61326, IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-4-6, ISO 11452-4, MIL-STD-461 CS114

#### Signal Generator Specifications

Frequency Range/Resolution	9 kHz – 1.5 GHz
	0.01Hz
Power Range/Resolution	-110 to +13 dBm
	0.01dB
Modulation	AM, FM, Phase, Int Pulse,
	Ext Pulse

#### Spectrum Analyzer Specifications

Frequency Range/Resolution	9 kHz – 1.5 GHz
	1 Hz
RF Power CW (max) Atten = 30 dB	20 dBm
Resolution BW	10 Hz – 1 MHz
Video BW	1 Hz – 3 MHz
Amplitude Measurement Range	
-110 dBm to +2	20 dBm in 1 dB steps
Preamplifier Gain	20 dB (nom)
Sweep Time, span> 100 Hz	10 msec – 1500 sec

#### **RF Solid State Amplifier Specifications**

Frequency Range	100 kHz – 1000 MHz
Power Rating	250 Watts
Minimum At 1 dB compression	175 Watts Minimum
Harmonic Distortion	OdBc at 75 Watts

#### Mismatch Tolerance

100% of rated power without fold back. Will operate without damage or oscillation with any magnitude of source and load impedance.



#### Gain 54 dB min.

Connections		
RF Out		Type N (front
Monitor Port In		Type N (front
Signal Generator Ou	ıt	Type N (rear
RF Amp In/Out		Type N (rear
Directional Coupler I	In	Type N (rear
Pulse In		BNC (rear
Communication		USB B (rear
Directional Coupler I	Fwd Out	Type SMA (rear
Directional Coupler I	Fwd In	Type SMA (rear
Directional Coupler I	Rev Out	Type SMA (rear
Directional Coupler I	Rev In	Type SMA (rear
General		
Dower	116/020 1/10 60/20 11	ainalo phago 14

Power	1 1 5/230 VAC, 50/60 Hz, single	phase 16 A
Breaker	2	pole, 20 A
Cooling	Active cooling, air	ventilation
Environmental C	onditions 10°C – 40°C (50°	°F – 104°F)
Dimensions	50.3 x 53.3 x 55.1 cm (19.8 x 21	x 21.7 in.)
Weight	49.9 k	.g (110 lb.)

#### PC Requirements

Computer Intel Pentium 4, AMD Athlon 64 or better processor		
Operating System	Windows, 7, 8, or 10	
RAM	2 GB Minimum	
Screen Resolution	1024 x 768	
Ports	2 available USB 2 ports	
Software Requirements	Microsoft Word/Excel 2007 or newer	

### Conducted Immunity Testing / Multi-Tone Testing

### MT2IEC10V3M Multi-Tone RF Radiated Immunity System



The MT2IEC10V3M Multi-Tone system is designed to develop a  $1.5 \times 1.5$  meter uniform field area (UFA) with an 18 V/m CW field strength at up to a 3 meter test distance in accordance with IEC 61000-4-3. This system has an operating frequency range from 80 MHz – 6 GHz. Two internal signal generators allow two simultaneous test frequencies allowing for an up to 50% reduction in sweep time.

The signal generation, control, and power monitoring equipment shall be mounted in a ventilated equipment rack along with the RF amplifiers

The MT2IEC10V3M AR System consists of the AR equipment, listed herein. Please refer to individual product specification sheets for details.

The export classification for this equipment is 3A001. This equipment is controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

AR Standardized Systems are customizable upon request. Contact AR for all such requests.

#### Complete Testing Solutions to the following standards:

#### **Radiated Immunity**

- EN/IEC 61000-4-3 - ISO11452-2 Auto (ALSE) - ISO11452-3 Auto (TEM cells) - ISO11451-5 Auto (Strip Line) - ISO11451 - 2 Full Vehicle - DO-160 Section 20.5 (Substitution Method) - EN/IEC 60601-1,-2 - EN 50130-4 - EN 61000-6-1/2 - EN 55024

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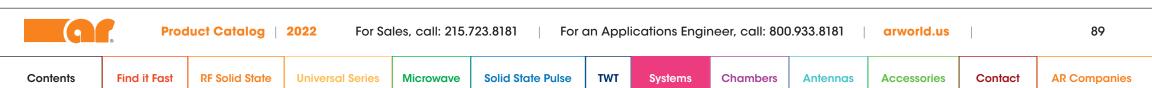
### MT4IEC10V3M Multi-Tone RF Radiated Immunity System

The MT4IEC10V3 Multi-Tone system is designed to develop a 1.5 x 1.5 meter uniform field area (UFA) with an 18 V/m CW field strength at up to a 3 meter test distance in accordance with IEC 61000-4-3. This system has an operating frequency range from 80 MHz – 6 GHz. Four internal signal generators allow you to four simultaneous test frequencies allowing for an up to 74% reduction in sweep time. The signal generation, control, and power monitoring equipment shall be mounted in a ventilated equipment rack along with the RF amplifiers. The MT4IEC10V3 AR System consists of the AR equipment, listed herein. Please refer to individual product specification sheets for details.

#### Complete Testing Solutions to the following standards:

#### **Radiated Immunity**

- EN/IEC 61000-4-3 - ISO11452-2 Auto (ALSE) - ISO11452-3 Auto (TEM cells) - ISO11451-5 Auto (Strip Line) - ISO11451 - 2 Full Vehicle - D0-160 Section 20.5 (Substitution Method) - EN/IEC 60601-1,-2 - EN 50130-4 - EN 61000-6-1/2 - EN 55024



### Solid State Field Generating Systems

### AA1000 Power Supply and Control



Primary Power (Universal; Se	elected Automatically): 100 – 240 VAC, 50/60 Hz
Connectors (Rack Unit):	
RF Input:	2.92 mm (K-type) female
RF Output:	2.92 mm (K-type) female
DC Output:	Twinax
Remote Interfaces:	
IEEE-488:	24-pin female
RS-232:	9-pin sub D (female)
Fiber optic:	ST Conn Tx and Rx RS-232
USB 2:	Туре Е
Ethernet:	RJ-45
Safety Interlock:	15–pin subminiature D
Cooling:	Forced air (self-contained fans)
Weight:	
Rack Unit:	4.5 kg (10 lb.)
Size (W x H x D):	
Rack Unit:	48.3 cm x 8.9 cm x 53.3 cm
	19 in. x 3.5 in. x 21 in
Environmental:	
Operating Temperature:	5°C / +40°C Operating
Altitude:	up to 2000 N
Shock and vibration:	Normal Truck Transpor

Regulatory Compliance:	
EMC	EN 61326-
Safety	UL 61010-
	CAN/CSA C22.2 #61010-
	CENELEC EN 61010-
RoHS	Directive 2011/65/E
WEEE	Directive 2012/19/E
Export Classification:	EAR9

### **AA18G26-20** 18 - 26.5 GHz 20 V/m

Rated Field Strength: Minimur	n 20 V/m at 1 meter antenna distance
Maximum Amplifier Input:	+10 dBm max
Frequency Response:	18–26.5 GHz instantaneous
3 dB Beamwidth:	
AA18G26-20:	E Plane: 17.5 degrees
	H Plane: 17.8 degrees
3 dB Spot Size @ 1 m:	
AA18G26-20:	0.31 m x 0.31 m
Modulation Capability:	
appearing on input sign	
appearing on input sign Spurious: Primary Power (Supplied b	al. Minus 65 dBc typica by AA1000):
appearing on input sign Spurious: Primary Power (Supplied b	al. Minus 65 dBc typica by AA1000):
appearing on input sign Spurious: Primary Power (Supplied I 8 VDC @	al. Minus 65 dBc typica by AA1000): 0 6 Amps max, +24 VDC @ 1 Amp max
appearing on input sign Spurious: Primary Power (Supplied H 8 VDC @ Connectors:	al. Minus 65 dBc typical
appearing on input sign Spurious: Primary Power (Supplied H 8 VDC @ Connectors: RF Input:	al. Minus 65 dBc typical by AA1000): 0 6 Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female
appearing on input sign Spurious: Primary Power (Supplied I 8 VDC @ Connectors: RF Input: DC Input:	al. Minus 65 dBc typica by AA1000): 0 6 Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax
appearing on input sign Spurious: Primary Power (Supplied I 8 VDC @ Connectors: RF Input: DC Input: Cooling:	al. Minus 65 dBc typica by AA1000): 2 6 Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax Forced air (self-contained fans)
appearing on input sign Spurious: Primary Power (Supplied I 8 VDC @ Connectors: RF Input: DC Input: Cooling: Weight:	al. Minus 65 dBc typica by AA1000): 2 6 Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax Forced air (self-contained fans
appearing on input sign Spurious: Primary Power (Supplied I 8 VDC @ Connectors: RF Input: DC Input: Cooling: Weight: AA18G26-20:	al. Minus 65 dBc typica by AA1000): 0 6 Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax



Environmental:	
Operating Temperature:	5°C/+40°C
Operating Altitude:	up to 2000 M
Shock and vibration:	Normal Truck Transport
Regulatory Compliance:	
EMC	EN 61326-1
Safety	UL 61010-1
	CAN/CSA C22.2 #61010-1
	CENELEC EN 61010-1
RoHS	Directive 2011/65/EU
WEEE	Directive 2012/19/EU
Export Classification:	EAR99

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### Solid State Field Generating Systems

### **AA18G26-50** 18 - 26.5 GHz 50 V/m

Rated Field Strength: Minimum 50	0 V/m at 1 meter antenna distance					
Maximum Amplifier Input:	+10 dBm mc					
Frequency Response:	18 – 26.5 GHz instantaneous					
3 dB Beamwidth:						
AA18G26-50:	E Plane: 8.1 degrees					
	H Plane: 9.5 degrees					
3 dB Spot Size @ 1 m:						
AA18G26-50:	0.14 m x 0.17 m					
Will faithfully reproduce AM, appearing on input signal.	. FM, or pulse modulation					
	Minus 65 dBc typical					
Spurious:	Minus 65 dBc typical					
Spurious: Primary Power (Supplied by A	,,					
Spurious: Primary Power (Supplied by A 8 VDC @ 6 /	A1000):					
Spurious: Primary Power (Supplied by A 8 VDC @ 6 /	Amps max, +24 VDC @ 1 Amp max					
Spurious: Primary Power (Supplied by A 8 VDC @ 6 / Connectors:	Anps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female					
Spurious: Primary Power (Supplied by A 8 VDC @ 6 / Connectors: RF Input: DC Input:	A1000):					
Spurious: Primary Power (Supplied by A 8 VDC @ 6 / Connectors: RF Input: DC Input: Cooling:	A1000): Amps max, +24 VDC @ 1 Amp max 2.92 mm (K–type) female Twinax					
Spurious: Primary Power (Supplied by A 8 VDC @ 6 / Connectors: RF Input: DC Input: Cooling:	A1000): Amps max, +24 VDC @ 1 Amp max 2.92 mm (K–type) female Twinax					
Spurious: Primary Power (Supplied by A 8 VDC @ 6 / Connectors: RF Input: DC Input: Cooling: Weight: AA18G26-50:	A1000): Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax Forced air (self-contained fans)					
Spurious: Primary Power (Supplied by A 8 VDC @ 6 / Connectors: RF Input: DC Input: Cooling: Weight:	A1000): Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax Forced air (self-contained fans)					



Environmental:	
Operating Temperature:	5°C/+40°C
Operating Altitude:	up to 2000 M
Shock and vibration:	Normal Truck Transport
Regulatory Compliance:	
EMC	EN 61326-1
Safety	UL 61010-1
	CAN/CSA C22.2 #61010-1
	CENELEC EN 61010-1
RoHS	Directive 2011/65/EU
WEEE	Directive 2012/19/EU
Export Classification:	EAR99

### **AA26G40-20** 26.5 - 40 GHz 20 V/m

Rated Field Strength: Minimu	ım 20 V/m at 1 meter antenna distance							
Maximum Amplifier Input: +10 dBm ma								
Frequency Response:	26.5 – 40 GHz instantaneous							
3 dB Beamwidth:								
AA26G40-20:	E Plane: 16.7 degrees							
	H Plane: 18.3 degrees							
3 dB Spot Size @ 1 m:								
AA26G40-20:	0.29 m x 0.32 m							
Modulation Capability:								
appearing on input sign								
appearing on input sign Spurious:	nal. Minus 65 dBc typical							
appearing on input sign Spurious: Primary Power (Supplied	Minus 65 dBc typical by AA1000):							
appearing on input sign Spurious: Primary Power (Supplied	Minus 65 dBc typical by AA1000):							
appearing on input sign Spurious: Primary Power (Supplied 8 VDC (	nal. Minus 65 dBc typical							
appearing on input sign Spurious: Primary Power (Supplied 8 VDC ( Connectors:	Minus 65 dBc typical by AA1000): @ 6 Amps max, +24 VDC @ 1 Amp max							
appearing on input sign Spurious: Primary Power (Supplied 8 VDC ( Connectors: RF Input:	Minus 65 dBc typical by AA1000): @ 6 Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female							
appearing on input sign Spurious: Primary Power (Supplied 8 VDC of Connectors: RF Input: DC Input:	nal. Minus 65 dBc typical by AA1000): @ 6 Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax							
appearing on input sign Spurious: Primary Power (Supplied 8 VDC ( Connectors: RF Input: DC Input: Cooling:	nal. Minus 65 dBc typical by AA1000): @ 6 Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax Forced air (self-contained fans)							
appearing on input sign Spurious: Primary Power (Supplied 8 VDC ( Connectors: RF Input: DC Input: Cooling: Weight:	nal. Minus 65 dBc typical by AA1000): @ 6 Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax Forced air (self-contained fans)							
appearing on input sign Spurious: Primary Power (Supplied 8 VDC ( Connectors: RF Input: DC Input: Cooling: Weight: AA26G40-20:	nal. Minus 65 dBc typical by AA1000): @ 6 Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax							



Environmental:	
Operating Temperature:	5°C/+40°C
Operating Altitude:	up to 2000 M
Shock and vibration:	Normal Truck Transport
Regulatory Compliance:	
EMC	EN 61326-1
Safety	UL 61010-1
	CAN/CSA C22.2 #61010-1
	CENELEC EN 61010-1
RoHS	Directive 2011/65/EU
WEEE	Directive 2012/19/EU
Export Classification:	3A001

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### **AA26G40-50** 26.5 - 40 GHz 50 V/m



Rated Field Strength: Minimum 5	i0 V/m at 1 meter antenna distance
Maximum Amplifier Input:	+10 dBm max
Frequency Response:	26.5 – 40 GHz instantaneous
3 dB Beamwidth:	
AA26G40-50:	E Plane: 8.3 degrees
	H Plane: 9.7 degrees
3 dB Spot Size @ 1 m:	
AA26G40-50:	0.15 m x 0.17 m
Modulation Capability: Will faithfully reproduce AM appearing on input signal.	l, FM, or pulse modulation
Spurious:	Minus 65 dBc typical
Spurious: Primary Power (Supplied by A	AA1000):
Spurious: Primary Power (Supplied by A	AA1000):
Spurious: Primary Power (Supplied by J 8 VDC @ 6	AA1000): Amps max, +24 VDC @ 1 Amp max
Spurious: Primary Power (Supplied by J 8 VDC @ 6 Connectors:	AA1000): Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female
Spurious: Primary Power (Supplied by J 8 VDC @ 6 Connectors: RF Input:	AA1000): Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax
Spurious: Primary Power (Supplied by J 8 VDC @ 6 Connectors: RF Input: DC Input:	Minus 65 dBc typical AA1000): Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax Forced air (self-contained fans)
Spurious: Primary Power (Supplied by J 8 VDC @ 6 Connectors: RF Input: DC Input: Cooling:	AA1000): Amps max, +24 VDC @ 1 Amp max 2.92 mm (K-type) female Twinax
Spurious: Primary Power (Supplied by J 8 VDC @ 6 Connectors: RF Input: DC Input: Cooling: Weight:	AA1000): Amps max, +24 VDC @ 1 Amp max 2.92 mm (K–type) female Twinax Forced air (self–contained fans)
Spurious: Primary Power (Supplied by J 8 VDC @ 6 Connectors: RF Input: DC Input: Cooling: Weight: AA26G40-50:	AA1000): Amps max, +24 VDC @ 1 Amp max 2.92 mm (K–type) female Twinax Forced air (self–contained fans)

Operating Temperature:	5°C/+40°0
Operating Altitude:	up to 2000 N
Shock and vibration:	Normal Truck Transpor
Regulatory Compliance:	
EMC	EN 61326-
Safety	UL 61010-
	CAN/CSA C22.2 #61010-
5.00	CENELEC EN 61010-
RoHS WEEE	Directive 2011/65/EL Directive 2012/19/EL
VVLLL	Directive 2012/19/LC

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Not all chambers are the same. All reverberation, fully and semi--anechoic chambers provided by AR RF/Microwave Instrumentation offer customers the highest level of performance, quality, and support.

ARCP-0022



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**RF Solid State Universal Series** 

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### **ARCP-0021 RF** Shielded Room



The Model ARCP-0021 RF shielded room is designed to comply with shielding effectiveness requirements according to EN 50147-1 March 1996. The RF enclosure is approximately 2.400m x 2.400m x2.475m (~ 8' x 8' x 8'2") (outside dimensions). This shielded enclosure is typically used as a control room space to house the instrumentation required to conduct testing in an anechoic chamber by providing an RF noise free space that maximizes the performance of the instrumentation equipment being operated. The export classification for this equipment is EAR99.

**ARCP-0022 Radiated Immunity** Chamber - 3m Test Distance



The Model ARCP-0022 chamber is designed to comply with field uniformity per IEC 61000-4-3 / EN 61000-4-3 (2010). The chamber enclosure is approximately 6.90m x 3.150m x2.925m (~22'-7 5/8" x 10'-4" x 9'-7 1/8" outside dimensions) and is constructed of pan type shielded panels. The export classification for this equipment is EAR99.

Structural members installed on the roof of the shield allow the chamber to carry the weight of the shield, ferrite tile absorber and HT25 & HT45 hybrid absorber, doors etc.

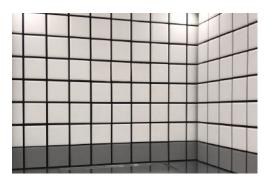
**ARCP-0023** 3m chamber w/ Ø1.5m test volume



The Model ARCP-0023 chamber is designed to comply with NSA & field uniformity per CISPR 16-1-4 Ed. 4, RSM per IEC 61000-4-3 and sVSWR per CISPR 16-1-4 Ed. 4 Clause 7. The chamber enclosure is approximately 8.55m (~28'-6") x 5.55m (~18'-2 1/2'') x5.665m (~18'-7") (outside dimensions) with a usable nominal internal clear space of 7.99m x 4.51m x 4.84m and is constructed of pan type shielded panels. The export classification for this equipment is EAR99.

A support structure allows the chamber to carry the weight of the shield, ferrite tile absorber and HT45 hybrid absorber, doors etc. It includes a ground plane with Ø1.5m turntable and 500Kg load rating, a Model TLT3 antenna mast and Model SC110V-2 controller.

**ARCP-0024** Semi Anechoic 5m Chamber with/ Ø2m test volume



The Model ARCP-0024 chamber is designed to comply with NSA & field uniformity per CISPR 16-1-4 Ed. 4, RSM per IEC 61000-4-3 and sVSWR per CISPR 16-1-4 Ed. 4 Clause 7. The chamber enclosure is approximately 10.65m x 6.450m x5.625m (~35' 0" x 21'-2" x 18'-6" outside dimensions) with a usable nominal internal clear space of 104m x 5.35m x 5.13m (34'-2" x 17'-7" x 16'-10") and is constructed of pan type shielded panels. The export classification for this equipment is EAR99.

A support structure allows the chamber to carry the weight of the shield, ferrite tile absorber and HT45 hybrid absorber, doors etc. It includes a ground plane with Ø2m turntable and 1000Kg load rating, a Model BAM 4.5-P antenna mast and Model FCU 3 controller.



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### **ARCP-0025**

Semi Anechoic 10m Chamber w/ 3m test volume



The Model ARCP-0025 chamber is designed to comply with NSA & field uniformity per CISPR 16–1–4 Ed. 4, RSM per IEC 61000–4–3 and sVSWR per CISPR 16-1-4 Ed. 4 Clause 7. The chamber enclosure is approximately 17.40m(~57'-1") x 11.250m(~36'-11")x 8.175m(~26'-10") (outside dimensions) and is constructed of pan type shielded panels. The export classification for this equipment is EAR99.

A support structure allows the chamber to carry the weight of the shield, ferrite tile absorber and HT45 & HT65 hybrid absorber, doors etc. It includes a ground plane with Ø3m turntable and 1000Kg load rating, an antenna mast and controller.

**ARCP-0026** Semi Anechoic 10m Chamber w/ 4m test volume



ARCP-0026 - 10m Semi anechoic chamber with a Ø4m Test Volume

The Model ARCP-0026 chamber is designed to comply with NSA & field uniformity per CISPR 16–1–4 Ed. 4, RSM per IEC 61000-4-3 and sVSWR per CISPR 16-1-4 Ed. 4 Clause 7. The chamber enclosure is approximately  $18.45m(\sim 60'-7'') x$ 11.850m(~38'-11")x 8.175m(~26'-10") (outside dimensions) and is constructed of pan type shielded panels. The export classification for this equipment is EAR99.

A support structure allows the chamber to carry the weight of the shield, ferrite tile absorber and HT45 hybrid absorber, doors etc. It includes a ground plane with Ø4m turntable and 1000Kg load rating, an antenna mast and controller.

### **ARCP-0027** Semi Anechoic 10m Chamber w/ 5m test volume



The Model ARCP-0027 chamber is designed to comply with NSA & field uniformity per CISPR 16–1–4 Ed. 4, RSM per IEC 61000-4-3 and sVSWR per CISPR 16-1-4 Ed. 4 Clause 7. The chamber enclosure is approximately  $19.50m(\sim 64'-0'') x$ 12.45m(~40'-11")x 8.175m(~26'-10") (outside dimensions) and is constructed of pan type shielded panels. The export classification for this equipment is EAR99.

A support structure allows the chamber to carry the weight of the shield, ferrite tile absorber and HT45 hybrid absorber, doors etc. It includes a ground plane with Ø5m turntable and 1000Kg load rating, an antenna mast and controller.

### **ARCP-0028** Vehicle Component Test Chamber



The Model ARCP-0028 chamber is designed to comply with CISPR25:2016 (Annex J – ALSE performance validation 150KHz - 1 GHz). The chamber enclosure is approximately 5.700m x 5.250m x3.575m (~18'-8 1/2" x 17'-2 5/8" x 11 8 3/4") (outside dimensions). The export classification for this equipment is EAR99.

The chamber is supported with a 8" roof beams that allow it to carry the weight of the shield, ferrite tile absorber and HT25 hybrid absorber, doors etc.

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ARCP-0029 Military Component Test Chamber (hybrid)



The Model ARCP–0029 chamber is designed to comply with MIL–STD 461 E/F and RTCA Do–160G for military component testing. The chamber enclosure is approximately 4.650m x 3.750m x 2.775m (~15–3" x 12'–3 5/8"x 9'–1 ¼") (outside dimensions) and is constructed of pan type shielded panels. The export classification for this equipment is EAR99.

An 8" beam on roof allows the chamber to carry the weight of the shield, ferrite tile absorber and HT25 hybrid absorber, doors etc.

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### ARCP-0030 Military Component Test Chamber (non-hybrid)



The Model ARCP–0030 chamber is designed to comply with MIL–STD 461 E/F and RTCA Do–160G for military component testing. The chamber enclosure is approximately 4.80m x 4.350m x 3.125m (outside dimensions) and is constructed of pan type shielded panels. The export classification for this equipment is EAR99.

An 8" beam on roof allows the chamber to carry the weight of the shield, MT50 Microwave absorber, doors etc.

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ARCP-0031 Reverb Chamber LUF200 ARCP-0032 Reverb Chamber LUF400



The Model ARCP–0031 Reverb Chamber is designed to comply with shielding effectiveness requirements according to EN 50147–1 March 1996. The chamber enclosure is approximately 5.100m x 450m x 2.925m ( $\sim 16'-9'' \times 13'-3-\frac{1}{2}'' \times 9'-7-\frac{1}{4}'')$  (outside dimensions). The export classification for this equipment is EAR99.

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The Model ARCP–0032 Reverb Chamber is designed to comply with shielding effectiveness requirements according to EN 50147–1 March 1996. The chamber enclosure is approximately 2.55m x 1.950m x 1.875m ( $\sim$ 8'–4 3/8" x 6'–4  $\frac{3}{4}$ " x 6'–1  $\frac{3}{4}$ ") (outside dimensions). The export classification for this equipment is EAR99.

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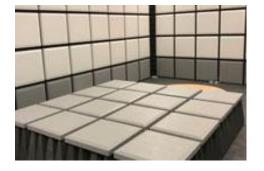


### ARCP-0033 Reverb Chamber LUF1000



The Model ARCP–0033 Reverb Chamber is designed to comply with shielding effectiveness requirements according to EN 50147–1 and Field Uniformity as per IEC 61000–4–21 and RTCA DO160–6. The RF enclosure is approximately 0.80m x 0.90m x 1.50m (-2'–7 1/2" x 2'–11 7/16" x 4'–11 15/16") (outside dimensions), overall height of the enclosure is 2m (-6'–6 3/4") on casters and provides an RF noise free space. The export Classification for this equipment is EAR99.

ARCP-0034 Fully Anechoic 3m Chamber



The Fully Anechoic 3m Chamber has a test volume of 1.5m. The Model ARCP–0034 chamber is designed to comply with NSA & field uniformity per CISPR 16–1–4 Ed. 4, RSM per IEC 61000–4–3 and sVSWR per CISPR 16–1–4 Ed. 4 Clause 7. The chamber enclosure is approximately 7.95m(~26'–1") x 4.95m(~16'–3") x 3.975m(~13'–6") (outside dimensions) and is constructed of pan type shielded panels. The export classification for this equipment is EAR99.

A support structure allows the chamber to carry the weight of the shield, ferrite tile absorber and HT45 hybrid absorber, doors etc. It includes a ground plane with Ø1.5m turntable and 500kG load rating.

### **About Chambers**

AR supplied test chambers provide performance and peace of mind in a single solution. Our patented and fire-retardant absorbers are RoHS and REACH compliant; they do not release carbon dust nor carry heavy poisonous chemicals. With our pan-type RF shielding construction and absorbers that don't absorb humidity, your test measurement accuracy is preserved over time.

Although AR offers predefined chamber designs, chambers are fully customizable, and offer a complete selection of accessories. Turntables, masts, and a wide array of antennas are part of the primary offering. At the same time, other components such as fiberoptic converters, shielded RF penetrations, specialty bulkhead connectors, CCTV, and projection systems are also available.

Shielding effectiveness according to EN 50147-1 March 1996								
Frequency Guaranteed value								
	10 kHz	≥80 dB						
Electric & Magnetic field	156 kHz	≥95 dB						
measurements	1 MHz	≥110 dB						
	10 MHz	≥110 dB						
	30 MHz	≥120 dB						
Plane wave	100 MHz	≥120 dB						
Plane wave	400 MHz	≥120 dB						
	1000 MHz	≥120 dB						
	10.5 GHz	≥100 dB						
Micro wave	18.0 GHz	≥100 dB						
WIICIO WOVE	26.5 GHz	≥100 dB						
	40.0 GHz	≥100 dB						

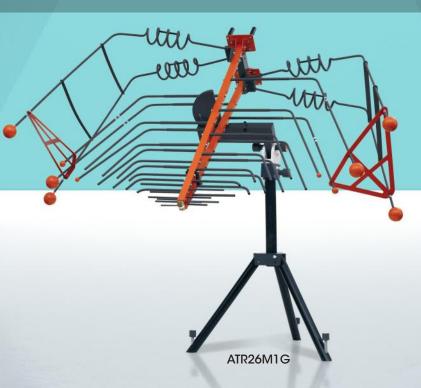
### Reverberation Chamber Stirrers and Tuners

#### Features

- Proven designs
- Scalable designs for existing chambers
- High performance
- High precision
- No detectable shakedown
- Servo-motor driven
- Variable speed
- Linear or s-curve acceleration
- Fully programmable
- Manual or automated operation
- Homing function
- · Stirring-only models available

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AR offers a wide range of high power, log periodic, high-gain horn, and bent element antennas, and more. With antennas available up to 50 GHz and 20,000 W of input CW power, our innovative antennas offer features available exclusively from AR.





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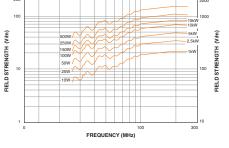
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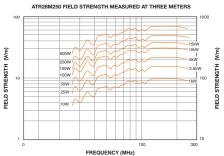
### Log-Periodic

### ATR26M250 26 – 250 MHz 15000 W

Frequency range	26 – 250 MHz					
Power input (max.)	15000 \					
Gain (over isotropic)	–3 to +6 dBi (26 – 80 MHz) 6 dBi (80 – 250 MHz)					
Gain flatness	±1.5 dBi (80 – 250 MHz)					
Impedance	50 ohms nominal					
VSWR (max.)	3.5:1 (80 – 250 MHz 10:1 (26 – 80 MHz					
Beamwidth (average)	Typical curves availab on reque					
Connector	1 5/8 E quick change connect					
Size (w x h x d)	279.4 x 53.6 x 202.4 cm (110 x 21.1 x 79.7 in.)					
Weight (max.)	31.8 kg (70 lb.)					

#### ATR26M250 FIELD STRENGTH MEASURED AT ONE METER





### ATR26M1G 26 MHz – 1 GHz 20000 W

Frequency range	26 MHz-1 GHz
Power input, CW	20 kW @ 26 MHz, derate to 5 kW @ 1000 MHz
Gain (over isotropic)	–8 to 0 dB (26–80 MHz) 0–6 dB (80–1000 MHz)
Gain flatness	±3 dB (80–1000 MHz)
Impedance	50 ohms nominal
VSWR (max.)	6:1 (26–80 MHz) 3.5:1 (80–1000 MHz)
Beamwidth (average)	Typical curves available on request
Connector	1 5/8 EIA male with removable center bullet
Size (W X H X D)	231 x 66 x 183 cm (91 x 26 x 72 in.)
Weight (max.)	29.5 kg (65 lb.)

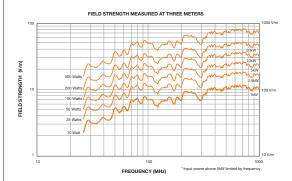
#### Mounting

May be mounted in two perpendicular planes using an optional antenna positioner (AP5010B). One non-metallic mast (4 foot) is included for vertical mounting.



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FIELD STRENGTH MEASURED AT ONE METER



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#### Mounting

May be mounted in two perpendicular planes using an optional antenna positioner (AP5010B). One non-metallic mast (4 foot) is included for vertical mounting.

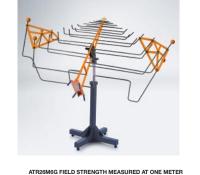
### Log-Periodic

### **ATR26M6G** 26 MHz – 6 GHz 5000 W

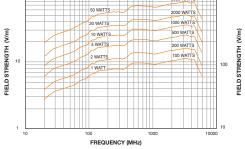
Frequency range	26 MHz – 6 GHz					
Power input (max.)	5000 V					
Gain (over isotropic)	–3 to +6 dBi (26 – 80 MHz) 6 dBi (80 MHz – 6 GHz)					
Gain flatness	±1.5 dBi (80 – 6 GHz)					
Impedance	50 ohms nominal					
VSWR (max.)	3:1 (80 – 6 GHz) 10:1 (26 – 80 MHz)					
Beamwidth (average)	Typical curves available on request					
Connector	Type N (F) quick change connector					
Size (w x h x d)	279.4 x 53.6 x 202.4 cm (110 x 21.1 x 79.7 in.)					
Weight (max.)	22.7 kg (50 lb.)					

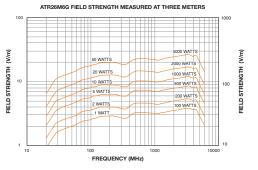
#### Mounting

May be mounted in two perpendicular planes using an optional antenna positioner (AP5010B). One non-metallic mast (4 foot) is included for vertical mounting.



### AIRZOMOG FIELD STRENGTH MEASURED AT ONE METER





### **ATR26M6G-1** 26 MHz - 6 GHz 5000 W

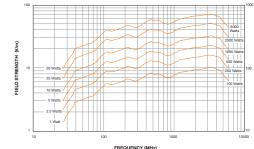
Frequency range	26 MHz – 6 GHz						
Power input (max.)	5000 W						
Gain (over isotropic)	-4 to 6 dB (26 - 80 MHz) 6 dB (80 MHz - 6 GHz)						
Gain flatness	±1.5 dB (80 MHz – 6 GHz)						
Impedance	50 ohms nominal						
VSWR (max.)	6:1 (26 – 80 MHz) 3:1 (80 MHz – 6 GHz)						
Beamwidth (average)	Typical curves available on request						
Connector	Type N (F) quick change connector; Type C (F) supplied for higher power applications						
Size (w x h x d)	218.4 x 73.7 x 161.3 cm (86 x 29 x 63.5 in.)						
Weight (max.)	13.6 kg (30 lb.)						

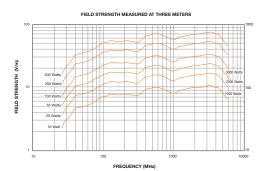
#### Mounting

May also be mounted using the optional AP5010B antenna ositioner or the TP1000BM3 tripod with ballast tray. Also includes 2 non-metallic masts (4 and 6 feet) vertical mounting.



FIELD STRENGTH MEASURED AT ONE METER



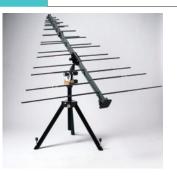


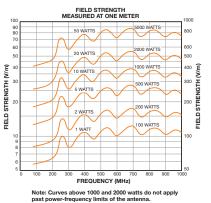
	ø	Product Catalog	<b>; 2022</b> F	or Sales, call: 2	215.723.8181	For an A	pplications E	ingineer, call:	800.933.8181	arworld.	us	100
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### Log-Periodic

### ATL80M1G 80 MHz - 1 GHz 2000 W

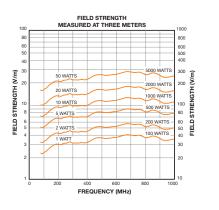
Frequency range	80 MHz – 1 GHz
Power input (max.)	2000 W
<b>Gain</b> (over isotropic) 7.5 dBi avg.	6.5 dBi min.,
Gain flatness	±1 dBi
Impedance	50 ohms nominal
VSWR (max.) 1.5:1 (average)	1.8:1 (max.)
Beamwidth (average)	E plane 60° H plane 105°
Front to back ratio (min.)	15 dB
Connector	Type N (F) quick change connector Type C (F) supplied for higher power applications
<b>Size</b> (w x h x d) (76 x 5.1 x 63 in.)	193 x 13 x 160 cm
Weight (max.)	7.7 kg (17 lb)
Mounting optional TP1000B tripod.	May be mounted using the





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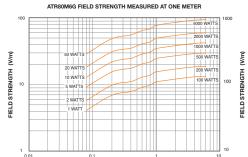
### ATR80M6G 80 MHz - 6 GHz 5000 W

Frequency range	80 MHz–6 GHz
Power input (max.)	5000 W
Gain (over isotropic)	6 dBi
Gain flatness	±2 dBi
Impedance	50 ohms nominal
VSWR (max.)	3:1 2:1 (typical)
Beamwidth (average)	Typical curves available on request
Connector	Type N (F) quick change connector
Size (w x h x d)	132.1 x 20.32 x 97.8 cm (52 x 8 x 38.5 in.)
Weight (max.)	7.94 kg (17.5 lb.)

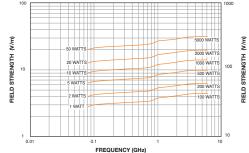
#### Mounting

May be tripod mounted in two perpendicular planes using optional tripod. Also includes one non-metallic mast for vertical mounting.

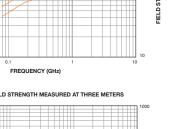




ATR80M6G FIELD STRENGTH MEASURED AT THREE METERS



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Antennas				Log-P	eriodi	c				
<b>ATL150M10</b> 150 MHz – 1 2000 W			A			200 MH 200 MH	<b>23 &amp; LP6</b> z – 2 GHz z – 3 GHz z – 6 GHz	2		
Frequency range	150 MHz – 1 GHz			K						
Power input (max.)	2000 W									
Gain (over isotropic)	6.5 dBi min., 7.5 dBi avg.	100 90 80	FIELD STRENGTH MEASURED AT ONE MI 500 0 WATTS	ETER 1000 800				ltı.		
Gain flatness	±1 dBi	60	$\sim$	0 WATTS 500			═╍═╋┿╋┿╋┿			
Impedance	50 ohms nominal			0 WATTS 400 E				Hu.		
VSWR (max.)	1.8:1 (max.) 1.5:1 (average)	E 30	5 WATTS	0 WATTS 200 E 200						
Beamwidth (average)	E plane 60° H plane 105°		2 WATTS 10			Gain Impedance		6 dBi typical 50 ohms nominal		
Front to back ratio (min.)	15 dB	8 7				Connector		Type N female		
Connector	Type N (F)	5 100 200	300 400 500 600 70 FREQUENCY (MHz			VSWR		2:1 max.		
	quick change connector Type C (F) supplied for		rves above 1000 and 2000 ver-frequency limits of the a	watts do not apply		Polarization		Linear		
	higher power applications					Max Power		LP1-300 W CW		
Size (w x h x d)	102 x 13 x 91 cm (40 x 5.1 x 36 in.)	100 80 60	FIELD STRENGTH MEASURED AT THREE ME	800		MUA I UWEI		LP3-250 W CW LP6-200 W CW		
Weight (max.)	7 kg (15 lb.)	50 40	50 WATTS	600 500 400 5000 WATTS 300		Size (LxWxH)	48 x 3 x 2	9.5 in 122 x 8 x 75 cm		
Mounting	May be mounted using the optional TP1000B tripod.	الله الله الله الله الله الله الله الله	50 WATTS 20 WATTS	2000 WATTS 200		Weight		8 lbs. (3.6 kg)		
	oplicita n rooob inpou.		10 WATTS 5 WATTS	1000 WATTS 100		Mounting Tube	22	mm dia. stainless steel		
		EFELD STREMATH (MM)	2 WATS 1 WAT 200 400 600 FREQUENCY (MHz	00 WATTS 50 00 00 00 00 00 00 00 00 00 00 00 00		Finish		Orange powdercoat		
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### Log-Periodic

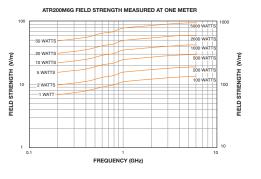
### **ATR200M6G** 200 MHz – 6 GHz 5000 W

Frequency range	200 MHz – 6 GHz
Power input (max.)	5000 W
Gain (over isotropic)	6 dBi
Gain flatness	±1.5 dBi
Impedance	50 ohms nominal
VSWR (max.)	3:1 2:1 (typical)
Beamwidth (average)	Typical curves available on request
Connector	Type N (F) quick change connector
Size (w x h x d)	82.6 x 17.8 x 57.2 cm (32.5 x 7 x 22.5 in.)
Weight (max.)	5 kg (12 lb.)

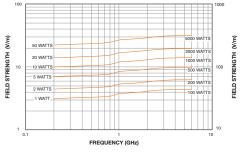
#### Mounting

May be tripod mounted in two perpendicular planes using optional tripod. Also includes one non-metallic mast for vertical mounting.





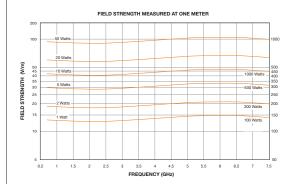
#### ATR200M6G FIELD STRENGTH MEASURED AT THREE METERS

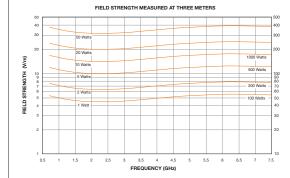


### **ATT700M8G** 700 MHz – 7.5 GHz 1200 W

Frequency range	700 MHz-7.5 GHz
Power input (max.)	1,200 W
Gain (over isotropic)	8 dBi typ.
Gain flatness	±1.5 dBi
Impedance	50 ohms nominal
VSWR (max.)	3:1 (max.) 1.7:1 (average)
Beamwidth (average)	E plane 57° H plane 60°
Connector	7–16 DIN (F)
Size (w x h x d)	28 x 28 x 56 cm (11 x 11 x 22 in.)
Weight (max.)	1.8 kg (4 lb.)
Mounting	May be tripod mounted with included mount.







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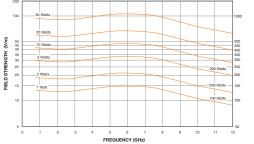
Log-Periodic

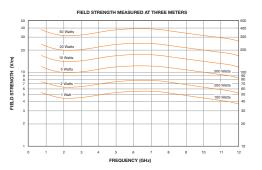
### **ATT700M12G** 700 MHz – 12 GHz 600 W

Frequency range	700 MHz – 12 GHz			
Power input (max.)	600 W max.			
Far Field Gain	8 dBi typ.			
Gain flatness	±1.5 dBi			
Impedance	50 ohms nominal			
VSWR (max.)	3:1 (max.) 1.7:1 (average)			
3 dB Beamwidth (average)	E plane 57° H plane 60°			
Connector	Type N (F)			
Size (w x h x d)	28 x 28 x 55 cm (11 x 11 x 21.5 in.)			
Weight (max.)	1.7 kg (3 lb., 12 oz)			
Mounting	May be tripod mounted with included mount			

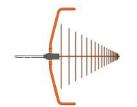


FIELD STRENGTH MEASURED AT ONE METER





**JB1, JB3 & JB6** 30 MHz – 2 GHz 30 MHz – 3 GHz 30 MHz – 6 GHz



Frequency Range	JB1 30 MHz – 2 GHz JB3 30 MHz – 3 GHz JB6 30 MHz – 6 GHz
Impedance	50 ohms nominal
Connector	Type N female
VSWR	<2:1 above 200MHz
Polarization	Linear
Imbalance	Less than 1 dB
Max. Power:	See curve in spec sheet
Size (LxW)	51 x 19 in, 130 x 48 cm
Wing Span	44 in (112 cm)
Weight	10 lbs. (5 kg)
Mounting Tube	22 mm dia. stainless steel
Wing Mount	Dual compression
Finish	Orange powdercoat
Options	SunAR SNAP! Mount Tripod mount Carrying case

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Horn

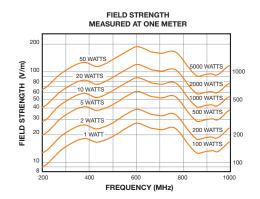
### ATH200M1G 200 MHz - 1 GHz 5000 W

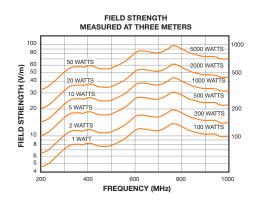
Frequency range	200 MHz – 1 GHz
Power input (max.)	5000 W
Gain (over isotropic)	10 dBi min. typically increasing to 18 dBi at 1000 MHz
Impedance	50 ohms nominal
VSWR (max.)	2.5:1 max., 1.5:1 avg.
Beamwidth (average)	Typical curves available on request
Connector	Type 1–5/8 EIA Flange, Quick Change Connector
Size (w x h x d)	109.2 x 145.8 x 175.3 cm (43 x 57 x 69 in.)
Weight (max.)	46 kg (100 lb.)

#### Mounting

Heavy-duty tripod included. Pads with 3/8-16 thread for stand mounting vertically or horizontally.







### ATH200M1G-1 200 MHz - 1 GHz 10000 W

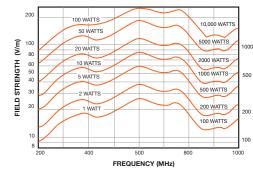
Frequency range	200 MHz-1 GHz
Power input (max.)	10000 W
Gain (over isotropic)	10 dBi min. typically increasing to 18 dBi at 1000 MHz
Impedance	50 ohms nominal
VSWR (max.)	2.5:1 max., 1.5:1 avg.
Beamwidth (average)	Typical curves available on request
Connector	Type 1–5/8 EIA Flange,
Size (w x h x d)	109.2 x 145.8 x 175.3 cm (43 x 57 x 69 in.)
Weight (max.)	46 kg (100 lb.)

#### Mounting

Heavy-duty tripod included. Pads with 3/8-16 thread for stand mounting vertically or horizontally.

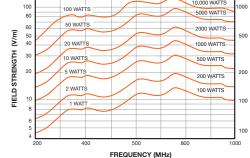


#### FIELD STRENGTH MEASURED AT ONE METER



MEASURED AT THREE METERS 10,000 WATTS 100 WATTS 50 WATTS 20 WATTS 10 WATTS

FIELD STRENGTH



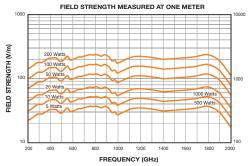
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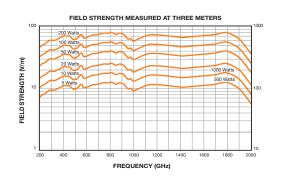
Horn

### **ATH200M2G** 200 MHz – 2 GHz 1000 W

Frequency range	200 MHz – 2 GHz
Power input (max.)	1000 W
Gain (over isotropic)	6 dBi typ.
VSWR (typ.)	2:1
Beamwidth (avg.)	
E Plane	(beamwidth graph
H Plane	available on request)
Front To Back Ratio (min.)	20 dBi
Connector	N (f) Precision
Size (w x h x d)	72.9 x 97.8 x 93.2 cm
	(28.7 x 38.5 x 36.7 in.)
Weight	10.21 kg (22.5 lb.)







**ATH400M1G** 400 MHz – 1 GHz 3000 W

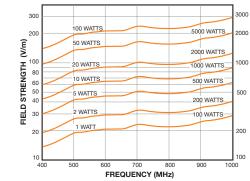
400 MHz – 1 GHz
See graphs.
10 dBi min. typically increasing to 15 dBi at 1000 MHz
50 ohms nominal
2.5:1 max., 1.5:1 avg.
See curve
Quick Change block. See Model Configurations.
56.4 x 79.3 x 73.7 cm (22.2 x 31.2 x 29 in.)
9.1 kg (20 lb.)

Mounting

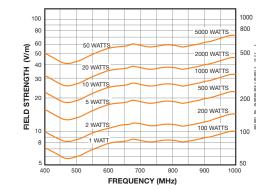
Rear flange for wall mount. Pads with 1/4–20 thread for tripod mount.



FIELD STRENGTH MEASURED AT ONE METER



FIELD STRENGTH MEASURED AT THREE METERS



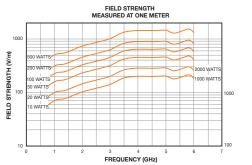
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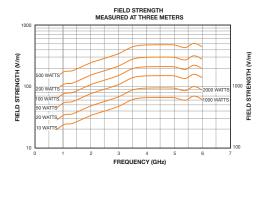
### Horn

### **ATH800M6G** 800 MHz - 6 GHz 2300 W

Frequency range	800 MHz-6 GHz
Power input (max.)	2,300 W (connector dependent)
Gain increasing to 22 dBi at 6 GHz	11 dBi min,
VSWR (max.)	
Max.	2.5:1
Average	1.6:1
Beamwidth (avg.) at 3 dBi down fro	om peak
E Plane	27.5°
H Plane	25°
Connector	7–16 DIN (F)
Size (w x h x d)	46.3 x 46.3 x 69.2 cm
	(18.25 x 18.25 x 27.25 in.)
Weight (max.)	7.26 kg (16 lb.)

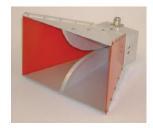


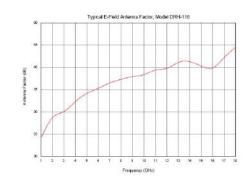




### **DRH-118** 1–18 GHz 300 W

Impedance	50 ohms nominal
VSWR	< 1.5:1 average
Connector	Type N female
Polarization	Linear
Max Power	300 watts
Size (LxWxH)	9 x 9.5 x 6 in., 23 x 24 x 15 cm
Weight	4 lb., 1.8 kg
Mount	14-20 tripod mount Includes individual calibration
Options	SunAR RF Motion SNAP! Mount Tripod
	Carrying case





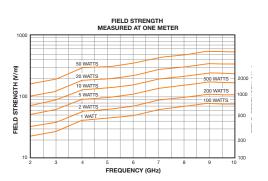
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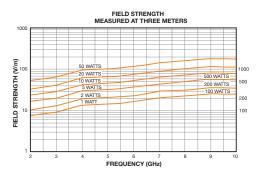
### Horn

**ATH2G10** 2 - 10 GHz 700 W

Frequency range	2 – 10 GHz					
Power input (max.)	700 W					
Gain	12.5 dBi min, increasing to 23 dBi at 10 GHz					
VSWR (max.)						
Max.	2:1					
Average	1.5:1					
Beamwidth (avg.) at 3 dBi down	from peak					
E Plane	25°					
H Plane	27°					
Connector	N (F)					
Size (w x h x d)	22.9 x 17.8 x 31.75 cm (9 x 7 x 12.5 in.)					
Weight (max.)	1.59 kg (3.5 lb.)					



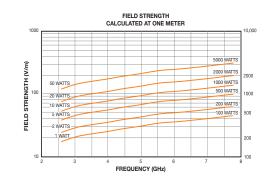


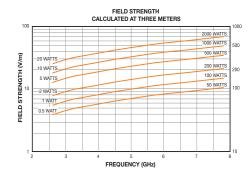




Frequency range	2.5 – 7.5 GHz
Power input (max.)	12000 W
Gain (over isotropic)	9.5 dBi min,
	increasing to 18 dB at 7.5 GHz.
VSWR (typ.)	
Max.	1.8:1
Average	1.3:1
Beamwidth (avg.) at 3 dBi da	own from peak
E Plane	30°
H Plane	30°
Connector	WRD-250-D30
Size (w x h x d)	12.2 x 9.9 x 20.3 cm
	(4.8 x 3.9 x 8 in.)
Weight	1.18 kg (2.5 lb.)







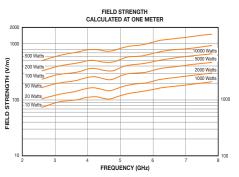
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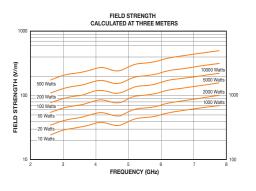
#### Horn

# **ATH2G8A-1** 2.5 - 7.5 GHz 12000 W

Frequency range	2.5 – 7.5 GHz
Power input (max.)	12000 W
Gain (over isotropic)	12.5 dBi min,
	increasing to 22 dBi at 7.5 GHz.
VSWR (typ.)	
Max.	1.8:1
Average	1.3:1
Beamwidth (avg.)	
E Plane	22°
H Plane	25°
Connector	WRD-250-D30
Size (w x h x d)	18 x 14.5 x 33.5 cm
	(7.1 x 5.7 x 13.2 in.)
Weight	1.8 kg (4 lb.)



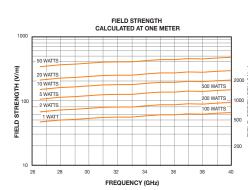


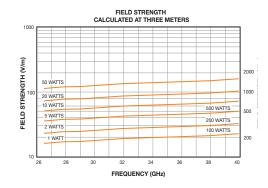


# **ATH4G8** 4 - 8 GHz 500 W

Frequency range	4 – 8 GHz					
Power input (max.)	500 W					
Gain increasing to 15.9 dBi at 8 GHz	11.5 dBi min.,					
	17.8 dBi min., increasing to 21.2 dBi at					
	8 GHz with gain enhancer					
VSWR (max.) Max. Average	1.6:1 1.3:1					
Beamwidth (avg.) at 3 dBi down fro	m peak					
E Plane H Plane	18° with gain enhancer 18° with gain enhancer					
Connector	N (F) Quick change connector					
<b>Size</b> (w x h x d) 7.62 x 10.3 x 15.14 cm	without gain enhancer					
	(30 x 46 x 5.96 in.)					
	with gain enhancer:					
	21.6 x 21.6 x 30.5 cm					
	(8.5 x 8.5 x 12 in.)					
Weight (max.)	2.27 kg (5 lb.)					







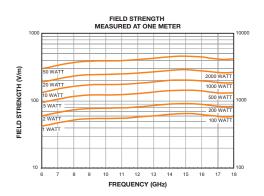
(9)	Proc	luct Catalog	<b>2022</b> For Sa	les, call: 215.7	723.8181   For c	an Appl	ications Engir	neer, call: 800	0.933.8181	arworld.us		109
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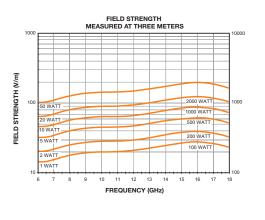
#### Horn

## **ATH6G18A** 6 - 18 GHz 3000 W

Frequency Range:		6 – 18 GHz
Average Power Input:		3000 W maximum
Peak Power Input:		Consult factory
Far Field Gain (over is	otropic):	19–25 dBi
		(see curve)
VSWR:		1.5:1 Typical
Beam Width (3 dB):		
		17°–7°, E–Plane (see curve)
		18°–9°, H–Plane (see curve)
Connector:	٧	VRD-650 D28 waveguide, cover
	flange, alte	rnating thru/tapped hole pattern
Weight:		1.13 kg (2.50 lbs)
Size:	19 x 1	3.8 x 33 cm (7.5 x 5.4 x 13 in)
Mounting Provision:		Tripod mounting
		bracket with ¼-20 tapped hole
Export Classification:		EAR99



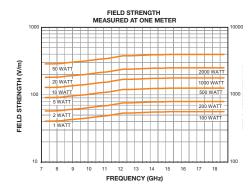


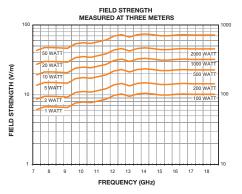


# **ATH7G18A** 7.5 - 18 GHz 2800 W

7.5 – 18 GHz
2,800 W
11.3 dBi min. increasing to 14 dBi at 18 GHz
17.4 dBi min., increasing to 20.2 dBi at 18 GHz with gain enhancer
guin childhee
1.2:1
1.1:1
n from peak
17° with gain enhancer
17° with gain enhancer
WRD-750 waveguide
with gain enhancer
9 x 10.8 x 20.6 cm
(3.54 x 4.25 x 8.11in)
0.6 kg (1.25 lb.)







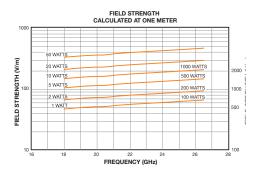
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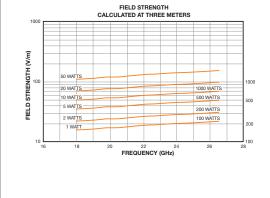
#### Horn

**ATH18G27A** 18 – 26.5 GHz 350 W

Frequency range	18 – 26.5 GHz
Power input (max.)	350 W CW
Gain	See Graph
VSWR (max.)	Typical 1.25:1
Beamwidth (avg.)	See Graph
Connector	WRD 180 C24 waveguide
Size (w x h x d)	6.43 x 53 x 9 cm (2.53 x 1.98 x 3.54 in)
Weight (max.)	150 g (5.3 oz)



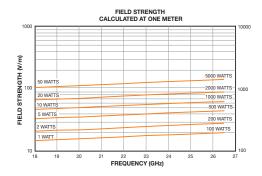


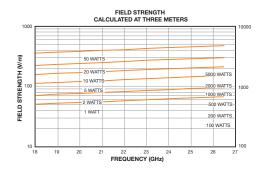


#### **ATH18G27A-1** 18 - 26.5 GHz 350 W

Frequency range	18 – 26.5 GHz
Power input (max.)	350 W CW
Gain	8.8 dBi min, increasing to 11.3 dBi at 26.5 GHz.
VSWR (max.)	
Max.	1.4:1
Average	1.2:1
Beamwidth (avg.)	
E Plane	57°
H Plane	55°
Connector	WR-42 waveguide
Size (w x h x d)	2.2 x 2.2 x 3.2 cm (0.88 x 0.88 x 1.25 in.)
Weight (max.)	241 g (8.5 oz)







<b>()</b>	Prod	luct Catalog	<b>2022</b> For Sa	les, call: 215.7	723.8181   For c	an Appli	ications Engir	neer, call: 800	.933.8181	arworld.us		111
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#### Horn

# **DRH-1840** 18 - 40 GHz 50 W

Impedance	50 ohms nominal
VSWR	< 1.5:1 average
Connector	Type K female
Polarization	Linear
Max Power	50 watts
Size (LxWxH)	5 x 5 x 3 in., 13 x 13 x 8 cm
Weight	1 lb., .45 kg
Mount	%-20 tripod mount Includes individual calibration.
Options	SunAR RF Motion SNAP! Mount Tripod Carrying case

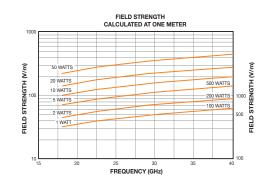


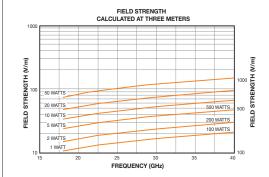
# Trpical E-Field Antenna Factor. Model DRH-118

**ATH18G40** 18 - 40 GHz 450 W

Frequency range	18 – 40 GHz
Power input (max.)	450 W
Gain	See Graph
VSWR (max.)	
Max.	1.5:1
Average	1.3:1
Beamwidth (avg.)	See Graph
Connector	WRD 180 C24 waveguide
Size (w x h x d)	3.73 x 2.69 x 6.27 cm
	(1.47 x 16 x 2.47 in.)
Weight (max.)	56.7 g (2 oz)





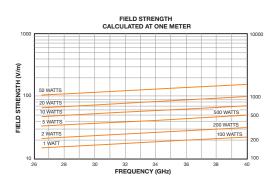


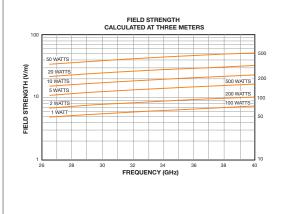
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Horn

Frequency range	26.5 – 40 GHz
Power input (max.)	240 W
Gain (over isotropic)	9 dBi min, increasing to 12 dBi at 40 GHz.
VSWR (typ.)	
Max.	1.3:1
Average	1.2:1
Beamwidth (avg.) at 3 dBi do	wn from peak
E Plane	57.5°
H Plane	56.5°
Connector	WR-28 waveguide
Size (w x h x d)	1.9 x 1.9 x 2.54 cm (0.75 x 0.75 x 10 in.)
Weight	122 g (4.3 oz)



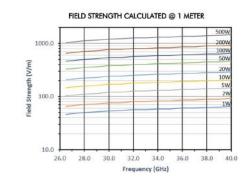




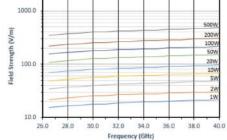
**ATH26G40A** 26.5 – 40 GHz 400 W

Frequency Range:	26.5 – 40 GHz
Power Input (maximun	n): 400 watts CW
Power Gain	(over isotropic): See Curve
VSWR:	Typical 1.25:1
Beamwidth (average):	See curve
Connector:	WR-28 waveguide
Mounting Provisions:	Waveguide flange
Weight:	50 g (1.8 oz)
Size (W X H X D):	3.19 X 44 X 7 Cm (1.26 X 1.59 X 2.76 ln)
Export Classification:	EAR99









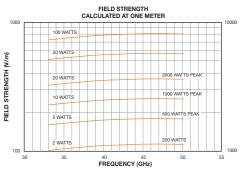
(9)	Prod	luct Catalog	<b>2022</b> For Sa	les, call: 215.7	723.8181   For c	an Appl	ications Engir	neer, call: 800	.933.8181	arworld.us		113
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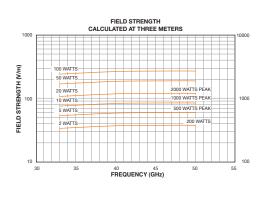
22 011- 50 011-

**ATH33G50** 33 - 50 GHz 240 W

Frequency range	33 GHz – 50 GHz
Power input (max.)	240 W
Gain (over isotropic)	20 ± 2 dBi
VSWR (typ.)	
Max.	
Average	1.2:1
Beamwidth (avg.) at 3 dBi down from	peak
E Plane	9.85°
H Plane	11.9°
Connector	WR-22 waveguide
Size (w x h x d)	4 x 3 x 9 cm
	(1.57 x 1.18 x 3.54 in.)
Weight	0.15 kg (0.33 lb.)



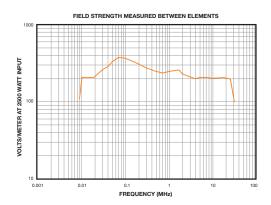




**ATE10K25M-1** 10 kHz – 25 MHz 3000 W

Frequency Range	10 kHz – 25 MHz
Power Input (max)	3000 W CW
Impedance	50 ohms
VSWR	2:1 max., 10 kHz–20 MHz 3.5:1 max., 20 MHz–25 MHz
Electric Field Intensity	200 volts/meter
Connector*	Type C (F)
Size (W x H x D)	303.53 x 222.25 x 101.8 cm (119.5 x 87.5 x 40 in.)
Weight (max.)	113 kg (250 lb.)
Weight (max.)	113 kg (250





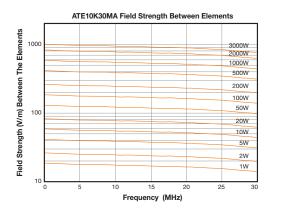
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#### **E-Field Generators**

## **ATE10K30MA** 10 kHz – 30 MHz 1000 W

Frequency range	10 kHz – 30 MHz
Power Input (max)	
without cooling option*	1000 W continuous
with forced-air cooling optio	n* 3000 W, 50% duty cycle
VSWR	
10 kHz-15 MHz	2:1 Max
15 MHz-22 MHz	3:1 Max
22 MHz-30 MHz	5:1 Max
Electric Field Intensity	See graph
Mounting Provisions U (optional tripod available)	NC ¼–20 tripod thread on 2 sides
Size 188	x 72 x 7 cm (74 x 28.3 x 2.5 in.)
(field-gene	rating elements are removable for
	storage and transportation)
Weight	
without cooling option	17 kg (38 lb.)
with forced-air cooling	21 kg (46 lb.)
Connector	Type C(F) Quick Change

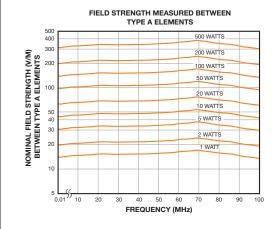


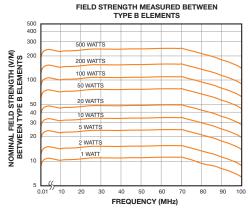


**ATE10K100M** 10 kHz - 100 MHz 500 W

Frequency range	50 ohms nomin 2.5:1 max., 1.4:1 typic See graph ominally 350 V/m with 500 W inp ominally 200 V/m with 500 W inp 36 x 46 x 36 c (14 x 18 x 14 in 48 x 46 x 36 c (19 x 18 x 14 in Type N ( 74 x 41 x 102 c (29 x 16 x 40 in 104 x 41 x 102 c (41 x 16 x 40 in 13 kg (28 lb Accepts tripod threade
Power input	500 W max
Input Impedance	50 ohms nomina
VSWR	2.5:1 max., 1.4:1 typica
Electric field intensity	See graphs
Field Intensity between Type A elements	
	inally 350 V/m with 500 W input
between Type B elements nom	inally 200 V/m with 500 W input
Max. Test Object Volume	
between Type A elements	36 x 46 x 36 cm
	(14 x 18 x 14 in.)
between Type B elements	48 x 46 x 36 cm
	(19 x 18 x 14 in.)
Connector*	Type N (F)
Size	
with Type A elements	
	(29 x 16 x 40 in.)
with Type B elements	104 x 41 x 102 cm
,,	(41 x 16 x 40 in.)
Weight (max.)	13 kg (28 lb.)
Mounting	Accepts tripod threaded
-	1/4 x 20 stud on three faces
	(optional tripod available)







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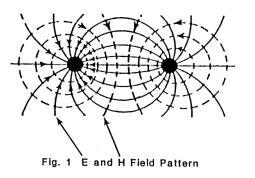
#### **E-Field Generators**

## ATP10K100M 10 kHz - 100 MHz 3000 W

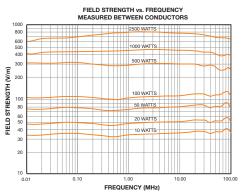
Frequency range		10 kHz – 100 MHz						
Power input (max	:)	3000 W CW						
Input impedance		50 ohms						
VSWR 2:1 max. 10 kHz-100 MH 6:1 max. 10-20 kHz above 1 kW input powe								
Electric field inter	nsity	See Figure						
Connector		See Model Configurations						
Natural convectio	n to 40°C aml	pient temperature						
Weight		95 kg (210 lb.)						

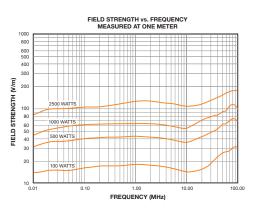
Size (W x H x D)

265 x 240 x 120 cm (105 x 96 x 49 in)





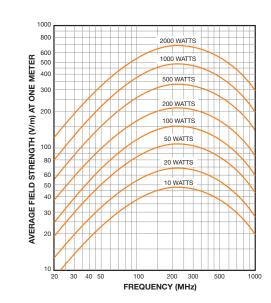




ATC25M1G 25 MHz – 1 GHz 3500 W

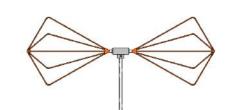
Frequency range	25 MHz – 1000 MHz
Input power (max.) 25 MHz–250 MHz 250 MHz–500 MHz 500 MHz–1 GHz	3,500 W 2000 W 1,250 W
Impedance	50 ohms nominal
Connector	Type C (F)
Electric field intensity	See curves left
Size (W x H x D)	117 x 61 x 51 cm (46 x 24 x 20 in.)
Weight (max.)	14 kg (30 lb.)
Mounting provisions	Magnetic clamps included



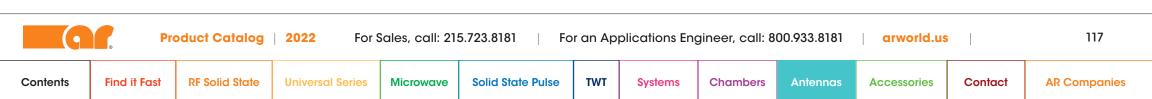


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# BC1, BC3 & BC5 30-300 MHz



Impedance	50 ohms nominal
Connector	Type N female
Polarization	Linear
Max Power	BC1-1 watt CW max. BC2-50 watts CW max. BC5-500 watts CW max.
Elements	20 in. (51 cm) diameter
Size (LxH)	54 x 32 in, 81 x 137 cm
Weight	5 lbs. (2 kg)
Mounting Tube	22 mm dia. stainless steel
Finish	Orange powdercoat

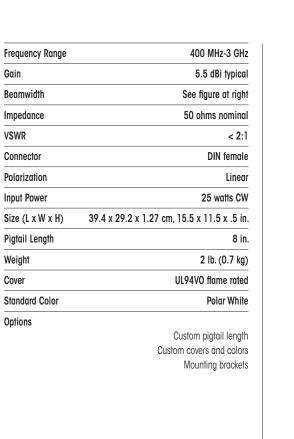


## **LP425PCB** 400 MHz – 3 GHz

Frequency Range	400 MHz – 3 GHz
Gain	5.5 dBi typical
Beamwidth	See figure at right
Impedance	50 ohms nominal
VSWR	< 2:1
Connector	Type N female
Polarization	Linear
Input Power	25 watts CW
Size (L x W x H)	39.4 x 29.2 x 1.27 cm, 15.5 x 11.5 x .5 in.
Pigtail Length	8 in.
Weight	2 lb. (0.7 kg)
Cover	UL94VO flame rated
Standard Color	Polar White
Options	Custom pigtail length Mounting brackets 7-16 DIN, 4.3-10 connectors PIM rated option Individual PIM testing Protective tray and cover



## **LP425PCB-O-DIN** 400 MHz – 3 GHz





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DAS Antennas

# **LP425** 400 MHz – 3 GHz

Frequency Range	400 MHz – 3 GHz
Gain	7 dBi typical
Impedance	50 ohms nominal
VSWR	< 2:1
Connector	Type N female
Polarization	Linear
Power	200 watts CW max.
Size (L x W x H)	48 x 41 x 18 cm, 19 x 16 x 7 in.
Weight	2 lb. (1 kg)
Finish	Gold iridite

Options

Radome Cover (add suffix R) Powder-coat finish (add suffix P) 7-16 DIN, 4.3-10 connectors



**LP460PCB** 400 MHz – 6 GHz



Frequency Range	400 MHz-6 GHz
Gain	5.6 dBi typical
Impedance	50 ohms nomina
VSWR	< 2:1
Connector	Type N female
Pigtail	RG-316
Polarization	Linear
Input Power	25 watts CW
Size (L x W x H)	36 x 25 x 1 cm, 14 x 10 x .375 in
Weight	1.5 lb. (0.7 kg)
Cover	UL94VO flame rated Kydex

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# LP6530PCB 650 MHz - 3 GHz

Frequency RangE	650 MHz – 3 GHz
Gain	7 dBi typical
Beamwidth	See figure at right
Impedance	50 ohms nominal
VSWR	< 1.5:1
Connector	Type N female
Polarization	Linear
Input Power	25 watts CW
Size (L x W x H)	39.4 x 29.2 x 1.27 cm, 15.5 x 11.5 x .5 in.
Pigtail Length	8 in.
Weight	2 lb. (0.7 kg)
Cover	UL94VO flame rated
Standard Color	Polar White
Options	
	Custom pigtail length Mounting brackets 7-16 DIN, 4.3-10 connectors PIM rated option Individual PIM testing Protective tray and cover



LP6560PCB 650 MHz - 6 GHz

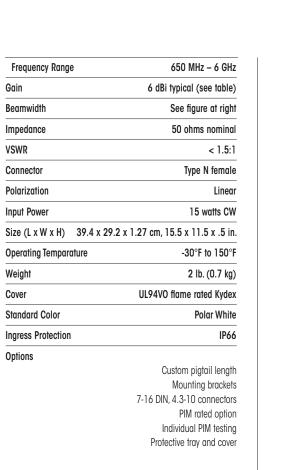
Gain

VSWR

Weight

Cover

Options



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AR offers a complete selection of test accessories that give you the most reliable results, such as probes, software, system controllers, couplers, and more. Many even make testing quicker, more efficient, and more accurate. They're all matched to our amplifiers to make your setup as easy as possible.

FL8000 Probes and FM7004A

350.39

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**Universal Series** Microwave

Solid State Pulse

TWT **Systems**  **Chambers** Antennas

Stormonitor\* Model FM/1044

Accessories Contact

**AR Companies** 

#### **Coaxial Cables**

# CC1

Armored low-loss microwave cables for applications with frequencies less than 18 GHz, VSWR typically less than 1.35:1

# CC2

0.45

0.4

0.35 (M) 0.25 Jamod 0.2 0.15

0.1 0.05

2.5

1.5

0.5

0

0 5 10 15 20 25 30 35 40

ertion Loss (dB/m)

0 L 0

10 15 20 25 30 35

5

Armored low-loss microwave cables for applications with frequencies less than 40 GHz. VSWR is typically less than 1.45:1

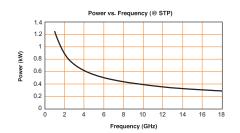
# CC4

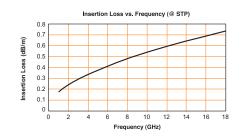
Recommended for AR's high power "A," "W," and "S" series amplifiers or other applications in the appropriate frequency and power range. VSWR is typically less than 1.25:1.

# CC5

Low–loss microwave cables designed for higher power applications with frequencies up to 11 GHz. VSWR typically less than 1.25:1.









Power vs. Frequency (@ STP)

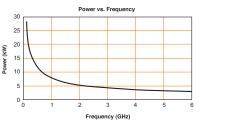
Frequency (GHz)

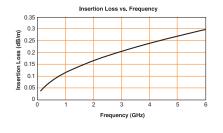
Insertion Loss vs. Frequency (@ STP)

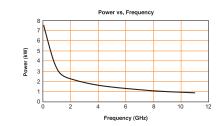
Frequency (GHz)

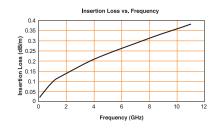












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#### **Dual Directional Couplers and Termination Loads for RF Amplifiers**

										1	
Amplifier	Dual Directional	Load Resistor or	150W1000B	DC6080A	LA250	1300SP1G2	DC7154A		130T26z5G40B	DC7620	
	Coupler	Attenuator	250W1000C	DC6180A	LA500	2000SP1G2	DC7154A		200T26z5G40A	DC7620	
Universo	al Series Ampl	lifiers	500W1000C	DC6180A	LA1000	4000SP1G2	DC7128A		70T40G50	DC7820	
1U1000	DC3010A		750W1000B	DC6280AM1		50000SP1G2	Call Factory		100T40G50	DC7820	
2.5U1000	DC3010A		1000W1000H	DC6280AM1	LA4000	8000SP1G2	DC7128A		1000TP8G18	DC7450M1	
501000	DC3010A		1500W1000A	DC6380		1500SP1z2G1z4	DC7154A		2000TP2G8B	DC7281A	LR2000M1
10U1000	DC3010A		2000W1000D	DC6380	LR5000	4000SP1z2G1z4	DC7128A		2000TP8G18	DC7450M1	
25U1000	DC3010A		3000W1000B	DC6380M1	LR5000	5000SP1z2G1z4	Call Factory		4000TP2G4	DC7281A	LA500
50U1000	DC3010A		4000W1000B	DC6380M2	LR5000	1500/1000SP1z2G3z1	Call Factory		12000TP2G4	DC7281A	
100U1000A	DC3100A		6000W1000	DC6430		1000SP2G4	DC7154A		4000TP4G8	DC7351	
150U1000	DC3100A		10000W1000A	DC6440		2000SP2G4	DC7154A		12000TP4G8	DC7351	
	DC3100A					5000SP2G4	Call Factory		4000TP8G12	DC7490	
250U1000A	DC3100A		Microv	wave Amplifie	ers	7000SP2G4	Call Factory		20000TP8G12	DC7490	
			15\$1G6	DC7205A		10000SP2G4	DC7154AM1		3000TP12G18	DC7462	
RF Soli	d State Amplif	fiers	30\$1G6C	DC7205A		15000SP2G4	Call Factory		5700TP12G18	DC7462	
100A400AM20	DC3300A		75\$1G6C	DC7205A		20000SP2G4	Call Factory		6900TP2G4	DC7154AM1	
800A3B	DC2500AM1		125\$1G6C	DC7205A		4000SP2z7G3z1	Call Factory		7400TP4G8	DC7351	
150A100D	DC2600A	LA500	250\$1G6C	DC7230A		12000SP2z7G3z1	Call Factory		8000TP2z7G3z1	DC7154AM1	
1200A225	DC2500AM2		350\$1G6A	DC7210A			1		8300TP8G12	DC7490	
2500A225C	DC2035A		500\$1G6C	DC7215A		TW	T Amplifiers		10000TP8G10	DC7490M1	
5000A225C	DC4255		30/20S1G18B	DC7205A and DC7435AM1		300T2G8	DC7281A			· · · · ·	
10000A225B	DC4256		125\$1G2z5	DC7144A		500T2G8					
12500A225A-L	DC4256		250\$1G2z5B	DC7144A		1000T2G8B	DC7276M1	LR2000M1			
25A250B	DC3010A		500\$1G2z5A	DC7154AM1		1500T2G8A	DC7276M1	LR2000M1			
50A250	DC2600A		1000\$1G2z5B	DC7164M1		200T4G8	DC7352A	LR0500			
125A250	DC2600A	LA150	50\$1G6AB	DC7200A		250T6G18	DC7445				
500A250D	DC2500AM1		100\$1G6AB	DC7200A		250T8G18	DC7450M1				
100A400A	DC3400A	LA150	20\$6G18A-L	DC7435AM1		500T8G18	DC7450M1				
175A400	DC3401A		40\$6G18A-L	DC7435AM1		1000T8G18B	DC7450M1	LR1500M1			
250A400	DC3401A					1500T8G18	DC7450M1	LR1500M1			
350A400	DC3401A		Solid Stat	e Pulsed Amp	olifiers	40T18G26A	DC7530	LR142			
600A400	DC3410A		2000SP0z8G2z5	Call Factory		130T18G26z5B	DC7530				
1000A400	DC3410A		4000SP0z8G2z5	Call Factory		200T18G26z5A	DC7530				
50W1000D	DC3001A		8000SP0z8G2z5	Call Factory		40T26G40A	DC7620	LR128			
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# **Dual Directional Couplers**

#### DC3300A 4 kHz - 400 MHz

250 W



Frequency Range	4 kHz – 400 MHz
Power (max. W)	250 CW
Flatness (max.)	50 ± 1.5 dB (4 kHz–10 kHz) 50 ± .75 dB (1 MHz–400 MHz)
Coupling Factor (includes flatness	) 50 ± 1.5 dB (4 kHz–10 kHz) 50 ± 1 dB (1 MHz–400 MHz)
Directivity	20 dB
typical minimum	15 dB
Insertion Loss (max.)	0.2 dB
VSWR (main line)	1.2:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	0.36 kg 0.8 lb
Size (approx.) W x H x D	19.3 x 5.1 x 5.6 cm (7.6 x 2 x 2.2 in.)

DC3510A 9 kHz – 1000 MHz 200 W



Frequency Range	9 kHz – 1000 MHz
Power (max. W)	200 CW
Flatness (max.)	± 0.6 dB
Coupling Factor (includes flatness)	$40 \pm 0.8 \text{ dB}$
Directivity typical	25 dB
minimum	20 dB (1–1000 MHz) 15 dB (09–1 MHz)
Insertion Loss (max.)	0.5 dE
VSWR (main line)	1.3:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	1.36 kg 3 lb
Size (approx.) W x H x D	15.7 x 5.8 x 4.3 cm (6.2 x 2.28 x 1.69 in.)

DC2600A 10 kHz - 250 MHz 600 W



Model O'CORDANI Model O'CORDANI The Allowing of the State

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DC2500AM1

1000 W

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10 kHz – 250 MHz

Frequency Range	10 kHz – 250 MHz
Power (max. W)	600 CW,
Flatness (max.)	± 0.5 dB
Coupling Factor (includes flatness)	50 ± 1 dB
Directivity	
typical	25 dB
minimum	18 dE
Insertion Loss (max.)	0.25 dE
VSWR (main line)	1.3:1 max
Connectors	
main line (J1/J2)	N(M)/N(F)
coupled (J3/J4)	N(F)/N(F)
Weight (max.)	0.64 kg
	1.4 lb
Size (approx.) W x H x D	10.2 x 7.6 x 6.6 cm
	(4 x 3 x 2.6 in.)

10 kHz – 250 MHz
1000 CW
± 0.9 dB
50 ± 1 dB
25 dB 20 dB (20 kHz–250 MHz) 18 dB (10 kHz–20 kHz)
0.22 dB
1.2:1 max.
N(M)/N(F) N(F)/N(F)
1.3 kg 2.5 lb
26.6 x 8.1 x 7.6 cm (10.1 x 3.2 x 3 in.)

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#### **Dual Directional Couplers**

DC2035A 10 kHz - 250 MHz 3500 W



Frequency Range	10 kHz – 250 MHz
Power (max. W)	3,500 CW
Flatness (max.)	± 0.9 dB
Coupling Factor (includes flatness)	50 ± 1 dB
Directivity typical minimum	25 dB 20 dB
Insertion Loss (max.)	0.30 dB
VSWR (main line)	1.2:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	7–16(M)/7–16(F) N(F)/N(F)
Weight (max.)	1.8 kg 4 lb.
Size (approx.) W x H x D	25.4 x 8.9 x 11.7 cm (10 x 3.5 x 4.6 in.)

DC4255\* 10 kHz – 250 MHz 10000 W



Frequency Range	10 kHz – 250 MHz
Power (max. W)	10000 CW
Flatness (max.)	± 0.9 dB
Coupling Factor (includes flatness)	60 ± 1 dB
Directivity	
typical	25 dE
minimum	20 dE
Insertion Loss (max.)	0.1 dB
VSWR (main line)	1.20:1 max
Connectors	
main line (J1/J2)	EIA fixed flanges
	1 <sup>5</sup> /, in. EIA (m)
coupled (J3/J4)	N(F)/N(F)
Weight (max.)	7 kg
	15.5 lb
Size (approx.) W x H x D	15.2 x 11.4 x 30.48 cm
	(6 x 4.5 x 12 in.)

DC4256\* 10 kHz - 250 MHz 13000 W



Frequency Range	10 kHz – 250 MHz
Power (max. W)	13000 CW
Flatness (max.)	±1 dB
Coupling Factor (includes flatness)	60 ± 1 dB
<b>Directivity</b> typical minimum	25 dB 20 dB
Insertion Loss (max.)	0.1 dB
VSWR (main line)	1.20:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	EIA fixed flanges 1 <sup>5</sup> / <sub>8</sub> in. EIA (m) N(F)/N(F)
Weight (max.)	7 kg 15.5 lb.
Size (approx.) W x H x D	15.24 x 11.43 x 32.38 cm (6 x 4.5 x 12.75 in.)

DC3400A 10 kHz - 400 MHz 250 W



Frequency Range	10 kHz – 400 MHz
Power (max. W)	250 CW
Flatness (max.)	± 0.5 dB
Coupling Factor (includes flatness)	40 ± 1 dB
Directivity typical minimum	25 dB 20 dB
Insertion Loss (max.)	0.5 dB
VSWR (main line)	1.3:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	0.8 kg 1.8 lb.
Size (approx.) W x H x D	13.2 x 6.8 x 4.1 cm (5.2 x 2.7 x 1.6 in.)

\*Power required for fan cooling."

\*Power required for fan cooling."

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# **Dual Directional Couplers**

**DC3401A** 10 kHz – 400 MHz 500 W



Frequency Range	10 kHz – 400 MHz
Power (max. W)	500 W CW
Flatness (max.)	± 0.6 dB
Coupling Factor (includes flatness)	50 dB ±0.8 dB
Directivity	05 40
typical minimum	25 dB 20 dB
Insertion Loss (max.)	0.5 dB
VSWR (main line)	1.30:1 max.
Connectors	
main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
	N(I )/N(I )
Weight (max.)	0.8 kg 1.5 lb.
Size (approx.) W x H x D	13.2 x 6.8 x 4.32 cm (5.2 x 2.7 x 1.7 in.)

**DC3410A** 10 kHz - 400 MHz 2000 W



Frequency Range	1 – 400 MHz
Power (max. W)	2000 CW
Flatness (max.)	± 1 dB
Coupling Factor (includes flat	iness)
	50 dB ± 1 dB (includes Flatness)
Directivity minimum	20 dB
Insertion Loss (max.)	<sup>0</sup> .15 dB max
VSWR (main line)	50 ohms, 1.2:1 max.
Connectors	See Model Configurations
Weight (max.)	1.25 kg 2.75 lb
Size (approx.) W x H x D	18.3 x 5.6 6.9 cm (7.2 x 2.2 x 2.71 in)

**DC3010A** 10 kHz – 1000 MHz 100 W



Frequency Range	10 kHz – 1000 MHz
Power (max. W)	100 CW
Flatness (max.)	± 0.6 dB
Coupling Factor (includes flatness)	40 ± 0.8 dB
Directivity typical minimum	25 dB 20 dB
Insertion Loss (max.)	0.6 dB
VSWR (main line)	1.3:1 max
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	0.9 kg 2 lb
Size (approx.) W x H x D	12.7 x 5.1 x 3.8 cm (5 x 2 x 1.5 in.)

**DC3100A** 10 kHz – 1000 MHz 500 W



Frequency Range	10 kHz – 1000 MHz
Power (max. W)	500 CW
Flatness (max.)	± 0.5 dB
Coupling Factor (includes flatness)	40 ± 1.5 dB
Directivity typical minimum	25 dB 20 dB
Insertion Loss (max.)	0.45 dB
VSWR (main line)	1.30:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	1.1 kg 2.5 lb.
Size (approx.) W x H x D	17 x 5.8 x 4.3 cm (6.7 x 2.27 x 1.69 in.)

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# **Dual Directional Couplers**

DC3001A 100 kHz – 1000 MHz 100 W



Frequency Range	100 kHz – 1000 MHz
Power (max. W)	100 CW
Flatness (max.)	± 0.6 dB
Coupling Factor (includes flatness)	$40 \pm 0.8 \text{ dB}$
Directivity typical minimum	25 dB 20 dB
Insertion Loss (max.)	0.6 dB
VSWR (main line)	1.3:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	0.39 kg 0.86 lb
Size (approx.) W x H x D	12.7 x 5.1 x 3.8 cm 12.7 x 5.1 x 3.8 cm

DC6080A 80 – 1000 MHz 500 W



Frequency Range	80 – 1000 MHz
Power (max. W)	500 CW
Flatness (max.)	± 0.5 dB
Coupling Factor (includes flatness)	40 ± 1 dB
Directivity typical	25 dB
minimum	20 dB
Insertion Loss (max.)	0.25 dB
VSWR (main line)	1.2:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	0.45 kg 1 lb
Size (approx.) W x H x D	7.62 x 7.62 x 2.77 cm (3 x 3 x 19 in.)

DC6180A 80 – 1000 MHz 600 W



Frequency Range	80 – 1000 MHz
Power (max. W)	600 CW
Flatness (max.)	± 0.5 dB
Coupling Factor (includes flatness)	60 ± 1 dB
Directivity	
typical	25 dB
minimum	20 dB
Insertion Loss (max.)	0.15 dB
VSWR (main line)	1.20:1 max.
Connectors	
main line (J1/J2)	N(M)/N(F)
coupled (J3/J4)	N(F)/N(F)
Weight (max.)	0.6 kg
,	1.2 lb
Size (approx.) W x H x D	10.9 x 6.3 x 3.2 cm
	(4.3 x 2.5 x 1.3 in.)

DC6280AM1 80 – 1000 MHz 1500 W



Frequency Range	80 – 1000 MHz
Power (max. W)	1,500 CW
Flatness (max.)	±0.5 dB
Coupling Factor (includes flatness)	63 ± 1 dB
Directivity typical minimum	25 dB 20 dB
Insertion Loss (max.)	0.15 dB
VSWR (main line)	1.2:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	7–16(M)/7–16(F) N(F)/N(F)
Weight (max.)	0.6 kg 1.2 lb.
Size (approx.) W x H x D	10.9 x 6.3 x 3.2 cm (4.3 x 2.5 x 1.3 in.)

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#### **Dual Directional Couplers**

DC6380 80 – 1000 MHz 3000 W



Frequency Range	80 – 1000 MHz
Power (max. W)	3000 CW
Flatness (max.)	± 1 dB
Coupling Factor (includes flatness)	65 dB ± 1.5 dB
Directivity	
typical	25 dB
minimum	20 dB
Insertion Loss (max.)	0.15 dB
VSWR (main line)	1.5:1 max
Connectors main line (J1/J2)	EIA fixed flanges 15/, in. EIA (m)
coupled (J3/J4)	N(F)
Weight (max.)	1.8 kg 4 lb
Size (approx.) W x H x D	20.3 x 8.9 x 10.2 cm (8 x 3.5 x 4 in.)

DC6380M1 80 – 1000 MHz 4500 W



Frequency Range	80 – 1000 MHz
Power (max. W)	4,500 CW
Flatness (max.)	± 1 dB
Coupling Factor (includes flatness)	68 ± 1.5 dB
Directivity	
typical minimum	25 dB 20 dB
	20 08
Insertion Loss (max.)	0.15 dB
VSWR (main line)	1.5:1 max.
Connectors	
main line (J1/J2)	EIA fixed flanges
coupled (J3/J4)	1 <sup>5</sup> / <sub>8</sub> in. EIA (m) N(F)
Weight (max.)	1.8 kg
	4 lb
Size (approx.) W x H x D	20.3 x 8.9 x 10.2 cm (8 x 3.5 x 4 in.)

DC6380M2 80 - 1000 MHz 7000 W



Frequency Range	80 – 1000 MHz
	00 1000 1112
Power (max. W)	7000 CW
Flatness (max.)	± 1 dB
Coupling Factor (includes flatness)	70 ± 1.5 dB
Directivity	
typical	25 dB
minimum	20 dB
Insertion Loss (max.)	0.15 dB
VSWR (main line)	1.5:1 max.
Connectors	
main line (J1/J2)	EIA fixed flanges
	15/, in. EIA (m)
coupled (J3/J4)	N(F)
Weight (max.)	1.8 kg
,	4 lb.
Size (approx.) W x H x D	20.3 x 8.9 x 10.2 cm
	(8 x 3.5 x 4 in.)

**DC6430** 80 – 1000 MHz 15000 W



Frequency Range	80 – 1000 MHz
Power (max. W)	15000 CW
Flatness (max.)	± 1 dB
Coupling Factor (includes flatness)	68 dB
Directivity typical minimum	20 dB 18 dB
Insertion Loss (max.)	0.1 dB
VSWR (main line)	1.15:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	EIA fixed flanges 3 <sup>1</sup> / <sub>8</sub> in. EIA (m) N(F)
Weight (max.)	3 kg 6.6 lb.
Size (approx.) W x H x D	15.2 x 13.2 cm (6 x 5.2 in.)

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**RF Solid State** 

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# **Dual Directional Couplers**

DC6440 80 – 1000 MHz 15000 W



Frequency Range	80 – 1000 MHz
Power (max. W)	15000 CW
Flatness (max.)	± 1 dB
Coupling Factor (includes flatness)	70 dB
Directivity typical minimum	20 dB 18 dB
Insertion Loss (max.)	0.1 dB
VSWR (main line)	1.10:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	EIA fixed flanges 4 <sup>1</sup> / <sub>16</sub> in. EIA (m) N(F)
Weight (max.)	3.5 kg 7.7 lb.
Size (approx.) W x H x D	15.2 x 15.8 cm (6 x 6.2 in.)

DC7144A 0.7 – 4.2 GHz 400 W



400 CW ± 0.8 dB
0 0 d
± 0.0 UD
40 ± 1.3 dB
19 dB 15 dB
0.4 dB
1.25:1 max.
N(M)/N(F) N(F)/N(F)
0.24 kg 0.525 lb
2.35 x 5.84 x 19 cm (0.925 x 2.3 x 7.48 in.)

DC7154A 0.7 – 4.2 GHz 400 W



Frequency Range	0.7 – 4.2 GHz
Power (max. W)	400 CW
Flatness (max.)	± 0.8 dB
Coupling Factor (includes flatness)	50 ± 1.3 dB
<b>Directivity</b> typical minimum	19 dB 15 dB
Insertion Loss (max.)	0.4 dB
VSWR (main line)	1.25:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	0.29 kg 0.64 lb.
Size (approx.) W x H x D	3.2 x 6.3 x10.9 cm (1.3 x 2.5 x 4.3 in.)

DC7154AM1 0.7 – 4.2 GHz 700 W



Frequency Range	0.7 – 4.2 GHz
Power (max. W)	700 CW
Flatness (max.)	± 0.8 dB
Coupling Factor (includes flatness)	50 ± 1.3 dB
Directivity typical minimum	19 dB 15 dB
Insertion Loss (max.)	0.4 dB
VSWR (main line)	1.25:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	7–16(M)/7–16(F) N(F)/N(F)
Weight (max.)	0.29 kg 0.64 lb
Size (approx.) W x H x D	3.2 x 6.3 x10.9 cm (1.3 x 2.5 x 4.3 in.)

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# **Dual Directional Couplers**

**DC7205A** 0.7 - 6 GHz 250 W



Frequency Range	0.7 – 6GHz
Power (max. W)	250 CW
Flatness (max.)	± 0.8 dB
Coupling Factor (includes flatness)	41 ± 1.2 dB
Directivity typical minimum	18 dB 15 dB
Insertion Loss (max.)	0.2 dB
VSWR (main line)	1.2:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	0.27 kg 0.6 lb
Size (approx.) W x H x D	6.8 x 5.1 x 35 cm (2.7 x 2 x 1.2 in.)

**DC7210A** 0.7 – 4.2 GHz 500 W



Frequency Range	0.7 – 4.2 GHz
Power (max. W)	500 CW
Flatness (max.)	± 1 dB
Coupling Factor (includes flatness)	50 ± 1.2 dB
<b>Directivity</b> typical minimum	18 dB 15 dB
Insertion Loss (max.)	0.2 dB
VSWR (main line)	1.35:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	7–16(M)/7–16(F) N(F)/N(F)
Weight (max.)	0.27 kg 0.6 lb
Size (approx.) W x H x D	54.6 x 50.8 x 34.5 cm (2.15 x 2 x 1.36 in.)

**DC7230A** 0.7 – 6 GHz 500 W



Frequency Range	0.7 – 6GHz
Power (max. W)	500 CW
Flatness (max.)	± 0.5 dB
Coupling Factor (includes flatness)	48 ± 1.5 dB
Directivity typical minimum	20 dB 15 dB
Insertion Loss (max.)	0.2 dB
VSWR (main line)	1.35:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	0.27 kg 0.6 lb.
Size (approx.) W x H x D	5.1 x 5.1 x 2.7 cm (2 x 2 x 16 in.)





0.7 – 6 GHz
750 CW
± 0.5 dB
50 dB ± 1.5 dB
18 dB 15 dB
0.2 dB
1.35:1 max. 1.45:1 max.
7–16(M)/7–16(F) N(F)/N(F)
0.27 kg 0.6 lb.
5.71 x 8.25 x 15.25 cm (2.25 x 3.25 x 6 in.)

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# **Dual Directional Couplers**

DC7128A 0.8 – 2.8 GHz 1500 W



Frequency Range	0.8 – 2.8 GHz
Power (max. W)	1500 CW
Flatness (max.)	± 0.8 dB
Coupling Factor (includes flatness)	50 ± 1 dB
Directivity typical minimum	25 dB 20 dB
Insertion Loss (max.)	0.2 dB
VSWR (main line)	1.3:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	7–16(M)/7–16(F) N(F)/N(F)
Weight (max.)	0.7 kg 1.5 lb.
Size (approx.) W x H x D	7.6 x 7.6 x 2.9 cm (3 x 3 x 1.125 in.)

DC7164M1 0.8 – 4.2 GHz 1400 W



Frequency Range	0.8 – 4.2 GHz
Power (max. W)	1,400 CW
Flatness (max.)	± 0.8 dB
Coupling Factor (includes flatness)	65 ± 1 dB
Directivity typical minimum	19 dE 15 dE
Insertion Loss (max.)	0.4 dB
VSWR (main line)	1.25:1 max
Connectors main line (J1/J2) coupled (J3/J4)	7/8 EIA N(F)
Weight (max.)	0.91 kg 2 lb
Size (approx.) W x H x D	5.71 x 8.25 x 15.25 cm (2.25 x 3.25 x 6 in.)

DC7164 0.8 – 4.2 GHz 700 W



requency Range	0.8 – 4.2 GHz
Power (max. W)	700 CW
Flatness (max.)	± 0.8 dB
Coupling Factor (includes flatness)	60 ± 1 dB
Directivity typical minimum	19 dB 15 dB
Insertion Loss (max.)	0.4 dB
VSWR (main line)	1.25:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	7/8 EIA N(F)
Weight (max.)	0.91 kg 2 lb.
Size (approx.) W x H x D	5.71 x 8.25 x 15.25 cm (2.25 x 3.25 x 6 in.)

DC7200A 1 – 6 GHz 250 W



Frequency Range	1 – 6 GHz
Power (max. W)	250 CW
Flatness (max.)	± 0.8 dB
Coupling Factor (includes flatness)	40 ± 1.2 dB
Directivity typical minimum	18 dB 15 dB
Insertion Loss (max.)	0.2 dB
VSWR (main line)	1.2:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	0.27 kg 0.6 lb.
Size (approx.) W x H x D	6.8 x 5.1 x 35 cm (2.7 x 2 x 1.2 in.)

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#### **Dual Directional Couplers**

DC7351

4 – 8 GHz

6000 W

**DC7281A** 2 - 8 GHz 600 W



FFrequency Range	2 – 8 GHz
Power (max. W)	600 CW
Flatness (max.)	± 1 dB
Coupling Factor (includes flatness)	50 dB ± 2 dB
<b>Directivity</b> typical minimum	15 dE 16 dE
Insertion Loss (max.)	0.2 dB max
VSWR (main line)	1.30:1 max
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) N(F)/N(F)
Weight (max.)	0.22 kg 0.48 lb
Size (approx.) W x H x D	10.49 x 37 x 2.54 cm (4.13 x 1.21 x 1 in.)

**DC7276M1** 2.5 – 7.5 GHz 2800 W



Frequency Range	2.5 – 7.5 GHz
Power (max. W)	2,800 CW
Flatness (max.)	± 2.5 dB
Coupling Factor (includes flatness)	50 ± 3 dB
Directivity	
typical	28 dB
minimum	25 dB
Insertion Loss (max.)	0.3 dB
VSWR (main line)	1.1:1 max.
Connectors	
main line (J1/J2)	N(M)/N(F)
coupled (J3/J4)	N(F)/N(F)
Weight (max.)	1.7 kg
	3.8 lb
Size (approx.) W x H x D	45.7 x 8.1 x 8.1 cm
	(18 x 3.2 x 3.2 in.)



Frequency Range	4 – 8 GHz
Power (max. W)	6000 CW
Flatness (max.)	± 1.5 dB
Coupling Factor (includes flatness)	40 ± 2 dB
Directivity typical minimum	35 dB 30 dB
Insertion Loss (max.)	0.15 dB
VSWR (main line)	1.1:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	WRD-350 N(F)
Weight (max.)	1.24 kg 2.75 lb.
Size (approx.) W x H x D	4.1 x 6.9 x 45.8 cm (1.61 x 2.72 x 18 in.)

**DC7435A** 4 - 18 GHz 200 W



Frequency Range	4 – 18 GHz
Power (max. W)	200 CW
Flatness (max.)	± 1 dB
Coupling Factor (includes flatness)	35 ± 2.5 dB
Directivity typical minimum	16 dB 12 dB
Insertion Loss (max.)	0.6 dB
VSWR (main line)	1.5:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	N(M)/N(F) SMA(F)
Weight (max.)	0.1 kg 3 OZ
Size (approx.) W x H x D	4.3 x 1.6 x 1.9 cm (1.7 x 0.625 x 0.75 in.)

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#### **Dual Directional Couplers**

**DC7445** 6 - 18 GHz 3000 W



Frequency Range	6 – 18 GHz
Power (max. W)	3000 CW
Flatness (max.)	± 3 dB
Coupling Factor (includes flatness)	$48 \text{ dB} \pm 4 \text{ dB}$
Directivity typical minimum	30 dB 20 dB
Insertion Loss (max.)	0.3 dB max.
VSWR (main line)	1.3:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	WRD-650 N(F)
Weight (max.)	0.64 kg 1.4 lb.
Size (approx.) W x H x D	2.9 x 3.5 x 30.5 cm (1.13x1.4x12 in.)

**DC7450M1** 7.5 – 18 GHz 3000 W

Frequency Range Power (max. W)

Flatness (max.)

Directivity

typical

minimum

Connectors main line (J1/J2)

coupled (J3/J4)

Size (approx.) W x H x D

Weight (max.)

Insertion Loss (max.)

Coupling Factor (includes flatness)

THE ALL PLACE LIGHT AND ALL PLACE

7.5 – 18 GHz

3000 CW

± 1.5 dB

 $50 \pm 2 \text{ dB}$ 

38 dB

25 dB

0.15 dB

N(F)

0.64 kg 1.42 lb.

1.1:1 max.

WRD-750 D24

3.5 x 4.4 x 30.5 cm (1.4 x 1.7 x 12 in.) **DC7490** 8 – 12 GHz 3000 W



Frequency Range	8 – 12 GHz
Power (max. W)	3000 CW
Flatness (max.)	± 1.5 dB
Coupling Factor (includes flatness)	40 ± 2 dB
Directivity typical minimum	40 dB 35 dB
Insertion Loss (max.)	0.14 dB
VSWR (main line) Connectors main line (J1/J2) coupled (J3/J4)	1.1:1 max. WR90 N(F)
Weight (max.)	0.45 kg 1 OZ
Size (approx.) W x H x D	2.54 x 8.43 x 33 cm (1 x 3.32 x 13 in.)

**DC7462** 12 - 18 GHz 1400 W



Frequency Range	12 – 18 GHz
Power (max. W)	1400 CW
Flatness (max.)	± 1.5 dB
Coupling Factor (includes flatness)	40 ± 2 dB
Directivity typical minimum	30 dB 25 dB
Insertion Loss (max.)	0.15 dB
VSWR (main line)	1.1:1 max.
Connectors main line (J1/J2) coupled (J3/J4)	WR62 N(F)
Weight (max.)	0.17 kg 0.38 lb.
Size (approx.) W x H x D	1.8 x 7.6 x 28 cm (0.7 x 3 x 11 in.)

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# **Dual Directional Couplers**

DC7530 18 - 26.5 GHz 300 W



Frequency Range	18 – 26.5 GHz			
Power (max. W)	300 CW			
Flatness (max.)	± 1 dB			
Coupling Factor (includes flatness)	40 dB ± 2 dB			
Directivity	40 -10			
typical	40 dB			
minimum	30 dB			
Insertion Loss (max.)	0.20 dB max			
VSWR (main line)	1.10:1 max.			
Connectors				
main line (J1/J2)	WR42			
coupled (J3/J4)	K(F)			
Weight (max.)	204 g			
	7.2 oz.			
Size (approx.) W x H x D	2.2 x 3.5 x 22.9 cm (0.88 x 1.4 x 9 in.)			





Frequency Range	26.5 – 40 GHz		
Power (max. W)	200 CW		
Flatness (max.)	± 1 dB		
Coupling Factor (includes flatness)	40 ± 2 dB		
Directivity			
typical	28 dB		
minimum	23 dB		
Insertion Loss (max.)	0.26 dB max.		
VSWR (main line)	1.15:1 max.		
Connectors			
main line (J1/J2)	WR28		
coupled (J3/J4)	K(F)		
Weight (max.)	113 g		
	4 oz		
Size (approx.) W x H x D	3.5 x 1.9 x 14 cm		
	1.4 x 0.75 x 5.5 in.)		

DC7820 33 - 50 GHz 200 W



Frequency Range	33 – 50 GHz
Power (max. W)	200 CW
Flatness (max.)	± 1 dB
Coupling Factor (includes flatness)	40 ± 2 dB
Directivity typical minimum	28 dB 23 dB
Insertion Loss (max.)	0.26 dB max
VSWR (main line)	1.15:1 max
Connectors main line (J1/J2) coupled (J3/J4)	WR28 K(F)
Weight (max.)	113 g 4 oz
Size (approx.) W x H x D	3.5 x 1.9 x 14 cm 1.4 x 0.75 x 5.5 in.)

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#### Field Monitoring

# **FL8200/Kit** 5 kHz – 200 MHz



Frequency Range	5 kHz – 200 MHz
Axis Type	Separable X–Y–Z Axis
Field Strength Range (Single Range	e) 0.3 – 500 V/m
Measurement Type	CW, AM & Pulse
Dynamic Range	> 64 dB
Analog Rise Time (10 – 90% Typica	l) 300 us
Isotropic Deviation(Measured at Orl	ho Angle)
	±0.5 dB @ 10 MHz
Resolution	< 0.1 dB
CW Damage Level	1000 V/m
Pulse Damage Level	5 kV/m (> 0.1% Duty)
Linearity Error ±0.5 dB or ±0	1.3 V/m (Whichever is greater)
Temperature Stabiliy (Over Operatir	ng Temperature Range) ±0.1 dB (Detection Circuit) ±0.5 dB (Complete System)
Weight	150 g (5.3 oz)
Dimensions (W x H x D) 42.3 x 52.4 x	52.4 mm (1.66 x 26 x 26 in)

42.3 x 52.4 x 52.4 mm (1.66 x 26 x 26 in) 29.2 mm (1.15 in) Spherical housing diameter 16.5 mm (0.65 in) Sensor radome height per axis

# **FL8009/Kit** 20 MHz - 9.3 GHz



Frequency Range		20 MHz – 9.3 GHz
Axis Type		Separable X–Y–Z Axis
Field Strength Range	e (Single Range)	0.5 – 800 V/m
Measurement Type		CW, AM & Pulse
Dynamic Range		> 64 dB
Analog Rise Time (1	0 – 90% Typical)	300 ns
Isotropic Deviation(	Measured at Ortho A	Angle)
		±0.5 dB @ 100 MHz
Resolution		< 0.1 dB
CW Damage Level		1000 V/m
Pulse Damage Leve		5 kV/m (> 0.1% Duty)
Linearity Error		/m (Whichever is greater) ±2 dB 20 MHz – 80 MHz)
Temperature Stabiliy	±	emperature Range) 0.1 dB (Detection Circuit) 0.5 dB (Complete System)
Weight		150 g (5.3 oz)
Dimensions (W x H )	42.3 x 52.4 x 52.	4 mm (1.66 x 26 x 26 in) pherical housing diameter

16.5 mm (0.65 in) Sensor radome height per axis

# **FL8018/Kit** 20 MHz – 18 GHz



Frequency Range	20 MHz – 18 GHz
Axis Type	Separable X–Y–Z Axis
Field Strength Range (Single Ra	nge) 2 – 1000 V/m
Measurement Type	CW, AM & Pulse
Dynamic Range	> 54 dB
Analog Rise Time (10 – 90% Typ	pical)
600 -	2400 ns (amplitude dependent)
Isotropic Deviation(Measured at	Ortho Angle)
	±0.5 dB @ 100 MHz
Resolution	< 0.1 dB
CW Damage Level	1200 V/m
Pulse Damage Level	6 kV/m (> 0.1% Duty)
Linearity Error	±0.5 dB
Temperature Stabiliy (Over Oper	rating Temperature Range)
	±0.5 dB
Weight	227 g (8 oz)
( )	78 x 65 x 65 (10.9 x 2.6 x 2.6 in) m (2.6 in) Sensor head diameter

#### **FL8040/Kit** 20 MHz – 40 GHz



Field Strength Range (Single Range)       2 – 1000 V/m         Measurement Type       CW, AM & Pulse         Dynamic Range       > 54 dB         Analog Rise Time (10 – 90% Typical) 600 – 2400 ns (amplitude dependent)         Isotropic Deviation(Measured at Ortho Angle)         ±0.5 dB @ 100 MHz         Resolution       < 0.1 dB         CW Damage Level       1200 V/m         Pulse Damage Level       6 kV/m (> 0.1% Duty)         Linearity Error       ±0.5 dB         Temperature Stabiliy (Over Operating Temperature Range)       ±0.5 dB         Weight       227 g (8 oz)         Dimensions (W x H x D)       278 x 65 x 65 (10.9 x 2.6 x 2.6 in)	Frequency Range	20 MHz – 40 GHz				
Measurement Type       CW, AM & Pulse         Dynamic Range       > 54 dB         Analog Rise Time (10 – 90% Typical) 600 – 2400 ns (amplitude dependent)         Isotropic Deviation(Measured at Ortho Angle) ±0.5 dB @ 100 MH:         Resolution       < 0.1 dB	Axis Type	Separable X–Y–Z Axis				
Dynamic Range         > 54 dE           Analog Rise Time (10 – 90% Typical) 600 – 2400 ns (amplitude dependent)           Isotropic Deviation(Measured at Ortho Angle)           ±0.5 dB @ 100 MHz           Resolution           < 0.1 dE	Field Strength Range (Sir	ngle Range) 2 – 1000 V/m				
Analog Rise Time (10 – 90% Typical) 600 – 2400 ns (amplitude dependent)           Isotropic Deviation(Measured at Ortho Angle) ±0.5 dB @ 100 MH;           Resolution         < 0.1 dB	Measurement Type	CW, AM & Pulse				
600 – 2400 ns (amplitude dependent)           Isotropic Deviation (Measured at Ortho Angle)           ±0.5 dB @ 100 MH:           Resolution           C 0.1 dE           CW Damage Level           0 kV/m (> 0.1 % Duty)           Linearity Error           ±0.5 dE           Temperature Stabiliy (Over Operating Temperature Range)           ±0.5 dE           Weight         227 g (8 oz           Dimensions (W x H x D)         278 x 65 x 65 (10.9 x 2.6 x 2.6 in)	Dynamic Range	> 54 dB				
Isotropic Deviation (Measured at Ortho Angle)           ±0.5 dB @ 100 MH:           Resolution         < 0.1 dE	Analog Rise Time (10 – 9	20% Typical)				
±0.5 dB @ 100 MHz           Resolution         < 0.1 dE		600 – 2400 ns (amplitude dependent)				
Resolution         < 0.1 dE	Isotropic Deviation(Meas	sured at Ortho Angle)				
CW Damage Level         1200 V/m           Pulse Damage Level         6 kV/m (> 0.1% Duty)           Linearity Error         ±0.5 dE           Temperature Stabiliy (Over Operating Temperature Range)         ±0.5 dE           Weight         227 g (8 oz)           Dimensions (W x H x D)         278 x 65 x 65 (10.9 x 2.6 x 2.6 in)		±0.5 dB @ 100 MHz				
Pulse Damage Level       6 kV/m (> 0.1% Duty)         Linearity Error       ±0.5 dE         Temperature Stabiliy (Over Operating Temperature Range)       ±0.5 dE         Weight       227 g (8 oz         Dimensions (W x H x D)       278 x 65 x 65 (10.9 x 2.6 x 2.6 in)	Resolution	< 0.1 dE				
Linearity Error         ±0.5 dE           Temperature Stabiliy (Over Operating Temperature Range)         ±0.5 dE           ±0.5 dE         ±0.5 dE           Weight         227 g (8 oz           Dimensions (W x H x D)         278 x 65 x 65 (10.9 x 2.6 x 2.6 in)	CW Damage Level	1200 V/m				
Temperature Stabiliy (Over Operating Temperature Range)         ±0.5 dE         Weight       227 g (8 oz         Dimensions (W x H x D)       278 x 65 x 65 (10.9 x 2.6 x 2.6 in)	Pulse Damage Level         6 kV/m (> 0.1% [					
±0.5 dt Weight 227 g (8 oz Dimensions (W x H x D) 278 x 65 x 65 (10.9 x 2.6 x 2.6 in	Linearity Error	±0.5 dE				
Weight         227 g (8 oz           Dimensions (W x H x D)         278 x 65 x 65 (10.9 x 2.6 x 2.6 in)	Temperature Stabiliy (Ov	er Operating Temperature Range)				
Dimensions (W x H x D) 278 x 65 x 65 (10.9 x 2.6 x 2.6 in		±0.5 dB				
	Weight	227 g (8 oz)				
	Dimensions (W x H x D)	278 x 65 x 65 (10.9 x 2.6 x 2.6 in) 65 mm (2.6 in) Sensor head diameter				

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#### **Field Monitoring**

# **FL8060/Kit** 20 MHz – 60 GHz



Frequency Range	20 MHz – 60 (	GHz
Axis Type	Separable X-Y-Z	Axis
Field Strength Range (Sir	ngle Range) 2 – 1000 '	V/m
Measurement Type	CW, AM & Pt	ulse
Dynamic Range	> 54	l dB
Analog Rise Time (10 – 9	0% Typical) 600 – 2400 ns (amplitude depende	ent)
Isotropic Deviation(Meas	ured at Ortho Angle) ±0.5 dB @ 100 l	MHz
Resolution	< 0.1	dB
CW Damage Level	1200	V/m
Pulse Damage Level	6 kV/m (> 0.1% D	uty)
Linearity Error	±0.5	i dB
Temperature Stabiliy (Ov	er Operating Temperature Range) ±0.5	5 dB
Weight	227 g (8	OZ)
Dimensions (W x H x D)	278 x 65 x 65 (10.9 x 2.6 x 2.6 65 mm (2.6 in) Sensor head diam	

# FM7004A



Dimensions (W x H x D)	21.91 x 4 45 x 27.69 cm
	21.71 x 4.40 x 27.07 011
Output:	
	Graphical, color LCD touch display
	IEEE-488 (GPIB)
	USB 2 (test and measurement class) RS-232
	Fthernet
Ormanithia Field Dashee	2
Compatible Field Probes	All 7000 and 8000 Series field probes
Power Requirements:	
Input voltage	Universal input 90 – 260 VAC
	50–60 Hz
Input current	0.2 – 0.6 Amps
Input type	IEC C14 Inlet with filter
Fuse	1A, 5x20 mm slow blow
Operating Temperature Ra	nge: 10°-40°C (50°-104° F) @
	5 – 95% RH noncondensing
Enclosure	Desktop case, 2U high
Correction Factor Tables	Stores up to 6 different tables (each table
corresponding to one	probe); 2 to 30 frequencypoints per table
Weight	without enclosure 2.3 kg (5 lb)
•	with enclosure 6.7 kg (14.75 lb)
Size (W x H x D)	without enclosure 48.3 x 9 x 25.4 cm
· · ·	(9 x 3.5 x 10 in)
	with enclosure 49.8 x 12.7 x 30.5 cm
	(19.6 x 5 x 12 in)
Export Classification:	EAR99

# FI8000



PC Interfaces	IEEE-488 (GPIB)
	rnet, USB 2. Test and Measurement Class ) Baud), Fiber-Optic Serial (19200 Baud)
F/O Connector Type	E-2000 Compact Duplex
Application Software	VM7000, emcware
Laser	
Wavelength	808 nm
Maximum Output Power	2000 mW
Class	1
Shutdown Time	<1 ms After fiber disconnect <250 ms After loss of communication
Power Requirements	
Input Voltage	90 – 260 VAC, 50 – 60 Hz
Input Current	0.2 – 0.6 A
Connector Type	IEC C14 Inlet with filter
Ambient Temperature	10° - 40° C
Enclosure 2U De	sktop Case with 1U Blank panel installed
Weight	2.3 kg (5 lb) without enclosure 6.8 kg (15 lb) with enclosure
Dimensions (W x H x D)	48.3 x 4.4 x 26.9 cm (190 x 1.72 x 10.60 in) without enclosure
50.4 x 11.6 x 30.5 cm	(19.84 x 4.58 x 120 in) with enclosure

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**Find it Fast** 

#### Load Attenuators

LA100



Frequency Range	DC -18 GHz
Power (max. W)	100 W continuous to 25°C*
Attenuation	40 dB**
Input VSWR (max.)	1.25:1 (DC – 8 GHz)
Output VSWR (max.)	1.35:1 (8 – 12.4 GHz) 1.45:1 (12.4 – 18 GHz)
Connectors Input Output	N (M) N (F)
Ambient Temperature Range	–55°C to 125°C
Operating Position	Horizontal Only
Weight (max.)	320 g 11 OZ
Size (approx.) W x H x D	21.8 x 4.2 x 4.2 cm (8.6 x 1.62 x 1.62 in.)





DC – 6 GHz
150 W continuous to 25°C*
40 dB**
1.1:1 (DC – 2 GHz) 1.2:1 (2 – 6 GHz)
1.20:1 (2–5 GHz)
N (M) N (F)
–55°C to 125°C
Horizontal Only
1.13 kg 2.5 lb
80 x 80 x 137.1 mm (3.15 x 3.15 x 5.4 in.)

# LA500



Frequency Range	DC – 5 GHz
Power (max. W)	500 W continuous to 25°C*
Attenuation	40 dB**
Input VSWR (max.)	1.15:1 (DC – 2.5 GHz) 1.35:1 (2.5 – 5 GHz)
Output VSWR (max.)	1.15:1 (DC – 2.5 GHz) 1.25:1 (2.5 – 5 GHz)
Connectors Input Output	N (M) N (F)
Ambient Temperature Range	–55°C to 125°C
Operating Position	Horizontal Only
Weight (max.)	3.63 kg 8 lb.
Size (approx.) W x H x D	138.7 x 109.5 x 259.6 mm (5.46 x 4.31 x 10.22 in.)

# LA1000



Frequency Range	DC – 3 GHz
Power (max. W)	1000 W continuous to 25°C*
Attenuation	40 dB**
Input VSWR (max.)	1.15:1 (DC –1.5 GHz) 1.25:1 (1.5 – 3 GHz)
Output VSWR (max.)	1.15:1 (DC – 1.5 GHz) 1.25:1 (1.5 – 3 GHz)
Connectors Input Output	N (M) N (F)
Ambient Temperature Range	–55°C to 125°C
Operating Position	Horizontal Only
Weight (max.)	13.15 kg 29 lb.
Size (approx.) W x H x D	178 x 332 x 451 mm (70 x 13.1 x 17.76 in.)

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Access	Masts					
TWR99 & TWR95	TLT2	TLT 3				
1 - 2.5 meter (TWR99) and 1 - 4 meter (TWR95) antenna height standard, 1 - 6 meter optional         Electric height adjustment         1 cm height resolution, 0.1m/sec speed         Pneumatic polarization, 0.90°, standard (70-150 PSI CDA required), ¼" NPT male hose needed         Safety brake         Zero maintenance	SunAR RF Motion Antenna Positioning Towers feature innovat design and manufacturing concepts that result in great ruggedness, durability and performance at a competitive prin The new Model TLT2 provides a very stable platform for the largest and smallest EMC test antennas of all types. Variable speed with soft start & stop.	20. SunAR RF Motion Antenna Positioning Towers feature innovative ce. design and manufacturing concepts that result in great ruggedness, durability and performance at a competitive price.				
Total height (2.5 m scan): 116" (~295 cm)	New trolley guide concept enhances azimuthal stability.	Tower height: 15'3"				
otal height (4 m scan): ~180" (~457 cm)	Dual load carriers give rigid, stable elevation under heavies					
bsolutely no conductive material above motor box	loads.	for Arbitrary setup parameters EUT distance Bore-sight initiation height				
trong, stable construction	Stable boom extension allows proper focal point placement any size antenna without moving tower.	tor				
iber optic interface standard (62.5/125 duplex ST)	Monolithic construction of major components results in	-				
asy assembly/disassembly	unbreakable, lifetime utility.	_				
laximum antenna load (may require counterweight) TWR95: 35 lb. (~16 kg) TWR99: 30 lb. (~14 kg)	Absence of conductive material above the motor box minimizes the electro-magnetic cross section, and minimize coupling to antennas.	S				
20V/230VAC, 50/60Hz, 6A/2x4A	Materials are selected for resistance to UV radiation and resistance to water absorption.					
WR95 base size: 48" x 48" (1.2 m x 1.2 m)	Standard model is operated by a single, standard controller	-				
<b>WR99 base size</b> 30" x 36" (.76 m x .76 m)	channel.					
ustom sizes and configurations available	Developed for indoor and outdoor use.					

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#### **Positioning Equipment**

TP1000B



Load Capacity:	27.2 kg (60 lbs)
Maximum Height (Approx.):	137 cm (53.9 in)
Maximum Height With Longer I	Mast (approximate):
	203 cm (80 in)
Minimum Height (Approx.):	89 cm (34.9 in)
Mast Travel:	(24" MAST) 48.3 cm (19 in)
	(51" MAST) 45.7 cm (18 in)
(19″ MAS	T, TP1000BM4) 37.3 cm (14.7 in)
Tilt Angle:	0–90°
Instrument Mounting Screw:	1/4 in. x 20
Material:	PVC, ABS, nylon
Weight:	9.7 kg (20.5 lbs)

Visit us online to view additional model options



Louu Cupuchy.	10 kg (22 lb.)
Maximum Height (Approx.):	175 cm (69 in.)
Minimum Height (Approx.):	53 cm (21 in.)
Column Travel:	45 cm (18 in.)
Pan Rotation:	360°
Instrument Mounting Screw:	1/4 in. x 20
Material:	Wood
Weight:	2.6 kg (5.7 lb.)
Export Classification:	EAR99

# AP5010B



Load Capacity	1:	45.36 kg (100 lbs)
Maximum Hei	ght (Approx.):	3.31 m (130.25 in)
Minimum Hei	ght (Approx.):	27 m (81.69 in)
Base Leg:	1.53 m (60.4	42 in); extends to 24 m (80.19 in)
Tilt Angle:		0–30°
Material:		Fiberglas, PVC, Delrin, Nylatror
Weight:		45 kg (98 lbs)
Export Classif	ication:	EAR99

Visit us online to view additional model options and our antenna mounting adapters.

# Antenna Positioning Stands APS-1 & APS-1EMP





Model	APS-1
Adjustable leveling casters	
Hard stops at 1, 1.5 and 2 meters	
Fine height adjust	
Adjustable calibration point	
Lightweight	
Disassembles easily	
Exceptionally stable	
Model	APS- 1EMP
Adjustable leveling casters	
Hard stops at 1, 1.5 and 2 meters	
Fine height adjust	
Adjustable calibration point	
Remote-controlled polarization	
Lightweight	
Disassembles easily	
Exceptionally stable	

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#### **Positioning Equipment**

**Elevation over Azimuth** ELAZ75



Allows for heavy EUT loads in both elevation (75 lb.) & azimuth (600 lb.)

Variable speed in both elevation & azimuth

Continuous rotation allowed in both elevation & azimuth (with optional components)

Low RF cross-section materials above drive units

Portable (no permanent installation necessary)

Remote azimuth drive option

Height customer-defined

Fiber-optic connections to controller (requires SC104V or SC110V System Controller)

**Find it Fast** 

**RF Solid State** 

Universal Series

GPIB full control

Contents

**Custom EUT mounts** 

**Optional RS-232 control** 

# **Elevation Positioner EL75**



The EL75 provides EUT rotation about a horizontal axis
Allows for heavy EUT loads in elevation (75 lb.)
Variable speed
Continuous rotation allowed in elevation
Materials above drive units
Portable (no permanent installation necessary)
Height customer-defined
Fiber-optic connections to controller (requires SC104V or SC110V System Controller)
GPIB full control
Custom EUT mounts
Optional RS-232 control

Microwave

#### **Elevation over Azimuth** ELAZ-2B



EUT load rating: 2 lb. Variable speed: 0-6 rpm Continuous rotation in both elevation & azimuth Low RF cross-section Portable (no permanent installation necessary) RS-232 control from PC Fiber-optic interface
Continuous rotation in both elevation & azimuth Low RF cross-section Portable (no permanent installation necessary) RS-232 control from PC
Low RF cross-section Portable (no permanent installation necessary) RS-232 control from PC
Portable (no permanent installation necessary) RS-232 control from PC
RS-232 control from PC
Fiber-optic interface
Simple ASCII command set
Custom EUT mounts
Precision stepper motor drive
Optional turntable deck with 20 lb. load capacity

**Chambers** 

Antennas

# System Controllers SC110V



#### 1 cm or degree resolution

#### **TTL Triggering**

#### Features

Accessories

The Model SC100V system controller provides fully independent control of up to three positioning devices and three fully programable auxiliary devices.

#### **Configuration Options**

Purchase one, two, or three module units; each module has one channel of full device control plus one auxiliary channel.

Contact

**AR Companies** 

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**Systems** 

Solid State Pulse

#### **Power Heads / Power Meters**

**PH2000A** 10 kHz – 8 GHz -60 - +20 dBm



Frequency Range	10 kHz – 8GHz
Power Range –7	0 dBm to +44 dBm, powerhead dependent
Measurement Speed:	1 channel: 200 Readings/Sec. 2 channels: 100 Readings/Sec.
Dynamic Range	-60 to +20 dBm
Inputs	Rear panel HEAD connectors and rear panel IEEE-488 connector standard.
Outputs Rear p	panel PWR/REF connector, 0 dBm, 50 MHz.
Rear panel RECO	RDER BNC connector, 0 to 10 V into 1 MΩ.

Output impedance is 99 k $\Omega$ . May be operated into 1 k $\Omega$  or 1 V fs. **PH2005** 500 kHz - 18 GHz -70 - +20 dBm



Frequency Range	1500 kHz – 18 GHz
Power Range	-70 dBm to +44 dBm, powerhead dependent
Measurement Spee	d: 1 channel: 200 Readings/Sec 2 channels: 100 Readings/Sec
Dynamic Range	-70 to +20 dBm
Inputs	Rear panel HEAD connectors and rear panel IEEE-488 connector standard.
Rear panel R	ar panel PWR/REF connector, 0 dBm, 50 MHz CORDER BNC connector, 0 to 10 V into 1 M $\Omega$ nce is 99 k $\Omega$ . May be operated into 1 k $\Omega$ or 1 V fs

PH2010 30 MHz - 40 GHz -70 - +44 dBm



Frequency Range:	10 kHz – 40 GHz
Power Range:	–70 dBm to +44 dBm
Number of Channels	Three (2 simultaneously viewable)
Measurement Speed:	1 channel: 200 Readings/Sec 2 channels: 100 Readings/Sec
Dynamic Range:	Up to 90 dB with diode heads, 50 dB with thermocouple heads
Inputs:	Rear panel HEAD connectors and rear panel IEEE-488 connector standard
Rear panel RECC	panel PWR/REF connector, 0 dBm, 50 MHz RDER BNC connector, 0 to 10 V into 1 M $\Omega$ p is 99 k $\Omega$ . May be operated into 1 k $\Omega$ or 1 V fs

**PM2003** 10 kHz - 40 GHz -70 - +44 dBm



Frequency Range:	10 kHz – 40 GHz
Power Range: -7	'O dBm to +44 dBm, powerhead dependent
Number of Channels	Three (2 simultaneously viewable)
Measurement Speed:	1 channel: 200 Readings/Sec. 2 channels: 100 Readings/Sec.
Dynamic Range:	Up to 90 dB with diode heads, 50 dB with thermocouple heads.
Inputs:	Rear panel HEAD connectors and rear panel IEEE–488 connector standard.
Rear panel RECC	panel PWR/REF connector, 0 dBm, 50 MHz. RDER BNC connector, 0 to 10 V into 1 M $\Omega$ . a is 99 k $\Omega$ . May be operated into 1 k $\Omega$ or 1 V fs.

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#### SC Switch Control Platform SC2000, SCX2000 and SCP2000



Rated Voltage	100 – 240 V AC
Rated Frequency	50 – 60 Hz
Rated Power	100 VA max.
Dimensions W x H x D	48.26 x 13.34 x 44.77 cm
	(19 x 5.25 x 17.625 in)
Weight	
SC2000 (without modules)	approx. 4.1 kg (9 lbs)
SCX2000 (without modules)	approx. 3.9 kg (8.5 lbs)
SCP2000 (with modules)	approx. 6.8 kg (15 lbs)
Module Slots	
Number of module slots	5 on rear of unit
Rated Frequency Rated Power Dimensions W x H x D Veight SC2000 (without modules) SCX2000 (without modules) SCY2000 (with modules) SCP2000 (with modules) Module Slots Number of module slots Number of control buses for module RF Switch Power Handling	s 5
RF Switch Power Handling	See Spec Sheet
Block Diagram	See Spec Sheet

# Shielded Enclosure Leak Detector System CL-105A and CL-106A



The CL-105A/CL-106A Shielded Enclosure Leak Detection System (SELDS) provides a convenient means of testing the electromagnetic shielding effectiveness of EMI enclosures by looking at the most likely points of degradation – the seams, doors, and filter connections. The system consists of a Model CL-105A Transmitter, Model CL-106A Receiver, headphones and a rugged carrying case. The incredible sensitivity of the model CL-105A Receiver allows it to meet the most rigid MIL standards (e.g. MIL-STD-188/125) for shielded room acceptance.

This system is designed to make relative shielding effectiveness measurements by passing a current along the surface of an EMI enclosure in order to sense the small magnetic fields formed where breaks in the EMI enclosure may occur.

The Model CL-105A Transmitter is used to generate an output signal which is connected to the EMI enclosure under test. This device has an auto-adjusting output that works with small, medium, and large EMI enclosures. An LED indicator illuminates green when the Transmitter has adjusted the output to the optimum level for the connected EMI enclosure.

The Model CL-106A Receiver has high sensitivity to detect the smallest of magnetic fields produced at breaks in the EMI enclosure under test. This unit auto-zeros and features an auditory output with varying amplitude related to the shielding effectiveness. The auditory output is available through the built-in speaker or included headphones. A 4-digit seven segment display is provided to indicate relative shielding effectiveness measurement values in dB. In addition, a built-in LED light source provides illumination when used in dark environments.

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### Software

#### emcware®

#### Features

The emcware® Suite by AR RF/Microwave Instrumentation provides automated Electromagnetic Compatibility (EMC) testing and report generation for all types of users from corporate to professional test laboratories. It is a standalone software application designed to operate on a PC running a Microsoft WindowsTM operating system. The export classification for this software is EAR99. This software is controlled for export in accordance with the U.S. Export Administration Regulations. Diversion contrary to U.S. law is prohibited.

#### Software Design

The emcware® Suite is designed to be userfriendly yet extremely flexible. It is broken up into modules based on different types of EMC testing. Within each module there are predefined standards. The ability to create custom test standards is also provided.

#### Equipment Management

Contained within the emcware® is a built-in Equipment List Manager. This tool allows for equipment to be entered one time and then accessed from within any of the modules. The Equipment List Manager also keeps track of calibration dates and can warn the user when the calibration date of a specific piece of equipment is approaching.

#### EUT Monitoring

Use custom equipment or a National Instruments DAQ card to monitor and report the status of the equipment under test (EUT). The National Instruments DAQ device can monitor Analog or Digital levels from the EUT or reset the EUT using the Digital Outputs. Custom equipment, in conjunction with dynamic link library (DLL) files, allows for complete EUT monitoring and control.

#### Instrument Drivers

Instrument control is provided through AR RF/ Microwave Instrumentation's extensive driver library. Creation of new drivers for equipment that is not currently supported is available upon request. Drivers can also be created and imported by the user in the form of dynamic link libraries (dll) files. For a list of supported remote interfaces, see the Included Equipment Drivers section.

#### Signal Routing

The emcware® is designed to allow the user to select between manual and automatic signal routing. Automatic signal routing is implemented using one or more AR RF/Microwave Instrumentation Model SC2000 System Controllers.

#### Reports

Extensive report generation capability is builtinto each module. These reports can be customized by the user. All reports are created in Microsoft Word or Microsoft Excel.

#### Help Instructions

A detailed help utility is included with the emcware®. The contents of the help instructions can be searched by keyword or topic. Open the help file using the context-sensitive help buttons located throughout the user interface.

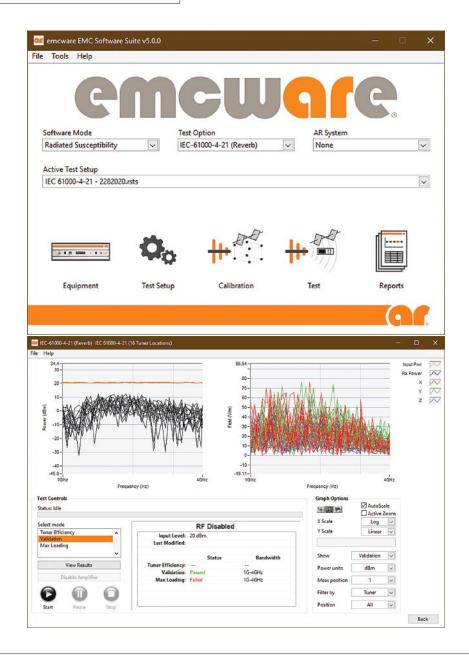
#### Licensing

The emcware® is conveniently licensed using a USB hardware dongle that enables full functionality of the software for a single PC. For more details, see the Licensing Information section on Page 4.

#### **AR Systems Compatibility**

The emcware® can automatically control select AR Systems using built-in equipment setups. See the Compatible Systems for a complete list.

Organization	Standard						
	CISPR 11						
	CISPR 13 CISPR 22						
CISPR							
	CISPR 25						
	CISPR 32						
	MIL-STD-461 RS103						
	MIL-STD-461 RS103 (Reverb)						
Department of Defense	MIL-STD-461 CS114						
	MIL-STD-461 RE(101, 102)						
	MIL-STD-461 CE (101, 102						
RTCA	DO-160 Section 20 DO-160 Section 20.6 (Reverb)						
	DO-160 Section 21						
	61000-4-3						
	61000-4-6						
	61000-4-21						
IEC	50130-4						
IEC	60601-1-2						
	61000-6-1						
	61326						
	61000-6-2						
Telcordia Technologies	GR-1089-Core						
International Organiza-	ISO-11452-(2, 3, 5)						
tion for Standards	ISO-11452-4						
Ford	ES-XW7T-1A278-AC						
GM	GMW3097						
BMW	GS 95002						
Chrysler	DC-11224						
Renault	36-00-808						
Peugeot	B21 7110						



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#### System Interlock / Turntables

# SI1000



Wired Interlock, Remote Out, and Relay Connections					
Molex receptacle, 3-pin, 093 in. DIA terminals					

Mating 3-pin plug connector and terminals supplied

Fiber Optic Connectors (2) FSMA for fiber connection

Compatible with F	C2000 Series C	ables
-------------------	----------------	-------

IEC inlet with filter
0.2–0.6 A IEC inlet with filter
nount case, 1U high
n (19 x 1.75 x 7 in.)
2.5 kg (6.25 lb.)

Operating Temperature Range 10 C to 40 C (50 F to 104 F) @ 5% to 95% RH non-condensing

Specification Flush Mount Turntables – Standard Models							
FM410VS	1.2 (4)	500 (1100)	125 (275)	300 (11.8)			
FM1505VS	1.5 (4.9)	500 (1100)	125 (275)	300 (11.8)			
FM1511VS	1.5 (4.9)	1000 (2200)	250 (550)	300 (11.8)			
FM2005VS	2 (6.6)	1000 (2200)	125 (275)	300 (11.8)			
FM2011VS	2 (6.6)	1000 (2200)	250 (550)	300 (11.8)			
FM2022VS	2 (6.6)	2000 (4400)	500 (1100)	300 (11.8)			
FM2044VS	2 (6.6)	4000 (8800)	1000 (2200)	410 (16)			
FM2066VS	2 (6.6)	6000 (13200)	1500 (3300)	410 (16)			
FM2522VS	2.5 (8.2)	2000 (4400)	500 (1100)	300 (11.8)			
FM2544VS	2.5 (8.2)	4000 (8800)	1000 (2200)	410 (16)			
FM3022VS	3 (9.8)	2000 (4400)	500 (1100)	300 (11.8)			
FM3044VS	3 (9.8)	4000 (8800)	1000 (2200)	410 (16)			
FM3066VS	3 (9.8)	6000 (13200)	1500 (3300)	410 (16)			
FM4044VS	4 (13.1)	4000 (8800)	1000 (2200)	460 (18)			
FM4066VS	4 (13.1)	6000 (13200)	1500 (3300)	460 (18)			
FM5044VS	5 (16.4)	4000 (8800)	1000 (2200)	460 (18)			
FM5066VS	5 (16.4)	7000 (15400)	1750 (3850)	460 (18)			
FM7066VS	7 (23)	6000 (13200)	1500 (3300)	460 (18)			
* Caster Load is defined a	as the load evenly distribu	ited on four casters, ea	ach separated by at lea	st 46 cm (18 in.)			

#### Features

- Advanced, low-maintenance grounding scheme
  Pit ring with self-cleaning ground plane interface
- (optional square interface)
- Exceeds site attenuation requirements
- Positioning switch located at turntable
- Variable speed standard
- Custom sizes and load ratings available
- All metal construction
- Variety of deck-mounted component options
- Precision—<.5° (greater precision optional)</li>
- Manual and remote operation
- Gear driven
- Scan or continuous rotation
- Extremely low maintenance
- Adjustable height
- Fiber-optic interface





\* Caster Load is defined as the load evenly distributed on four casters, each separated by at least 46 cm (18 in.)

\*\* Low profile models, custom sizes and weight capacities available - consult factory

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### **Turntables**

### **Surface Mounts**



Model	SM46C
Diameter	1.2 m (4 ft.)
Running Load	800 lb
Table Top Height	2 in. (5 cm)
Model	SM411C
Diameter	1.2 m (4 ft.)
Running Load	1,100 lb
Table Top Height	3 in. (7.6 cm)
Model	SM2015C
Diameter	2 m
Running Load	1,500 lb
Table Top Height	3 in. (7.6 cm)

#### Features

No pit required Indoor/outdoor Non-slip drive belt Cable access between turntable top and bottom Fiber optic interface Sefl-cleaning, fixed rollers Non-conductive Variable speed standard <0.5 degree position accuracy

### Free Space FS121



12 in. diameter deck	
Non–conductive deck and riser	
36 in. height (customer specified)	
EUT load rating: 10 lb.	
Variable speed: 0–6 rpm	
Soft start/stop	
<1° resolution and repeatability	
Low RF cross section	
Portable	
RS-232 control from PC	
Hollow riser tube for cable access	
Simple ASCII command set	
Precision stepper motor drive	
Electromechanical home switch	
120 or 230 VAC, 50-60 Hz	
Options	Fiber–optic interface

### Free Space FS241



Height at deck: to be specifie	ed by customer
	(15 in.–96 in.)
Distributed load capacity	~45 kg (100 lb.)
Rotation speed: Variable at O available)	.5, 1, 2, ~2.2 rpm (custom speeds
•	e)
Position resolution	<0.25°
Position resolution All material above the motor	, <0.25°
All material above the motor	, <0.25°
All material above the motor	<0.25° box is nonconductive
All material above the motor Cables may be routed betwe	<0.25° box is nonconductive en the rotating deck and its base 115 VAC / 230 VAC,
All material above the motor Cables may be routed betwe	<0.25° box is nonconductive en the rotating deck and its base 115 VAC / 230 VAC

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### **USB Pulse Power Sensor**

### **PSP102** 4 kHz – 6 GHz

Continuous sample rate:	25 MSPS
Effective sample rate:	1 GSPS
Time resolution:	1 ns
Tiger source:	internal or external TTL
External Trigger in/out:	TTL in (slave) or out (master)
Minimum Trigger Width:	4 us
Maximum Trigger Frequency:	120 kHz
Trigger Jitter:	1 ns rms, 20 ns rms (external)
Trace Acquisition Speed:	> 30 k sweeps/second
Measurement Speed: 100 k t	meas/sec (buffered mode) over USB 1000 meas/sec (continuous)
Trigger Modes:	Auto, Normal, Single, Free run
Trigger Arming: Continuous,	Trigger Holdoff, Frame (gap) Holdoff
Remote Connectivity:	USB 2, type B connector
Command Protocol:	M–C and IVI–Com
Maximum Input Power:	200 mW avg, 1W for 1 us peak
Size (LxWxH): 145	5 x 43 x 43 mm (5.7 x 1.7 x 1.7 in.)
Weight:	363 grams/0.8 lb.
Power Consumption:	2W, (USB high power device)



### **PSP001** 50 MHz - 6 GHz

Sampling Techniques:	Real-time/Equivalent Time/Statistical Sampling
Continuous Sample Rate:	100 MHz
Effective Sample Rate:	10 GHz
Time Resolution:	100 ps
Trigger Sources:	Internal or External TT
External Trigger in/out:	TTL in (slave) or out (master), SMB connector
Minimum Trigger Width:	10 ns
Maximum Trigger Frequer	icy: 50 MHz
Trace Acquisition Speed:	100 K sweeps/second
Measurement Speed:	100 K meas/sec (buffered mode) over USB 800 meas/sec (continuous)
Remote Connectivity:	USB 2, type B connector
CoMaximum Input Power	200 mW avg, 1W for 1us peak
Size (LxWxH):	145 x 43 x 43 mm (5.7 x 1.7 x 1.7 in.)
Power Consumption:	2.5W max (USB high power device)



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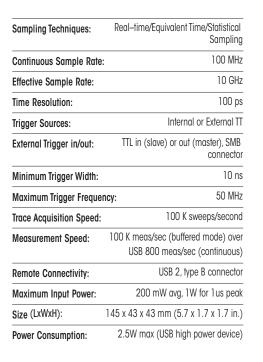
**Chambers** 

### **USB Pulse Power Sensor**

### **PSP002** 50 MHz - 18 GHz



### **PSP004** 50 MHz - 18 GHz





Real-time/Equivalent Time/Statistical Sampling
100 MHz
10 GHz
100 ps
Internal or External TT
TTL in (slave) or out (master), SMB connector
10 ns
cy: 50 MHz
100 K sweeps/second
100 K meas/sec (buffered mode) over USB 800 meas/sec (continuous)
USB 2, type B connector
200 mW avg, 1W for 1us peak
145 x 43 x 43 mm (5.7 x 1.7 x 1.7 in.)
2.5W max (USB high power device)

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### **USB Pulse Power Sensor**

### **PSP003** 50 MHz – 40 GHz



<b>PSP005</b>	
50 MHz - 4	40 GHz

Sampling Techniques:	Real-time/Equivalent Time/Statistical Sampling
Continuous Sample Rate:	100 MHz
Effective Sample Rate:	10 GHz
Time Resolution:	100 ps
Trigger Sources:	Internal or External TT
External Trigger in/out:	TTL in (slave) or out (master), SMB connector
Minimum Trigger Width:	10 ns
Maximum Trigger Frequer	ncy: 50 MHz
Trace Acquisition Speed:	100 K sweeps/second
Measurement Speed:	100 K meas/sec (buffered mode) over USB 800 meas/sec (continuous)
Remote Connectivity:	USB 2, type B connector
Maximum Input Power:	200 mW avg, 1W for 1us peak
Size (LxWxH):	145 x 43 x 43 mm (5.7 x 1.7 x 1.7 in.)
Power Consumption:	2.5W max (USB high power device)



Sampling Techniques:	Real–time/Equivalent Time/Statistical Sampling
Continuous Sample Rate	: 100 MHz
Effective Sample Rate:	10 GHz
Time Resolution:	100 ps
Trigger Sources:	Internal or External TT
External Trigger in/out:	TTL in (slave) or out (master), SMB connector
Minimum Trigger Width:	10 ns
Maximum Trigger Freque	ncy: 50 MHz
Trace Acquisition Speed:	100 K sweeps/second
Measurement Speed:	100 K meas/sec (buffered mode) over USB 800 meas/sec (continuous)
Remote Connectivity:	USB 2, type B connector
Maximum Input Power:	200 mW avg, 1W for 1us peak
Size (LxWxH):	145 x 43 x 43 mm (5.7 x 1.7 x 1.7 in.)
Power Consumption:	2.5W max (USB high power device)

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**Universal Series** 

Microwave Solid State Pulse

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#### **AR US Sales Associates**

- 1. ProTEQ Solutions Nashua, NH 888-490-6624
- 2. Advanced Technical Marketing Parsippany, NJ 800-310-8805
- 3. Delmarva Engineering Crownsville, MD 410-990-9000

Charlottesville, VA 410-990-9000

- 4. EQS Systems, LLC Chesterland, OH 800-729-8084
- 5. Brennan Associates Saint Petersburg, FL 727-446-5006

Delray Beach, FL 727-446-5006

Seffner, FL 727-446-5006

6. DyTec/Midwest Inc. Rolling Meadows, IL 847-255-3200

- 7. Testech Sales Engineers Richardson, TX 972-644-5010
- Austin, TX 972-644-5010

Houston, TX 972-644-5010 Edmond, OK

972-644-5010 8. Technical Marketing Specialists Greenwood Village, CO 800-342-8408

Tempe, AZ 800-342-8408

Albuquerque, NM 800-342-8408

Salt Lake City, UT 800-342-8408

9. PSI Solutions Inc. Tacoma, WA OR, SW WA, ID, and MT 253-838-9263

WA, Alaska 253-838-9263

10. Ward/Davis Associates San Jose CA 408-213-1090

Redondo Beach, CA 310-643-6977

San Diego, CA 310-643-6977

11. ACA TMetrix Inc. Mississauga, ON Canada 800-665-7301

12. Sitemas e Ingenieria de EMC (SI-EMC) Colonia Cuaiimalpa Mexico City (Mexico) +52 (55) 2163 2148 +52 (55) 2163 2979

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Altoo Measurement Science

Altoo Measurement Science ApS

Complus Systems Pvt Ltd

**Precision Technologies** 

MTI Summit Electronics

Albania **AR** Europe +353 61 50 4300 Argentina Instrumental Tech

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Scientific Devices +61 3 9569 1366 Austria

AR Deutschland GmbH +49 6101 802700 Bahrain Motabagah Trading Company

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Radiant-Elcom +7495 725 0404 Belgium

AR Benelux B.V. +31 1724 23000 Brazil **Boreal Communications** 

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Oman

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**United Arab Emirates** Motabaaah

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Vietnam +34 976 013 300 Precision Technologies

Contact

PTE, Ltd. Singapore + 65 6 2734573

Find it Fast

Product Catalog 2022 For Sales, call: 215.723.8181

**Universal Series** 

For an Applications Engineer, call: 800.933.8181

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## **Contact Service**

We believe local after sales support and service are essential, and we strive to provide the best service possible.

Our highly trained technicians maintain equipment so that even older or rebuilt AR products continue to perform the same as they did on Day 1. There are rebuilt AR amplifiers over 20 years old that are still going strong and delivering precision results.

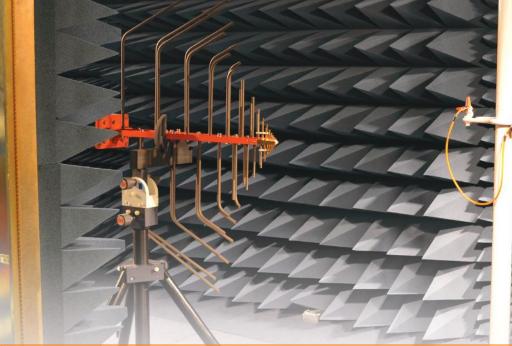
You can depend on AR's service from calibration and regular maintenance to troubleshooting and repairs.

#### Three-Year, No Questions Asked Warranty

We set a new standard when introducing our three-year warranty (one-year warranty for TWTs and powerheads). It's easy to stand behind your products when their quality is unsurpassed. Making sure that AR products exceed your expectations is our goal. We do whatever it takes to achieve that.

In the US, contact AR's Customer Service Department at 215.723275 or service@arworld.us. Outside of the US, contact the AR distributor nearest you. (Maybe reference previous page?)





	Basic Warranty	Assured	Enhanced	Performance
Technical Support (HW and SW)				
Email / Phone Case Response Time	24 hrs.	8 hrs	4 hrs	2 hrs
24 x 5 Technical Support				~
On–Site Post–Sales Support				4
Hardware Support				
Repair Service Coverage Turnaround Time	15 business days	14 business days	10 business days	7 business days
Calibration Service Turnaround Time	15 business days	10 business days	5 business days	3 business days
Firmware Release and Updates	✓	✓	✓	~
Spare Parts/Consignment Inventory			optional	~
Product Maintenance	optional	optional	optional	optional
Software Support				
Updates and Maintenance Releases	✓	✓	✓	~
Proactive Release Notification	✓	✓	✓	~
Success Services				
Customer Success Manager-Advocate, Escalation Point			✓	~
Onboarding and Support Performance Metrics Report		<b>√</b> Annual	<b>√</b> Bi–Annual	<b>√</b> Quarterly

Response time based on AR standard business hours and hardware support turnaround time excludes component lead time.
 AR Software Agreement required for software support.

3. All the offered services are subject to availability of capabilities in country and legal terms and conditions.

4. Contact your local AR sales representative for more information.

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AR is a multi-national corporation that's made up of a family of companies, each providing innovative solutions and exceptional support and service. These companies include:

#### **AR RF/Microwave Instrumentation**

AR RF/Microwave Instrumentation provides Total RF and EMC Test Solutions by offering customers RF test instrumentation, RF test systems, EMC test software, and chambers. In addition to the complete array of product solutions also comes world-class, customer-facing service and applications support.

#### AR Europe

AR Europe represents AR's deep commitment to the European marketplace. Through a network of partners strategically located throughout Europe, the company supplies systems, antennas, chambers, modules, and power amplifiers for EMC testing and wireless, medical, and industrial applications.

#### SunAR RF Motio

SunAR RF Motion, manufactures turntables, motorized and manual antenna positioning towers, a system controller, distributed antenna systems (DAS), emission antennas, and reverberation chamber tuners for EMC and wireless testing.

#### **AR Modular RF**

AR Modular RF designs and manufactures rack mount and amplifier systems that cover a broad frequency spectrum and offer diverse power ranges. Some of the most innovative, dependable, and durable RF amplifier modules and broadband solid-state RF amplifier systems in the world, these systems are used for communications and medical, scientific, and industrial applications.

With the combined resources of the AR companies, we're able to offer our customers more options, more solutions, and more innovations. In the world of EMC, wireless, and beyond, AR is the one company with infinite solutions.

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### Your Partner for All Your Equipment Needs

AR Europe is not just a distribution network; we are a system and solution provider! In collaboration with our third-party sales partners, we supply a broad range of test equipment/ systems for RF/Microwave, EMC, electrical safety, power electronics, test and measurement, and RF shielding applications.

AR Europe is comprised of five AR offices (Ireland, UK, France, Benelux, and Germany) and an extensive network of independent sales representatives' companies. Our network of experienced sales associates and service technicians allows us to provide the best technical solution for our customers' requirements as well as local training, installation, repair, and maintenance support.

With our extensive range of products, services, skills, and experience, AR Europe is the perfect partner for all your test-equipment needs. We have the solutions, from instrumentation to turnkey systems and one-off projects.

### A Formidable Force

No one has more experience in all facets of EMC testing equipment than AR Europe and our partners around the world. Working as a team together with our customers, we have the ability to find solutions, solve problems, and provide exceptional service in the most efficient, cost-effective, and timely manner.

With locations throughout Europe, we're nearby and ready to help make EMC testing quicker, easier, and more accurate than ever.

We have developed a very strong customer base in a wide range of electronic/electrical business sectors covering communications, military, commercial, medical, automotive, aerospace, product compliance testing, research, and educational markets.



### **AR EUROPE**

### **AR Europe Systems**

### Your Solution Partner in Europe

AR Europe is not just a distribution network; we are a solution provider. In collaboration with AR RF/Microwave Instrumentation and third-party sales partners, we supply a broad range of test equipment and systems solutions for RF/Microwave applications, EMC, Electrical safety, Power electronics, Test and Measurement, and RF shielding applications.

AR Europe comprises five AR offices (Benelux, France, Germany, Ireland and the UK) and we work with an extensive network of independent sales representatives providing local support across the EMEA region. Our team of experienced sales associates, project engineers and service technicians allows us to provide the best technical solution for our customers' requirements including installation, local training, repair and maintenance support.

With our extensive range of products, services, skills, and experience, AR Europe is the perfect partner for all your test equipment needs. We have the solutions, from instrumentation to full turnkey EMC systems.

### AR Europe Systems Through AR/RF Microwave Instrumentation

Our close ties with AR RF/Microwave Instrumentation allow us the ability to offer complete EMC and RF system solutions to an array of customers, requiring systems for military, aerospace, automotive, consumer products, or R&D testing. With an AR system comes the same support and service you have grown accustomed to and trusted throughout the years.

### Our Support is as Strong as our Products

Throughout Europe, we have well-equipped service centers staffed by our experienced factorytrained engineers, enabling us to provide high quality local warranty support, repair, and calibration if needed.

With an extensive range of spare parts available in stock we respond quickly, providing a fast turnaround on service helping to minimize your downtime.

Additional services include:

- On-site repair and calibration
- Bespoke service contracts
- Routine maintenance programs
- Management of all your calibration needs (including accredited calibration)
- Shielding effectiveness measurements

Contact your local service centre for more information.

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### SunAR RF Motion / AR Modular RF

## SunAR RF Motion

### Manufacturers of Positioning Equipment and Antennas for EMC and Wireless Testing

The SunAR RF Motion product line includes precision positioners for EMC testing, antenna measurements, and OTA testing; antennas for EMC and wireless testing, distributed antenna systems (DAS); turntables; and reverberation system design and stirrers for EMC, shielding effectiveness and OTA testing. Formerly known as Sunol Sciences, the Dublin, CA-based company has built a reputation for providing reliable, high performance and high-quality products; characteristics that make it a perfect fit for AR.

#### Product Overview

- Full line of standard products
- Scalable designs for specific applications
- Turntables
- Antenna masts / positioners / stands
- Reverberation chamber stirrers
- Distributed antenna systems (DAS)

EMC and wireless testing

Antennas

System controllers

Many SunAR products can be customized to your specifications. Call one of our engineers at (925) 833-9936 to learn about customization options for masts, positioners, stirrers, and turntables.

## **AR Modular RF**

### for Tactical Booster Amplifiers, RF Systems and Modules

AR Modular RF designs, manufactures and distributes some of the most innovative, dependable, and durable RF Amplifier Modules and broadband solid-state RF amplifier systems in the world. These products play a critical role in wireless and radio communications, military communications, electronic warfare, electronic countermeasures, homeland security, and have a variety of medical, scientific, and industrial applications.

- RF Amplifier Modules: 0.01 6000 MHz, 5 500 W.
- Broadband, narrowband and custom designs available
- Military Amplifier Systems and Accessories
- Booster Amplifiers and RF Jammer Amplifiers for tactical military radios from 30 512 MHz and from 1.2 1.9 GHz
- Power Amplifiers for legacy communication designs as well as virtually every new & emerging communications system





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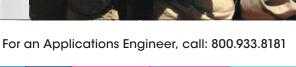
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### AR Modular RF: Military Products

**AR-20** 30 – 512 MHz 20 W



Power Output	20 CW, 20 WPEP
Frequency Range	30 MHz-512 MHz
Input Power 2V	V CW or PEP for full 20W output
SATCOM Rx LNA	Built-in
SATCOM Rx LNA Gain/Noise Figu	re 12 dB/<2.5 dB typical
SATCOM Rx Co-site Filter	Co-Site filter provides
>35 dB protection t	o the SATCOM receive channels
Modulation	All Legacy and Modern complex tactical communications waveforms like ANW2, IW, and SRW
Power Requirements	12–35.5 VDC single XX90 battery or 12 and 28 VDC vehicle supply
Current@24 VDC nominal	<3.2A Amps @ 28 V typical
Operating Temperature	-30 to +60° C Ambient
Water	IP67
Vibration/Shock/Humidity	Designed to meet applicable sections of MIL STD 810/ designed for ground/base vehicle use
Size (HxWxD) Inches	1.58 x 3.75 x 55 in.
Weight	1 lb. 10 oz
JITC Certified	Yes
GSA Schedule	Yes

### **AR-20KT** 30 – 512 MHz 20 W



20 CW, 20 WPEP 30 MHz–512 MHz CW or PEP for full 20W output Built-in e 12 dB/<2.5 dB typical Co-Site filter provides the SATCOM receive channels All Legacy and Modern
CW or PEP for full 20W output Built-in e 12 dB/<2.5 dB typical Co-Site filter provides the SATCOM receive channels All Legacy and Modern
Built-in Built-in Pail 2 dB/<2.5 dB typical Co-Site filter provides the SATCOM receive channels All Legacy and Modern
e 12 dB/<2.5 dB typical Co-Site filter provides the SATCOM receive channels All Legacy and Modern
Co-Site filter provides the SATCOM receive channels All Legacy and Modern
the SATCOM receive channels All Legacy and Modern
complex tactical communications waveforms like ANW2, IW, and SRW
12–35.5 VDC single XX90 battery or 12 and 28 VDC vehicle supply
<3.2A Amps @ 28 V typical
-30 to +60° C Ambient
IP67
Designed to meet applicable sections of MIL STD 810/ designed for ground/base vehicle use
1.58 x 3.75 x 55 in.
2 lb. 15 oz (Full Kit)
Yes

**AR-20B** 30 – 512 MHz 20 W



Power Output	20 CW, 20 WPEP
Frequency Range	30 MHz-512 MHz
Input Power	2W CW or PEP for full 20W output
SATCOM Rx LNA	N/A
SATCOM Rx LNA Gain/Noise	Figure N/A
SATCOM Rx Co-site Filter	N/A
Modulation	All Legacy and Modern complex tactical communications waveforms like ANW2, IW, and SRW
Power Requirements	12–35.5 VDC single XX90 battery or 12 and 28 VDC vehicle supply
Current@24 VDC nominal	<3.2A Amps @ 28 V typical
Operating Temperature	-30 to +60° C Ambient
Water	IP67
Vibration/Shock/Humidity	Designed to meet applicable sections of MIL STD 810/ designed for ground/base vehicle use
Size (HxWxD) Inches	1.58 x 3.75 x 55 in.
Weight	1 lb. 10 oz
JITC Certified	No
GSA Schedule	Yes

**AR-20BKT** 30 – 512 MHz 20 W



Power Output	20 CW, 20 WPEP
Frequency Range	30 MHz-512 MHz
Input Power	2W CW or PEP for full 20W output
SATCOM Rx LNA	N/A
SATCOM Rx LNA Gain/Noise	Figure N/A
SATCOM Rx Co-site Filter	N/A
Modulation	All Legacy and Modern complex tactical communications waveforms like ANW2, IW, and SRW
Power Requirements	12–35.5 VDC single XX90 battery or 12 and 28 VDC vehicle supply
Current@24 VDC nominal	<3.2A Amps @ 28 V typical
Operating Temperature	-30 to +60° C Ambient
Water	IP67
Vibration/Shock/Humidity	Designed to meet applicable sections of MIL STD 810/ designed for ground/base vehicle use
Size (HxWxD) Inches	1.58 x 3.75 x 55 in.
Weight	2 lb. 15 oz (Full Kit)
JITC Certified	No
GSA Schedule	Yes



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### AR Modular RF: Military Products

**AR-20H** 30 – 512 MHz 20 W



Power Output	20 CW, 20 WPEP
Frequency Range	30 MHz-512 MHz
Input Power	Nominal 2W–5W CW or PEP for full 20W output
SATCOM Rx LNA	Built-in
SATCOM Rx LNA Gain/Noise Figure	6 dB/4 dB typical
SATCOM Rx Co-site Filter	N/A
Modulation	All Legacy and Modern complex tactical communications waveforms like ANW2C and SRW
Power Requirements	18 to 35.5 VDC compliant to MIL-STD-704F, , MIL-STD 461F, MIL-STD 464C
Current@24 VDC nominal	<3.2A Amps @ 24 V typical
Operating Temperature	-40 to +71° C Ambient
Water	IP67
Vibration/Shock/Humidity	MIL-STD-810G
Size (HxWxD) Inches	1.86 x 3.75 x 8.78 in.
Weight	2.6 lb.
JITC Certified	No
GSA Schedule	Yes

### **AR-20EP** 225 – 450 MHz 20 W



Power Output	20 CW, 20 WPEF
Frequency Range	225 MHz – 450 MHz
Input Power	2W CW or PEP for full 20W output
SATCOM Rx LNA	Built-ir
SATCOM Rx LNA Gain/Noise F	igure 12 dB/4 dB typica
SATCOM Rx Co-site Filter	N/A
Modulation	All Legacy and Moderr complex tactica communications waveforms
Power Requirements	12 to 35.5 VDC
Current@24 VDC nominal	<3.2A Amps @ 24 V typica
Operating Temperature	-30 to +60° C Ambien
Water	IP67
Vibration/Shock/Humidity	MIL-STD-81
Size (HxWxD) Inches	1.58 x 3.75 x 55 in
Weight	1 lb. 10 oz
JITC Certified	Nc
GSA Schedule	Yes

**AR-20HC2** 300 - 500 MHz 20 W



Power Output	20 CW, 20 WPEP
Frequency Range	300 MHz – 500 MHz
Input Power Nominal 0.75W–3W C	CW or PEP for full 20W output
SATCOM Rx LNA	Built-in
SATCOM Rx LNA Gain/Noise Figure	10 dB/2.5 dB typica
SATCOM Rx Co-site Filter	Yes
Modulation	All Legacy and Moderr complex tactica communications waveforms like FSK, ANW2C and SRW
Power Requirements	9.5 to 36 VDC
Current@24 VDC nominal	<3.2A Amps @ 28 V typica
Operating Temperature	-40 to +70° C Ambien
Water	IP67
Vibration/Shock/Humidity	MIL-STD-810
Size (HxWxD) Inches	1.86 x 3.75 x 8.78 in
Weight	2.6 lb
JITC Certified	No
GSA Schedule	Yes

### **AR-35** 30 - 512 MHz 20 W



Power Output	35 watts CW nominal; 35W PEP with 70% AM modulation
Frequency Range	30 MHz – 512 MHz
Input Power	3W PEP typical for 35W PEP Output
SATCOM Rx LNA	N/A
SATCOM Rx LNA Gain/Nois	se Figure N/A
SATCOM Rx Co-site Filter	N/A
Modulation	AM, FM, or PM, and Tactical communications waveforms
Power Requirements	13.8 VDC –33 VDC, from two BAXX90 Batteries or 12 and 24 VDC vehicle ystems, filtered and transient protected
Current@24 VDC nominal	5.5 Amps nominal
Operating Temperature	-30 to +60° C
Water	66 ft for 20 min
Vibration/Shock/Humidity	MIL STD 810F/Hand portable
Size (HxWxD) Inches	2.30 x 30 x 7.70 in.
Weight	2 lb.
JITC Certified	No
GSA Schedule	Yes

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### AR Modular RF: Military Products

### **AR-50** 30 – 512 MHz 50 W



70% AM modulation; <10% distortion typical         Frequency Range       30 MHz – 512 MHz         Input Power       <5W CW typical for 50W Output         SATCOM Rx LNA       Built-in         SATCOM Rx LNA Gain/Noise Figure       12 dB/2.5 dB typical         SATCOM Rx Co-site Filter       Band pass frequency         239–273 MHz, Out of band rejection >45 dB typical         Modulation       All Legacy and Modern complex tactical communications waveforms like ANW2, WNW, and SRW         Power Requirements       12 – 36 VDC, from Battery or 12 and 24 VDC vehicle systems. Filtered and transient protected         Current@24 VDC nominal       7.5 Amps nominal         Operating Temperature       -30 to +60° C         Water       IP67         Vibration/Shock/Humidity       Per MIL STD 810G (Including SB-X10001B)         Size (HxWxD) Inches       2.50 x 60 x 7.50 in.         Weight       4.4 lb         JITC Certified       PSC-5D, PRC-117G, PRC-148 JEM			
Input Power       <5W CW typical for 50W Output	Power Output		
SATCOM Rx LNA       Built-in         SATCOM Rx LNA Gain/Noise Figure       12 dB/2.5 dB typical         SATCOM Rx Co-site Filter       Band pass frequency         239–273 MHz, Out of band rejection >45 dB typical         Modulation       All Legacy and Modern complex tactical communications waveforms like ANW2, WNW, and SRW         Power Requirements       12 – 36 VDC, from Battery or 12 and 24 VDC vehicle systems. Filtered and transient protected         Current@24 VDC nominal       7.5 Amps nominal         Operating Temperature       -30 to +60° C         Water       IP67         Vibration/Shock/Humidity       Per MIL STD 810G (Including SB-X10001B)         Size (HxWxD) Inches       2.50 x 60 x 7.50 in.         Weight       4.4 lb         JITC Certified       PSC-5D, PRC-117G, PRC-148 JEM	Frequency Range		30 MHz – 512 MHz
SATCOM Rx LNA Gain/Noise Figure       12 dB/2.5 dB typical         SATCOM Rx Co-site Filter       Band pass frequency         239–273 MHz, Out of band rejection >45 dB typical         Modulation       All Legacy and Modern complex tactical         communications waveforms       communications waveforms like ANW2, WNW, and SRW         Power Requirements       12 – 36 VDC, from Battery or 12 and 24 VDC vehicle systems. Filtered and transient protected         Current@24 VDC nominal       7.5 Amps nominal         Operating Temperature       -30 to +60° C         Water       IP67         Vibration/Shock/Humidity       Per MIL STD 810G (Including SB-X10001B)         Size (HxWxD) Inches       2.50 x 60 x 7.50 in.         Weight       4.4 lb         JITC Certified       PSC-5D, PRC-117G, PRC-148 JEM	Input Power	<5W	/ CW typical for 50W Output
SATCOM Rx Co-site Filter       Band pass frequency         239–273 MHz, Out of band rejection >45 dB typical         Modulation       All Legacy and Modern complex tactical communications waveforms like ANW2, WNW, and SRW         Power Requirements       12 – 36 VDC, from Battery or 12 and 24 VDC vehicle systems. Filtered and transient protected         Current@24 VDC nominal       7.5 Amps nominal         Operating Temperature       -30 to +60° C         Water       IP67         Vibration/Shock/Humidity       Per MIL STD 810G (Including SB-X10001B)         Size (HxWxD) Inches       2.50 x 60 x 7.50 in.         Weight       4.4 lb         JITC Certified       PSC-5D, PRC-117G, PRC-148 JEM	SATCOM Rx LNA		Built-in
239–273 MHz, Out of band rejection >45 dB typical         Modulation       All Legacy and Modern complex tactical communications waveforms like ANW2, WNW, and SRW         Power Requirements       12 – 36 VDC, from Battery or 12 and 24 VDC vehicle systems. Filtered and transient protected         Current@24 VDC nominal       7.5 Amps nominal         Operating Temperature       -30 to +60° C         Water       IP67         Vibration/Shock/Humidity       Per MIL STD 810G (Including SB-X10001B)         Size (HxWxD) Inches       2.50 x 60 x 7.50 in.         Weight       4.4 lb         JITC Certified       PSC-5D, PRC-117G, PRC-148 JEM	SATCOM Rx LNA G	ain/Noise Figure	12 dB/2.5 dB typical
Complex tactical communications waveforms like ANW2, WNW, and SRW         Power Requirements or 12 and 24 VDC vehicle systems. Filtered and transient protected         Current@24 VDC nominal       7.5 Amps nominal         Operating Temperature       -30 to +60° C         Water       IP67         Vibration/Shock/Humidity       Per MIL STD 810G (Including SB-X10001B)         Size (HxWxD) Inches       2.50 x 60 x 7.50 in.         Weight       4.4 lb         JITC Certified       PSC-5D, PRC-117G, PRC-148 JEM	•••••••••••••••		
or 12 and 24 VDC vehicle systems. Filtered and transient protected Current@24 VDC nominal Operating Temperature -30 to +60° C Water IP67 Vibration/Shock/Humidity Per MIL STD 810G (Including SB-X10001B) Size (HxWxD) Inches 2.50 x 60 x 7.50 in. Weight 4.4 lb JITC Certified PSC-5D, PRC-117G, PRC-148 JEM	Modulation		complex tactical
Operating Temperature       -30 to +60° C         Water       IP67         Vibration/Shock/Humidity       Per MIL STD 810G (Including SB-X10001B)         Size (HxWxD) Inches       2.50 x 60 x 7.50 in.         Weight       4.4 lb         JITC Certified       PSC-5D, PRC-117G, PRC-148 JEM	Power Requiremen		/DC vehicle systems. Filtered
Water     IP67       Vibration/Shock/Humidity     Per MIL STD 810G (Including SB-X10001B)       Size (HxWxD) Inches     2.50 x 60 x 7.50 in.       Weight     4.4 lb       JITC Certified     PSC-5D, PRC-117G, PRC-148 JEM	Current@24 VDC n	ominal	7.5 Amps nominal
Vibration/Shock/Humidity         Per MIL STD 810G (Including SB-X10001B)           Size (HxWxD) Inches         2.50 x 60 x 7.50 in.           Weight         4.4 lb           JITC Certified         PSC-5D, PRC-117G, PRC-148 JEM	Operating Tempera	ture	-30 to +60° C
(Including SB-X10001B)           Size (HxWxD) Inches         2.50 x 60 x 7.50 in.           Weight         4.4 lb           JITC Certified         PSC-5D, PRC-117G, PRC-148 JEM	Water		IP67
Weight         4.4 lb           JITC Certified         PSC-5D, PRC-117G, PRC-148 JEM	Vibration/Shock/Hu	midity	
JITC Certified PSC-5D, PRC-117G, PRC-148 JEM	Size (HxWxD) Inch	es	2.50 x 60 x 7.50 in.
	Weight		4.4 lb
GSA Schedule Yes	JITC Certified	PSC-5	5D, PRC-117G, PRC-148 JEM
	GSA Schedule		Yes

### AR-50RC 225 – 450 MHz 50 W



Power Output module	LOS: 25 watts CW nominal; 25W PEP with 70% AM ation; <10% distortion typical
SATCOM (29	0 MHz to 320 MHz): 50 watts
Frequency Range	30 MHz – 512 MHz
Input Power <5 watts CW typical for 25	W LOS and 50W SATCOM Output
SATCOM Rx LNA	Built-in
SATCOM Rx LNA Gain/Noise Figure	12 dB/2 dB typical
SATCOM Rx Co-site Filter 239 MHz–273 MHz, Out of	Band pass frequency band rejection 35 dB typical
Modulation	AM, FM, or PM, and tactical ommunications waveforms
1	12 – 35.5 VDC filtered and cted for 12 or 24 volt vehicle rstems or dual XX90 batteries
Current@24 VDC nominal	<7.5 Amps @ 24 V typical
Operating Temperature	-30 to +60° C
Water	IP67
Vibration/Shock/Humidity	Per MIL STD 810F
Size (HxWxD) Inches	2.50 x 60 x 7.50 in.
Weight	4.4 lb.
JITC Certified	Based off AR-50 design
GSA Schedule	Yes

### **AR-50RCS** 30 – 90 MHz 50 W



Power Output		rominal; 50W PEP with 70% AM odulation; <10% distortion typical
Frequency Range		30 MHz – 90 MHz
Input Power	<5 wat	tts CW typical for 50 watts Output
SATCOM Rx LNA		N/A
SATCOM Rx LNA G	ain/Noise Fig	ure N/A
SATCOM Rx Co-site	e Filter	N/A
Modulation		AM, FM, or PM, and tactical ommunications waveforms
Power Requiremer		12 – 35.5 VDC filtered and protected for 12 or 24 volt vehicle systems or dual XX90 batteries
Current@24 VDC r	iominal	<7.5 Amps @ 24 V typical
Operating Tempera	ture	-30 to +60° C
Water		IP67
Vibration/Shock/Hu	umidity	Per MIL STD 810F
Size (HxWxD) Incl	ies	2.50 x 60 x 7.50 in.
Weight		4.4 lb.
JITC Certified		Based off AR-50 design
GSA Schedule		Yes

### **AR-50S** 30 – 88 MHz 50 W

Power Output



50 watts CW nominal; 50W PEP with

	80% AM modulation; <10% distortion typical			
Frequency Range	30 MHz – 88 MHz			
Input Power	<5 watts CW typical for 50 watts Output			
SATCOM Rx LNA	N/A			
SATCOM Rx LNA Gain/Noise Figure				
SATCOM Rx Co-site	Filter N/A			
Modulation	AM, FM, or PM, and Tactical communications waveforms			
Power Requirements	12 – 36 VDC filtered and transient protected for 12 or 24 Volt vehicle systems or dual XX90 batteries			
Current@24 VDC no	ninal <7.5 Amps @ 24 V typicall			
Operating Temperatu	re -30 to +60° C			
Water	IP67			
Vibration/Shock/Hun	idity Per MIL STD 810Fe			
Size (HxWxD) Inche	<b>s</b> 2.50 x 60 x 7.50 in.			
Weight	4.4 lb.			
JITC Certified	Based off AR-50 design			
GSA Schedule	Yes			

Contact

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### AR Modular RF: Military Products

**AR-50SE** 30 – 88 MHz 50 W



Power Output	50 watts CW nominal; 50W PEP with 80% AM modulation; <10% distortion typical
Frequency Range	30 MHz – 88 MHz
Input Power	<5 watts CW typical for 50 watts Output
SATCOM Rx LNA	N/A
SATCOM Rx LNA Go	in/Noise Figure N/A
SATCOM Rx Co-site	Filter N/A
Modulation	AM, FM, or PM, and Tactical communications waveforms
Power Requirement	3 12–33 VDC, MIL-STD-461E and 1275
Current@24 VDC no	minal <7.5 Amps @ 24 V typicall
Operating Temperat	<b>ure</b> -40 to +55°C
Water	IP67
Vibration/Shock/Hu	nidity Per MIL STD 810F
Size (HxWxD) Inch	<b>s</b> 2.50 x 6.50 x 9.93 in.
Weight	8 lb.
JITC Certified	Based off AR-50 design
GSA Schedule	Yes

### **AR-55L** 1250 – 1800 MHz 20 W



Power Output	45W PEP (+2 dB / -1 dB), typical across the band, with 5W PEP input		
Frequency Range		1,250 – 1,800 MHz	
Input Power		2–5 W PEP	
SATCOM Rx LNA		Built-in	
SATCOM Rx LNA Gair	/Noise Figure	12 dB/<3.5 dB typical	
SATCOM Rx Co-site F	ilter High pass	Filter, Out of band rejection 40 dB typical	
Modulation	Cor	nstant Envelope Waveforms	
Power Requirements	28 VDC filter	red and transient protected	
Current@24 VDC non	ninal	7 Amps @ 28 V typical	
Operating Temperatu	e	-30 to +60° C Ambient	
Water		IP67	
		o meet applicable sections or ground/base vehicle use	
Size (HxWxD) Inches	l	2.5 x 6 x 7.5 in.	
Weight		6 lb.	
JITC Certified		No	
GSA Schedule		Yes	

# **AR-75** 30 – 512 MHz 75 W

Power Output	75 watts CW nominal; 75 W PEP with 70% AM modulation; <10% distortion typical			
-				
Frequency Rang	je		300 MHz – 512 MHz	
Input Power	5–8 watts C	W typical for	nominal 75 watts Output	
SATCOM Rx LNA	4		Built-in	
SATCOM Rx LNA	A Gain/Nois	e Figure	12 dB/2 dB typical	
SATCOM Rx Co-	site Filter		frequency 239–273 MHz, nd rejection 45 dB typical	
Modulation			M, FM, or PM, and Tactical mmunications waveforms	
Power Requiren protected for	or 24 volt ve	ehicle system	VDC filtered and ransient s batteries MIL-STD 1275 DC internal power supply	
Current@24 VD	C nominal	<	<9.5 Amps @ 24 V typical	
Operating Temp	erature		-40 to +70° C Ambient	
Water			IP67	
Vibration/Shock	/Humidity		Per MIL STD 810F	
Size (HxWxD) I	nches		30 x 60 x 11.17 in.	
Weight			10.5 lb.	
JITC Certified			No	

### **AR-75-M50** 30 – 512 MHz 50 W

**.** . .



	Nominal 50 watts CW; 50W PEP 70% DOM; <10% distortion <5% typical		
Frequency Ra	nge	30 MHz – 512 MHz	
Input Power	~5–7 watts C	W typical for 50 watts Output	
SATCOM Rx L	NA	Built-in	
SATCOM Rx L	NA Gain/Noise Figure	12 dB/2 dB typical	
SATCOM Rx C 239	• ••	Band pass frequency f band rejection 45 dB typical	
Modulation	AM, FM, or PM, an	d modern Tactical networking communication waveforms	
Dowor Dog	10.0		
	for 24 volt vehicle syst	5.5 VDC filtered and transient tems batteries; MIL-STD 1275 DC internal power supply filter	
protected	for 24 volt vehicle syst nd 461 compliant DC-D	tems batteries; MIL-STD 1275	
protected ar	for 24 volt vehicle syst ad 461 compliant DC-E DC nominal	tems batteries; MIL-STD 1275 DC internal power supply filter	
protected ar Current@24 V	for 24 volt vehicle syst ad 461 compliant DC-E DC nominal	tems batteries; MIL-STD 1275 DC internal power supply filter < 9.5 Amps @ 24 V typical	
protected ar Current@24 V Operating Ter	for 24 volt vehicle syst ad 461 compliant DC-E DC nominal aperature	terns batteries; MIL-STD 1275 DC internal power supply filter < 9.5 Amps @ 24 V typical -30 to +60° C	
protected ar Current@24 V Operating Terr Water	for 24 volt vehicle syst ad 461 compliant DC-E DC nominal apperature ck/Humidity	tems batteries; MIL-STD 1275 DC internal power supply filter < 9.5 Amps @ 24 V typical -30 to +60° C IP67	
protected ar Current@24 V Operating Ten Water Vibration/Sho Size (HxWxD)	for 24 volt vehicle syst ad 461 compliant DC-E DC nominal apperature ck/Humidity	tems batteries; MIL-STD 1275 DC internal power supply filter < 9.5 Amps @ 24 V typical -30 to +60° C IP67 Per MIL STD 810F	
protected at Current@24 V Operating Terr Water Vibration/Sho	for 24 volt vehicle syst ad 461 compliant DC-E DC nominal aperature ck/Humidity ) Inches	tems batteries; MIL-STD 1275 DC internal power supply filter < 9.5 Amps @ 24 V typical -30 to +60° C IP67 Per MIL STD 810F 30 x 60 x 11.17 in.	

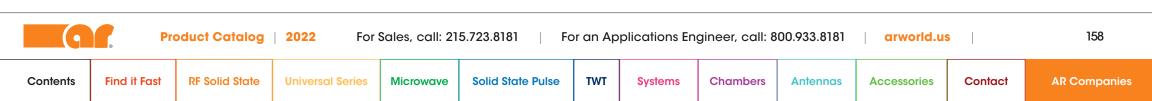
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### **AR Modular RF: Military Products**

### **AR-125R** 30 – 512 MHz 125 W



Power Output	125 watts CW typical
Frequency Range	30 MHz – 512 MHz
Input Power 10 watts typica	al, up to 20W without damage
SATCOM Rx LNA	External/KMW2030P
SATCOM Rx LNA Gain/Noise Figure	e 12 dB/2 dB typical
SATCOM Rx Co-site Filter	N/A
Modulation AM/FM/PM, SINCGAR	S, HPW, HAVEQUICK, DAMA, IW, SRW and ANW2, plus others
	oower: 100-240 VAC, 50-60 Hz (approx. 650 watts @ 24 VDC)
Current@24 VDC nominal	27 Amps typicall
Operating Temperature	-30 to +60° C (ambient)
Water	No
Vibration/Shock/Humidity	Per MIL-STD-461
Size (HxWxD) Inches	3.5 x 19 x 24 in.
Weight	~ 25 lb.
JITC Certified	No
GSA Schedule	Yes



AR Modular RF: Commercial Products

AR-5010 30 MHz - 88 MHz 500 W CW/PEP



**Basic Communications** 

Lightweight, 19-in., 2U rack mount

Ethernet remote control





Base Platform for Quick Customizations	
Class A or Class AB	
Lightweight 19-in., 2U rack mount	
Ethernet remote control	

### Subsystems for Integration



Custom packaging	
Engineered to customer specifications	
Sub-octave and multi-octave designs	

### **Physics Applications**



Custom frequency band
Highly repeatable performance unit to unit
Multiple calibrated monitoring ports
Highly reliable for long-term 24/7 use

AR-5030/AR-5030C2 700 MHz - 960 MHz 80 W CW/PEP



Shipboard Communications

Lightweight, 19-in., 2U Rack Mount

Ethernet remote control

Modules for OEMs and Integration 10 kHz - 6 GHz



High- and low-gain power amplifier modules

Mini-system PA modules with ALC and interfaces

Communication Systems Up to 1000 W output



VHF/UHF band operation
24/7 operation capable
Repeatable performance unit to unit for field interchangeability

Single-phase and three-phase AC power capable from same unit



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**Universal Series** 

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Accessories

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**RF Solid State** 

Microwave So

Solid State Pulse

TWT Systems

Chambers Antennas

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Rack Mount Amplifiers					
Model	Frequency Response	Maximum Output Power (W)			
KAA1020	10 kHz – 230 MHz	25			
KAW1080	10 kHz – 1000 MHz	25			
KAA5170P	500 kHz – 5.5 MHz	1000 Pulse			
KAA2030	500 kHz – 40 MHz	200			
KAA2020	500 kHz – 100 MHz	100			
KAW1020	500 kHz – 1000 MHz	5			
KAA4020	1 – 50 MHz	500			
KAA4021P	1 – 50 MHz	300 Pulse			
KAW1050	1 – 400 MHz	25			
KAW1040	1 – 512 MHz	20			
KAA3020	2 – 32 MHz	100			
AR-5010	30 – 88 MHz	500			
KAA2070-M11	70 – 76 MHz	300			
AR-5000	80 - 1000 MHz (Call factory for details)	100 - 500			
KAW5030	100 – 400 MHz	200			
KAW2040	100 – 500 MHz	100			
KAW2300	100 – 1000 MHz	100			
KAW2020	200 – 500 MHz	100			
KAW2100-M2	200 – 500 MHz	200			
KAW2020-M16	220 – 245 MHz	100			
KAW5050	225 – 400 MHz	1000 PEP, 500 CW			
KAW4040-M12	390 – 410 MHz	500			
KAA2030-M11	500 kHz	300			
AR-5030	700 – 960 MHz	80			
AR-5030C2	700 – 960 MHz	80			
KAA2026	700 kHz – 3 MHz	125			

Amplifier Modules					
Model	Frequency Response	Maximum Output Power (W)			
KMA2020	10 kHz - 230 MHz	100			
KMA2040-M25	100 KHz – 50 MHz	100-500			
KMA1040	200 KHz – 50 MHz	50			
KMA2040	500 kHz – 40 MHz	200			
KMA2040-M12	500 kHz – 40 MHz	200			
KMA2040P	500 kHz – 40 MHz	200 (CW)			
KMW1020	500 kHz – 512 MHz	10			
KMW1060	1 – 512 MHz	20			
KMA2040-M22	2 – 30 MHz	200 CW, 250 Peak			
KMA4040	30 – 40 MHz	400			
KMW2026-M5	30 – 512 MHz	30			
KMW2026-M20	30 – 512 MHz	100-200			
KMW2025	30 – 512 MHz	100-200 CW, 500 Pulse			
KMA1001	225 – 400 MHz	1			
KMW2040-M17	225 – 400 MHz	100			
KMW2040-LTE	225 – 400 MHz	100 CW, 125 Peak			
KMW2026-M15	225 – 450 MHz	40			
KMW2026-M26	291 MHz	60			



### At AR, we are committed to a sustainable future.

T

Over the last decade, we have worked hard to continuously improve our product efficiency and reliability. Our products are more energy efficient than ever. This increased efficiency not only improves the product's operational life but also lowers the user's energy consumption. Our goal is to achieve zero environmental footprint without compromising strength or quality. We are focused on innovative solutions that meet footprint without compromising hard to make a positive impact on the world.

#### Repair it.

If your equipment is in need of some extra care to fix a problem, we are here to help.<sup>1</sup> All our products come with a limited warranty and are designed with easy maintenance in mind. Our global network of AR certified repair locations aims at minimizing downtime and restoring product life. Contact us by email or phone for help.

#### Trade it in.

Trade in your eligible equipment when you purchase a new product. AR Trade In is a way to exchange your old equipment for credit, so that you can offset the purchase price of your new one.<sup>2</sup> If your equipment isn't eligible for credit, we'll

recycle it free of charge. It's a win for you and the planet.

1. In the US, contact AR's Customer Service Department at 215.723275 or service@arworld.us. Outside of the US, contact the AR distributor nearest you.

2. Trade-in values vary based on condition, year, and model eligibility. When we receive your equipment at our factory site in Souderton, PA, it will be thoroughly inspected to determine if it can be reused or recycled. The trade in value is determined by AR at its sole discretion.





**KUMMEN** 

# AR's Competitive Edge

At AR, there's no substitute for customer responsiveness. It's the foundation of our business and the AR value that's recognized around the globe. It's one of the key reasons AR has become the worldwide leader in EMC, wireless and beyond.

AR products do more, last longer, work harder, and make your job easier. And that gives you a fierce competitive edge. Only AR delivers innovative technology, advanced design, quality build and workmanship, mismatch capability, durability and longevity, less cost per watt, and a worldwide support network that's here for you today and tomorrow. With the combined resources of all the AR companies, we simply have more of the best people making the products to overcome your toughest challenges.

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- RF & Microwave Solid State Amplifiers ranging from: 1-50000 watts, 10 Hz 50 GHz
- Antennas to 15000 watts input power, 10 kHz 50 GHz
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- Multi-tone test systems
- Field measuring equipment
- EMC test software
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- · Positioning equipment
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AR RF/Microwave Instrumentation is ISO Certified.



**G** Global Promise

The AR warranty is more than just a warranty, it's a promise, backed by a knowledgeable support team that's always there for you to help solve any problems and answer any questions, today and tomorrow. AR warrants its amplifiers, antennas, test systems, power meters, field monitoring equipment, conducted immunity generators, couplers and tripods to be free of defects in materials and workmanship for a period of three years from date of shipment. Vacuum, traveling wave tubes and powerheads carry a one year warranty.

Want to know more about AR? Need help with any RF solutions or testing procedures?

Here's how to reach AR and get all the help you need: www.arworld.us