SRC HAVERHILL
a division of WINCHESTER

SRC HAVERHILL

RF & MICROWAVE CABLE ASSEMBLY SOLUTIONS

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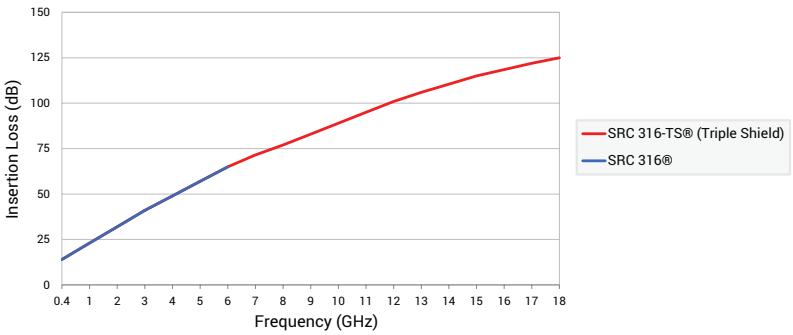
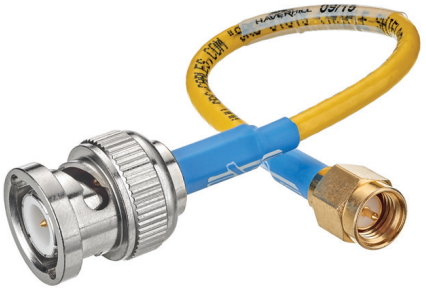
SRC HAVERHILL CABLE ASSEMBLIES

SRC 316® AND SRC 316-TS® TRIPLE-SHIELD

- 90 dB to 110 dB Shielding vs. 40 dB
- 20% Lower loss and twice as flexible
- Replaces Standard Mil-C-17 316, 174, 188
- Pre-treated, cross-linked dielectric
- Ideal for test cables and instrumentation

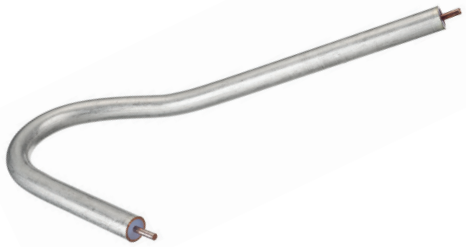




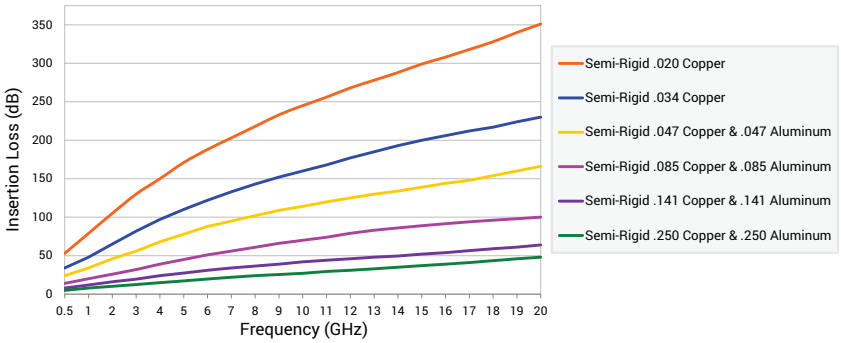
	CABLE SERIES			
ELECTRICAL DATA	SRC 316		SRC 316-TS (TRIPLE SHIELD)	
Impedance Ohm	50		50	
Capacitance pF/ft @ 1 GHz	29		29	
Velocity of Propagation	71%		71%	
Shielding dB	90		110	
Max Voltage VRMS	1500		1500	
Halogen	Passes IEC 754		Passes IEC 754	
MECHANICAL DATA				
Center Conductor	Silver Plated Copper		Silver Plated Copper	
Dimension-inches (mm)	.020	(.51)	.020	(.51)
Dielectric	Cellular X-Linked High Density Polyolefin		Cellular X-Linked High Density Polyolefin	
Shield 1	Al Mylar Tape	.003 (.076)	Al Mylar Tape	.003 (.076)
Shield 2	SC	97% coverage	SC	97% coverage
Shield 3			SC	97% coverage
Jacket	PVC (White)	.099 Outer Diameter	PVC (Yellow)	.120 Outer Diameter.
Bend Radius-inches	.25		.3	
ENVIRONMENTAL DATA				
Temperature Range °C	-40 +105		-40 +105	
Flame Rating	UL 1581		UL 1581	
FREQUENCY	INSERTION LOSS (dB/100 FT)			
400 MHz	14.8		14.6	
900 MHz	22		21.8	
2 GHz	34.8		34.6	
6 GHz	64.8		64.5	
12 GHz	na		97.7	
18 GHz	na		125.8	
FREQUENCY	AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL			
400 MHz	60		60	
900 MHz	50		50	
2 GHz	20		20	
6 GHz	10		10	
12 GHz	na		10	
18 GHz	na		10	

SEMI-RIGID CABLE/CABLE ASSEMBLIES

- Excellent power handling and electrical performance
- Superior choice for tactical and shock or vibration applications
- Precision CNC cutting and machining to .002 in tolerance for phase matching
- Copper or Aluminum shield (30% less weight, similar performance)
- Factory offers various plating options for copper tubing



SEMI-RIGID ATTENUATION IN dB/100 FT.

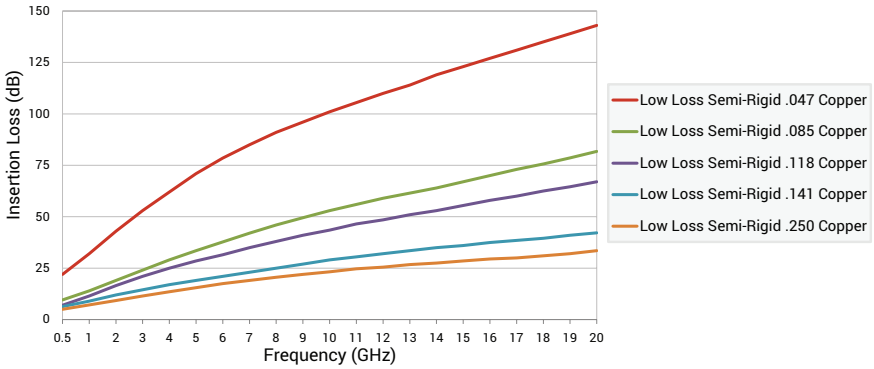


	CABLE SERIES								
ELECTRICAL DATA	.020	.034	.047	.085	.141	.250	.047	.085	.141
Impedance Ohm	50	50	50	50	50	50	50	50	50
Capacitance pF/ft @ 1 GHz	29	29	29	29	29	29	29	29	29
Max Voltage VRMS	750	2000	2000	5000	5000	7500	2000	5000	5000
Cutoff Frequency	270 GHz	155 GHz	110 GHz	61 GHz	34 GHz	20 GHz	110 GHz	61 GHz	34 GHz
MECHANICAL DATA									
Shield	Bare Copper	Bare Copper	Bare Copper	Bare Copper	Bare Copper	Bare Copper	SnPlateAl	SnPlateAl	SnPlateAl
Center Conductor	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel
Dimension-inches (mm)	.0044 (.112)	.008 (.203)	.011 (.288)	.020 (.51)	.026 (.91)	.064 (1.62)	.011 (.288)	.020 (.51)	.026 (.91)
Dielectric	PTFE .015	PTFE .026	PTFE .037	PTFE .066	PTFE .116	PTFE .209	PTFE .037	PTFE .066	PTFE .116
Bend Radius-inches	.05	.05	.05	.1	.15	.5	.05	.1	.15
Cable Outer Diameter-inches (mm)	.020 (.508)	.034 (.864)	.047(1.19)	.085 (2.16)	.141 (3.58)	.250 (6.35)	.047 (1.19)	.085 (2.16)	.141 (3.58)
ENVIRONMENTAL DATA									
Temperature Range °C	-55/+85	-55/+100	-55/+100	-55/+125	-55/+125	-55/+125	-55/+100	-55/+125	-55/+125
FREQUENCY				INSERTION LOSS (dB/100 FT)					
.5 GHz	53	34	24	14	8	5	26	15	8.3
1 GHz	76	48	34	20	11	7.5	37	21	12.1
5 GHz	171	110	79	46	28	21	85	49	30.1
10 GHz	245	159	114	68	42	33	122	72	45.4
20 GHz	351	230	166	100	64	48	177	107	70
FREQUENCY				AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL					
.5 GHz	20	36	81	232	601	2100	85	241	600
1 GHz	14	25	57	162	418	1400	60	169	450
5 GHz	6	11	25	70	174	875	27	73	180
10 GHz	5	8	17	48	118	350	18	50	120
20 GHz	3	5	12	33	78	200	13	34	70

LOW LOSS AND PHASE STABLE SEMI-RIGID CABLE/CABLE ASSEMBLIES

- Low density PTFE dielectric gives superior low-loss performance
- Higher temperature range, better power handling, and more phase stable than standard semi-rigid
- Available with high performance connectors
- Factory offers various plating options for copper tubing

LOW LOSS, PHASE STABLE SEMI-RIGID ATTENUATION IN dB/100 FT.



	CABLE SERIES				
ELECTRICAL DATA	.047	.085	.118	.141	.250
Impedance Ohm	50	50	50	50	50
Velocity of Propagation	83%	83%	83%	83%	83%
Capacitance pF/ft @ 1 GHz	24.5	24.5	24.5	24.5	24.5
Max Voltage VRMS	2000	2500	3000	5000	7500
Cutoff Frequency	118 GHz	60 GHz	46 GHz	36 GHz	20 GHz
MECHANICAL DATA					
Shield	Bare Copper	Bare Copper	Bare Copper	Bare Copper	Bare Copper
Center Conductor	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper
Dimension-inches (mm)	.013 (.323)	.023 (.571)	.032 (.813)	.046 (1.156)	.074 (1.88)
Dielectric	LD PTFE Tape .0375	LD PTFE Tape .066	LD PTFE Tape .097	LD PTFE Tape .120	LD PTFE Tape .209
Bend Radius-inches	.125	.250	.400	.500	1.000
Cable Outer Diameter-inches (mm)	.047 (1.24)	.085 (2.18)	.118 (2.30)	.141 (3.58)	.250 (6.35)
ENVIRONMENTAL DATA					
Temperature Range ºC	-55/+200	-55/+200	-55/+200	-55/+200	-55/+200
FREQUENCY		INSERTION LOSS (dB/100 FT)			
.5 GHz	22	9.57	7	6.3	5
1 GHz	31	13.9	12	9	7.1
5 GHz	71	34.6	28	20.5	16.2
10 GHz	100	52.6	41	29.3	23.2
20 GHz	143	81.8	67	42.2	33.5
FREQUENCY		AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL			
.5 GHz	124	341	634	900	2716
1 GHz	88	242	446	622	1902
5 GHz	39	108	200	269	818
10 GHz	27	77	144	186	562
20 GHz	19	58	96	126	348

VORTEX ULTRA LOW LOSS PHASE STABLE FLEXIBLE CABLE ASSEMBLIES

CABLE ASSEMBLIES ATTRIBUTES

- Cable assemblies are 100% tested for Insertion Loss and VSWR
- Designed for Low structural VSWR, which reduces variations in attenuation and phase compared to lower VoP cable assemblies
- Our global engineering team is available to assist in solving your technical requirements
- Certified soldered cable assemblies per IPC/WHMA-A-620
- Connector interfaces meet MIL-STD-348
- Connectors meet the environmental specifications of MIL-PRF-39012
- Cable and Connector Retention: Meets MIL-T-81490 and MIL-C-87104
- Torque Resistance: Meets MIL-T-81490 and MIL-C-87104
- Flexure Life: Meets MIL-C-87104
- Standard and ruggedized cable assemblies available
- Connector Mating Durability: 500 cycles minimum per MIL-PRF-39012
- Phase matched cable assemblies available

CONNECTOR MATERIALS

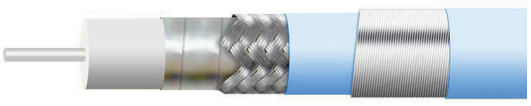
- Outer Bodies: Passivated Stainless Steel
- Inner Bodies: Passivated Stainless Steel
- Contacts: Gold Plated
- Insulators: PTFE and PLTFE

AVAILABLE CONNECTOR INTERFACES

- 2.4, 2.9, SMA, TNC, and Type N
- Connectors are available with or without lock wire holes

STANDARD CABLE CONSTRUCTION

RUGGEDIZED CABLE CONSTRUCTION



SRC-140/210 CABLE SPECIFICATIONS

	CABLE SERIES	
ELECTRICAL DATA	SRC-140	SRC-210 (Ruggedized)
Max Frequency (GHz)	50	50
Impedance	50 Ohms	50 Ohms
Velocity of Propagation	83% Nominal	83% Nominal
Time Delay (ns/ft)	1.22	1.22
Capacitance (pF/ft)	24	24
VSWR (cable only)	<1.15:1	<1.15:1
Attenuation	See Information Below	See Information Below
Average Power	See Information Below	See Information Below
RF Shielding (dB) to 18 GHz	>90	>90
MECHANICAL DATA		
Cable Outer Diameter-inches	.140	.210
Jacket Color	Blue	Blue
Jacket Material	FEP	FEP
Dielectric	EPTFE	EPTFE
Cable and Connector Retention	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
Torque Resistance	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
Internally Ruggedized	No	Yes
Crush Resistance	Meets MIL-T-81490 and MIL-C-87104	Exceeds MIL-T-81490 and MIL-C-87104 >150 Pounds per Linear Inch
Flexure Life	Meets MIL-C-87104	Meets MIL-C-87104
Bend Radius-inches	.5	.5
Weight (lbs per 100 ft)	1.9	4.6
ENVIRONMENTAL DATA		
Temperature Range ºC	-65 to +165	-65 to +165
Custom/Special Operating Temperature Range ºC	-65 to +200	-65 to +200
Flame Rating	UL94 V-0	UL94 V-0

FREQUENCY	INSERTION LOSS (dB/foot)	AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL
.04 GHz	.075	550
1 GHz	.120	450
2 GHz	.170	300
4 GHz	.240	225
8 GHz	.350	150
12 GHz	.440	120
18 GHz	.560	100
26 GHz	.690	80
32 GHz	.780	71
40 GHz	.890	60
50 GHz	1.020	50

SRC-150/215 CABLE SPECIFICATIONS

	CABLE SERIES	
ELECTRICAL DATA	SRC-150	SRC-215 (Ruggedized)
Max Frequency (GHz)	40	40
Impedance	50 Ohms	50 Ohms
Velocity of Propagation	83% Nominal	83% Nominal
Time Delay (ns/ft)	1.22	1.22
Capacitance (pF/ft)	24	24
VSWR (cable only)	<1.15:1	<1.15:1
Attenuation	See Information Below	See Information Below
Average Power	See Information Below	See Information Below
RF Shielding (dB) to 18 GHz	>90	>90
MECHANICAL DATA		
Cable Outer Diameter-inches	.150	.210
Jacket Color	Blue	Blue
Jacket Material	FEP	FEP
Dielectric	EPTFE	EPTFE
Cable and Connector Retention	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
Torque Resistance	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
Internally Ruggedized	No	Yes
Crush Resistance	Meets MIL-T-81490 and MIL-C-87104	Exceeds MIL-T-81490 and MIL-C-87104 >150 Pounds per Linear Inch
Flexure Life	Meets MIL-C-87104	Meets MIL-C-87104
Bend Radius-inches	.5	.5
Weight (lbs per 100 ft)	2.3	4.9
ENVIRONMENTAL DATA		
Temperature Range °C	-65 to +165	-65 to +165
Custom/Special Operating Temperature Range °C	-65 to +200	-65 to +200
Flame Rating	UL94 V-0	UL94 V-0

FREQUENCY	INSERTION LOSS (dB/foot)	AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL
.04 GHz	.070	600
1 GHz	.110	500
2 GHz	.160	370
4 GHz	.220	260
6 GHz	.270	210
8 GHz	.320	180
12 GHz	.390	150
18 GHz	.490	120
26 GHz	.590	100
32 GHz	.660	95
40 GHz	.750	75

SRC-190/260 CABLE SPECIFICATIONS

	CABLE SERIES	
ELECTRICAL DATA	SRC-190	SRC-260 (Ruggedized)
Max Frequency (GHz)	26.5	26.5
Impedance	50 Ohms	50 Ohms
Velocity of Propagation	83% Nominal	83% Nominal
Time Delay (ns/ft)	1.22	1.22
Capacitance (pF/ft)	24	24
VSWR (cable only)	<1.15:1	<1.15:1
Attenuation	See Information Below	See Information Below
Average Power	See Information Below	See Information Below
RF Shielding (dB) to 18 GHz	>90	>90
MECHANICAL DATA		
Cable Outer Diameter-inches	.190	.260
Jacket Color	Blue	Blue
Jacket Material	FEP	FEP
Dielectric	EPTFE	EPTFE
Cable and Connector Retention	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
Torque Resistance	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
Internally Ruggedized	No	Yes
Crush Resistance	Meets MIL-T-81490 and MIL-C-87104	Exceeds MIL-T-81490 and MIL-C-87104 >150 Pounds per Linear Inch
Flexure Life	Meets MIL-C-87104	Meets MIL-C-87104
Bend Radius-inches	.500	.500
Weight (lbs per 100 ft)	3.7	9.3
ENVIRONMENTAL DATA		
Temperature Range °C	-65 to +165	-65 to +165
Custom/Special Operating Temperature Range °C	-65 to +200	-65 to +200
Flame Rating	UL94 V-0	UL94 V-0

FREQUENCY	INSERTION LOSS (dB/foot)	AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL
.04 GHz	.05	1000
1 GHz	.08	800
2 GHz	.12	550
4 GHz	.16	400
8 GHz	.23	290
10 GHz	.26	250
12 GHz	.29	220
14 GHz	.32	210
16 GHz	.34	200
18 GHz	.36	195
26.5 GHz	.44	175

SRC-224/290 CABLE SPECIFICATIONS

	CABLE SERIES	
ELECTRICAL DATA	SRC-224	SRC-290 (Ruggedized)
Max Frequency (GHz)	18	18
Impedance	50 Ohms	50 Ohms
Velocity of Propagation	83% Nominal	83% Nominal
Time Delay (ns/ft)	1.22	1.22
Capacitance (pF/ft)	24	24
VSWR (cable only)	<1.15:1	<1.15:1
Attenuation	See Information Below	See Information Below
Average Power	See Information Below	See Information Below
RF Shielding (dB) to 18 GHz	>90	>90
MECHANICAL DATA		
Cable Outer Diameter-inches	.224	.290
Jacket Color	Blue	Blue
Jacket Material	FEP	FEP
Dielectric	EPTFE	EPTFE
Cable and Connector Retention	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
Torque Resistance	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
Internally Ruggedized	No	Yes
Crush Resistance	Meets MIL-T-81490 and MIL-C-87104	Exceeds MIL-T-81490 and MIL-C-87104 >150 Pounds per Linear Inch
Flexure Life	Meets MIL-C-87104	Meets MIL-C-87104
Bend Radius-inches	.750	.750
Weight (lbs per 100 ft)	4.8	10.1
ENVIRONMENTAL DATA		
Temperature Range °C	-65 to +165	-65 to +165
Custom/Special Operating Temperature Range °C	-65 to +200	-65 to +200
Flame Rating	UL94 V-0	UL94 V-0

FREQUENCY	INSERTION LOSS (dB/foot)	AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL
.04 GHz	.038	1300
1 GHz	.061	1100
2 GHz	.087	800
4 GHz	.125	520
6 GHz	.155	450
8 GHz	.180	380
10 GHz	.203	350
12 GHz	.224	310
14 GHz	.244	300
16 GHz	.263	280
18 GHz	.280	270

SRC-305/380 CABLE SPECIFICATIONS

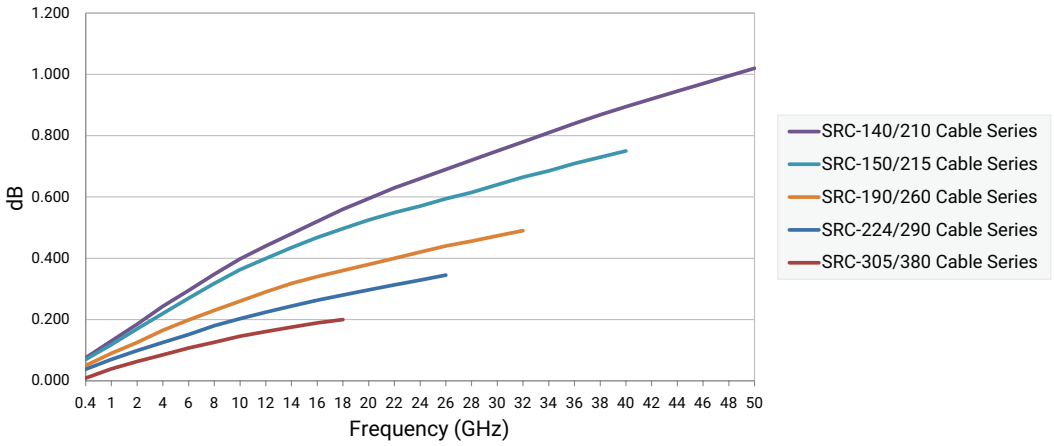
	CABLE SERIES	
ELECTRICAL DATA	SRC-305	SRC-380 (Ruggedized)
Max Frequency (GHz)	18	18
Impedance	50 Ohms	50 Ohms
Velocity of Propagation	83% Nominal	83% Nominal
Time Delay (ns/ft)	1.22	1.22
Capacitance (pF/ft)	24	24
VSWR (cable only)	<1.15:1	<1.15:1
Attenuation	See Information Below	See Information Below
Average Power	See Information Below	See Information Below
RF Shielding (dB) to 18 GHz	>90	>90
MECHANICAL DATA		
Cable Outer Diameter-inches	.305	.380
Jacket Color	Blue	Blue
Jacket Material	FEP	FEP
Dielectric	EPTFE	EPTFE
Cable and Connector Retention	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
Torque Resistance	Meets MIL-T-81490 and MIL-C-87104	Meets MIL-T-81490 and MIL-C-87104
Internally Ruggedized	No	Yes
Crush Resistance	Meets MIL-T-81490 and MIL-C-87104	Exceeds MIL-T-81490 and MIL-C-87104 >150 Pounds per Linear Inch
Flexure Life	Meets MIL-C-87104	Meets MIL-C-87104
Bend Radius-inches	1.0	1.0
Weight (lbs per 100 ft)	8.2	16.5
ENVIRONMENTAL DATA		
Temperature Range °C	-65 to +165	-65 to +165
Custom/Special Operating Temperature Range °C	-65 to +200	-65 to +200
Flame Rating	UL94 V-0	UL94 V-0

FREQUENCY	INSERTION LOSS (dB/foot)	AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL
.04 GHz	.009	2500
1 GHz	.044	1900
2 GHz	.063	1350
4 GHz	.090	900
6 GHz	.110	750
8 GHz	.130	650
10 GHz	.146	600
12 GHz	.161	580
14 GHz	.175	550
16 GHz	.188	525
18 GHz	.200	450

VORTEX ATTENUATION, AVERAGE POWER, AND PHASE VS. TEMPERATURE

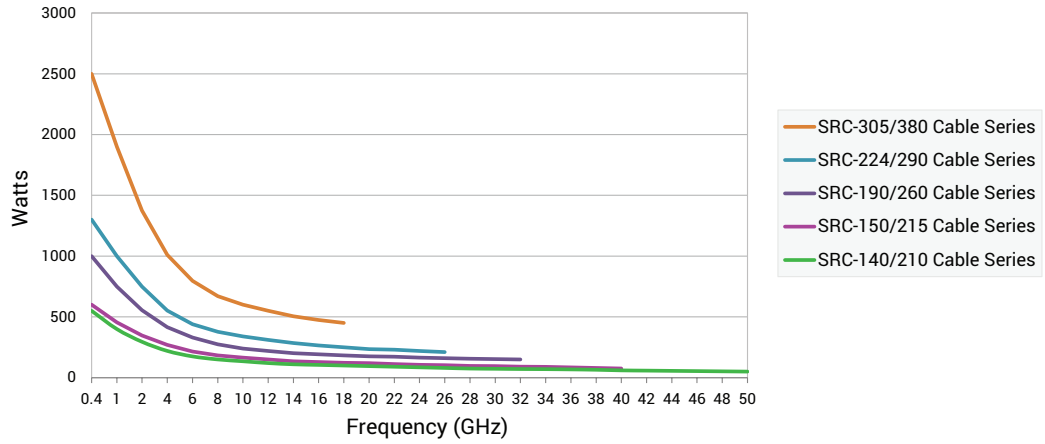
ATTENUATION IN dB/foot

140, 210, 150, 215, 190, 260, 224, 290, 305, 380 Series Cable



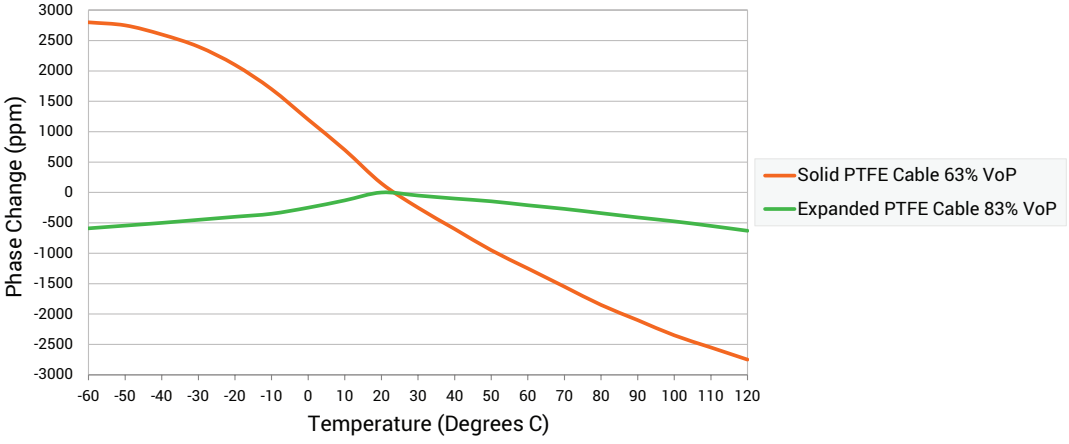
AVERAGE CABLE POWER, 20 DEGREES C AT SEA LEVEL

140, 210, 150, 215, 190, 260, 224, 290, 305, 380 Series Cable



PHASE VS TEMPERATURE RELATIONSHIP

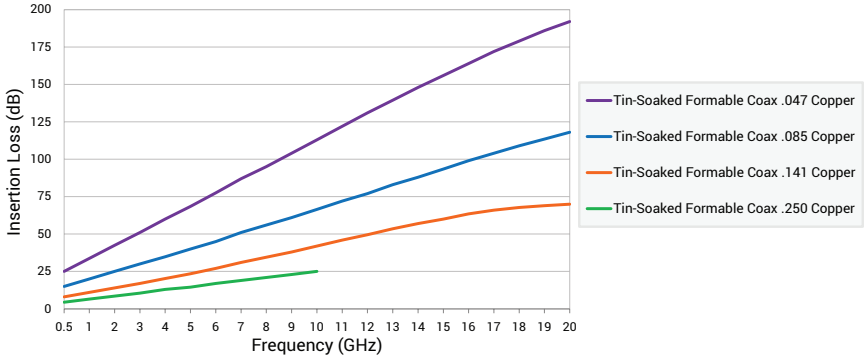
140, 210, 150, 215, 190, 260, 224, 290, 305, 380 Series Cable



TIN-SOAKED FORMABLE COAX CABLE ASSEMBLIES

- Excellent electrical performance – better power handling
- Durable, pre-treated PTFE dielectric and phase stable characteristics
- Hand formable is ideal for prototypes or as an alternative to semi-rigid
- Wide selection of connectors suitable for most applications

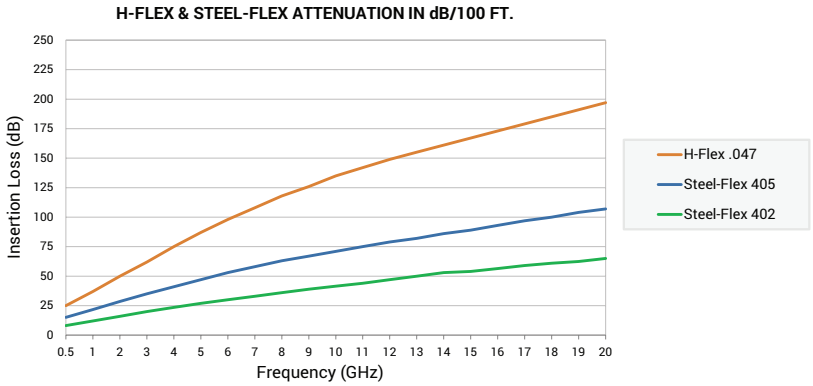
COMFORMABLE COAX ATTENUATION IN dB/100 FT.

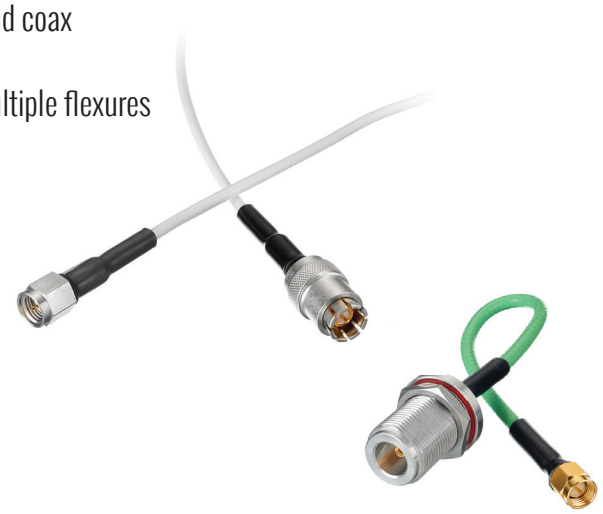


	CABLE SERIES			
ELECTRICAL DATA	.047	.085	.141	.250
Impedance Ohm	50	50	50	50
Capacitance pF/ft @ 1 GHz	30	29.5	29.3	29.6
Velocity of Propagation	70%	70%	70%	70%
Max Voltage VRMS	1000	1500	1900	5000
Frequency Range	DC to 20 GHz	DC to 20 GHz	DC to 20 GHz	DC to 18 GHz
MECHANICAL DATA				
Center Conductor	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper	Silver Plated Copper
Dimension-inches (mm)	.007 (.18)	.020 (.51)	.036 (.91)	.065 (1.65)
Dielectric	PTFE .033	PTFE .066	PTFE .116	PTFE .209
Jacket	Cu/Sn Composite	Cu/Sn Composite	Cu/Sn Composite	Cu/Sn Composite
Bend Radius-inches	.125	.125	.250	.375
Cable Outer Diameter-inches (mm)	.047 (1.19)	.085 (2.16)	.141 (3.58)	.250 (6.35)
ENVIRONMENTAL DATA				
Temperature Range °C	-65 +150	-65 +150	-65 +150	-65 +150
FREQUENCY		INSERTION LOSS (dB/100 FT)		
.5 GHz	25	15	8	4.4
1 GHz	36	20.8	12	6.7
5 GHz	128	74	45	27
10 GHz	162	95	65	36
20 GHz	192	118	70	NA
FREQUENCY		AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL		
.5 GHz	45	180	600	1900
1 GHz	32.5	130	450	1400
5 GHz	13	35	120	350
10 GHz	11	26	88	200
20 GHz	10.5	20	70	NA

H-FLEX AND STEELFLEX FLEXIBLE ALTERNATIVE FOR RG405/RG402

- Flexible alternative for 047 (HF-047), 085 (405) and 141 (402) semi-rigid coax
- Low cost with good electrical performance 110 dB Shielding
- .25 in (HF-047), .5 in (405) and .8 in (402) bend radius, stable after multiple flexures
- Custom, armorized metal boots & PVC shrink for durable solder joints



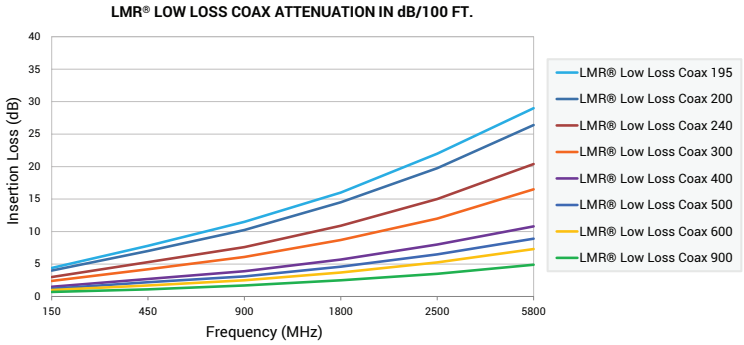


	CABLE SERIES		
ELECTRICAL DATA	HF 047	405	402
Impedance Ohm	50	50	50
Capacitance pF/ft @ 1 GHz	20.4	29.4	29.4
Max Voltage VRMS	500	2,000	5,000
Frequency Range	40 GHz	.05 to 63 GHz	.05 to 34 GHz
Shielding	>110	>110	>110
Max Structural VSWR @ 18 GHz	1.20:1	1.20:1	1.20:1
MECHANICAL DATA			
Center Conductor	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel
Dimension-inches (mm)	.0013	.020 (.51)	.037 (.91)
Dielectric	PTFE .037	PTFE .064	PTFE .117
Jacket	FEP .067	FEP .104	FEP .163
Bend Radius-inches	.4	.5	.8
ENVIRONMENTAL DATA			
Temperature Range °C	-55 +125	-55 +200	-55 +200
FREQUENCY		INSERTION LOSS (dB/100 FT)	
1 GHz	45	19.2	11.2
5 GHz	90	45.7	27
10 GHz	138	67.5	41
18 GHz	182	95.1	58
40 GHz	222	154.3	67
60 GHz	328	191	na
FREQUENCY	AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL		
1 GHz	43	130	620
5 GHz	19	50	220
10 GHz	12	40	150
18 GHz	8	20	120
40 GHz	4	10	28
60 GHz	2	10	na

TIMES MICROWAVE LMR™ LOW-LOSS COAX FOR WIRELESS APPLICATIONS

LMR Jacket Options

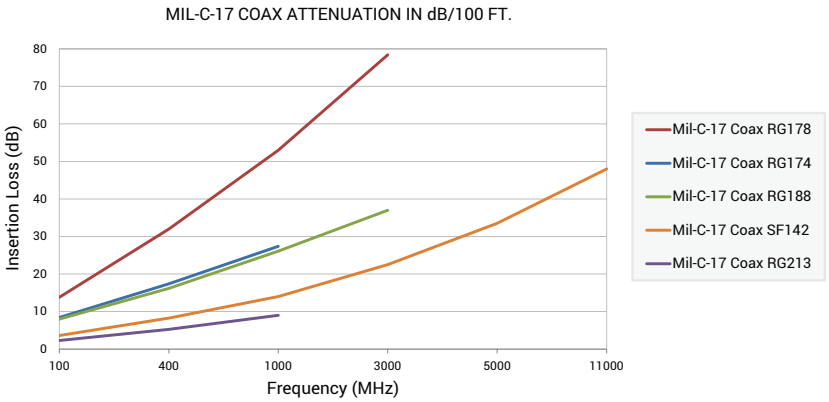
- "d" Foil/braid w/waterproofing compound around the foil/braid
- "f" Non-halogen, low smoke, "CMP/MPP" and CSA 'FT4' rated
- "r" Fire retardant, PVC, less expensive alternative to 'f'
- "p" PVC jacket, more flexible than PE jacket (also available in white)



	CABLE SERIES							
ELECTRICAL DATA	195	200	240	300	400	500	600	900
Impedance Ohm	50	50	50	50	50	50	50	50
Capacitance pF/ft @ 1 GHz	24.3	24.5	24.2	24.1	23.9	23.6	23.4	23.4
Velocity of Propagation	80%	83%	84%	85%	85%	86%	87%	87%
Max Voltage VRMS	1000	1000	1500	2000	2500	3000	4000	5000
Shielding (dB)	>90	>90	>90	>90	>90	>90	>90	>90
Cutoff Frequency (GHz)	41	39	31	24.5	16.2	12.6	10.3	6.9
MECHANICAL DATA								
Center Conductor	Bare Copper	Bare Copper	Bare Copper	Bare Copper	Bare Copper Clad Aluminum	Bare Copper Clad Aluminum	Bare Copper Clad Aluminum	Bare Copper Tube
Dimension-inches (mm)	.037 (.94)	.044 (1.12)	.056 (1.42)	.070 (1.78)	.108 (2.74)	.142 (3.61)	.176 (4.47)	.262 (6.65)
Dielectric	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE	Foam PE
Outer Conductor	Aluminum Tape	Aluminum Tape	Aluminum Tape	Aluminum Tape	Aluminum Tape	Aluminum Tape	Aluminum Tape	Aluminum Tape
Braid	Tinned Cu	Tinned Cu	Tinned Cu	Tinned Cu	Tinned Cu	Tinned Cu	Tinned Cu	Tinned Cu
Jacket	PE (d,f,r,p)	PE (d,f,r,p)	PE (d,f,r,p)	PE (d,f,r,p)	PE (d,f,r,p)	PE (d,f)	PE (d,f)	PE (d,f)
Bend Radius-inches (mm)	.5 (12.7)	.5 (12.7)	.75 (19.1)	.88 (22.2)	1.0 (25.4)	1.25 (31.8)	1.50 (38.1)	3.00 (76.2)
Repeated Bend Radius-inches (mm)	2.0 (50.8)	2.0 (50.8)	2.5 (63.5)	3.0 (76.2)	4.0 (101.6)	5.0 (127.0)	6.0 (152.4)	9.0 (228.6)
Cable Outer Diameter-inches (mm)	.195 (4.95)	.195 (4.95)	.240 (6.10)	.300 (7.62)	.405 (10.29)	.500 (12.7)	.590 (14.99)	.870 (22.10)
ENVIRONMENTAL DATA								
Temperature Range ºC	-40 +85	-40 +85	-40 +85	-40 +85	-40 +85	-40 +85	-40 +85	-40 +85
FREQUENCY				INSERTION LOSS (dB/100 FT)				
150 MHz	4.4	4	3	2.4	1.5	1.2	1	0.7
450 MHz	7.8	7	5.3	4.2	2.7	2.2	1.7	1.2
900 MHz	11.1	9.9	7.6	6.1	3.9	3.1	2.5	1.7
1800 MHz	16	14.2	10.9	8.7	5.7	4.6	3.7	2.5
2500 MHz	19	16.9	12.9	10.4	6.8	5.5	4.4	3
5800 MHz	29.9	26.4	20.4	16.5	10.8	8.9	7.3	4.9
FREQUENCY			AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL					
150 MHz	.39	.45	.60	.92	1.5	1.93	2.4	3.89
450 MHz	.22	.26	.38	.52	.83	1.09	1.35	2.19
900 MHz	.15	.18	.26	.36	.58	.75	.93	1.51
1800 MHz	.22	.13	.18	.25	.40	.52	.63	1.03
2500 MHz	.09	.11	.15	.21	.33	.42	.52	.86
5800 MHz	.06	.07	.10	.13	.21	.26	.32	.52

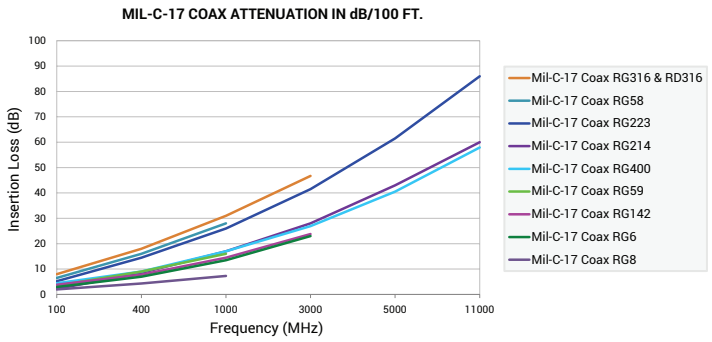
MIL-C-17 COAX CABLE ASSEMBLIES

- Quick turnaround
- Meet all MIL-C-17 requirements
- Factory offers all solder and crimp connectors



	CABLE SERIES				
ELECTRICAL DATA	SF142	RG174	RG178	RG188	RG213
Impedance Ohm	50	50	50	50	50
Capacitance pF/ft @ 1 GHz	29.4	30.8	29.4	29.4	30.8
Velocity of Propagation	69.5%	66%	69.5%	69.5%	66%
Shielding (dB)	90	40	40	40	60
Max Voltage VRMS	1,900	1,500	750	1,200	5,000
Power (Max Freq) Watts	52	26	110	220	320
Cutoff Frequency (MHz)	34,000	1000	3000	3000	1000
MECHANICAL DATA					
Center Conductor	Silver Plated Copper Clad Steel	Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Bare Copper
Dimension-inches (mm)	.037 (.94)	.0189 (.48)	.012 (.30)	.0201 (.50)	.0888 (2.26)
Dielectric	PTFE .116	PE .060	PTFE .033	PTFE .06	PE .285
Jacket	FEP .195	PVC-IIA .110	FEP .071	PTFE .105	PVC-IIA .405
Bend Radius-inches	1	0.5	0.4	0.5	2
ENVIRONMENTAL DATA					
Temperature Range °C	-55 +200	-40 +85	-40 +150	-55 +250	-40 +85
FREQUENCY		INSERTION LOSS (dB/100 FT)			
100 MHz	3.6	8.4	13.8	8	2.3
400 MHz	7.4	17	27.8	16.2	4.8
1000 MHz	12	27.4	44.4	26.1	9
3000 MHz	23	na	78.4	46.7	na
5000 MHz	31	na	na	na	na
11000 MHz	48	na	na	na	na
FREQUENCY		AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL			
100 MHz	1796	68	240	400	1400
400 MHz	864	32	120	275	660
1000 MHz	522	18	75	150	400
3000 MHz	277	na	40	130	na
5000 MHz	202	na	na	na	na
11000 MHz	122	na	na	na	na

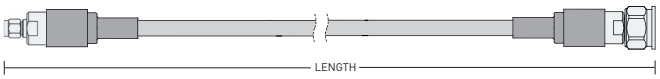
MIL-C-17 COAX CABLE ASSEMBLIES



	CABLE SERIES									
ELECTRICAL DATA	RG6	RG8	RG58	RG59	RG142	RG214	RG223	RG316	RD316	RG400
Impedance Ohm	76	50	50	75	50	50	50	50	50	50
Capacitance pF/ft @ 1 GHz	20.6	29.6	30.8	20.6	29.4	30.8	30.8	29.4	29.4	29.4
Velocity of Propagation	66%	66%	66%	66%	69.5%	66%	66%	69.5%	69.5%	69.5%
Shielding (dB)	40	40	40	40	60	60	60	40	60	40
Max Voltage VRMS	3000	4000	1900	2300	1900	5000	1900	1200	900	1900
Power (Max Freq) Watts	NA	320	90	130	1100	330	86	210	210	1050
Cutoff Frequency (MHz)	3000	1000	1000	1000	8000	11000	12400	3000	3000	12400
MECHANICAL DATA										
Center Conductor	Copper Clad Steel	Bare Copper	Bare Copper	Copper Clad Steel	Silver Plated Copper Clad Steel	Bare Copper	Silver Plated Copper Clad	Silver Plated Copper Clad Steel	Silver Plated Copper Clad Steel	Silver Plated Copper Clad
Dimension-inches (mm)	.0285 (.72)	.088 (2.26)	.032 (.81)	.0226 (.55)	.037 (.94)	.0888(2.26)	.035 (.89)	.021 (.53)	.021 (.53)	.039 (.98)
Dielectric	PE .185	PE .285	PE .116	PE .146	PTFE .116	PE .285	PE .116	PTFE .060	PTFE .060	PTFE .116
Jacket	PVC-II .332	PVC-IIA .405	PVC-I .195	PVC-IIA .242	FEP .195	PVC-IIA .425	PVC-IIA .212	FEP .098	FEP .114	FEP-IX .195
Bend Radius-inches	3	2	1	1.2	1	2.5	1	0.5	0.5	1
ENVIRONMENTAL DATA										
Temperature Range °C	-40+80	-40+80	-40+80	-40+80	-55+200	-40+85	-40+85	-55 +200	-55 +200	-55 +200
FREQUENCY				INSERTION LOSS (dB/100 FT)						
100 MHz	2.9	2	6.5	3.4	3.8	2.2	5.2	8	8	4.4
400 MHz	6.5	4.3	10.2	9	7.8	6.8	12	16.2	16.2	9
1000 MHz	9.8	7.3	28	16	12.8	8	21	26.1	26.1	14.7
3000 MHz	23	na	na	na	23.8	28	40	46.7	46.7	26.9
5000 MHz	na	na	na	na	na	42	58	na	na	36.1
11000 MHz	na	na	na	na	na	60	86	na	na	57.9
FREQUENCY				AVERAGE POWER (Watts) @ 20° C @ SEA LEVEL						
100 MHz	310	100	360	270	1800	990	395	580	580	1,470
400 MHz	150	47	182	130	900	500	196	270	270	710
1000 MHz	90	28	98	80	530	300	120	150	150	430
3000 MHz	50	na	na	na	260	190	70	90	90	230
5000 MHz	na	na	na	na	na	150	55	na	na	170
11000 MHz	na	na	na	na	na	60	20	na	na	100

CABLE ASSEMBLY PART NUMBER

VORTEX ASSEMBLY EXAMPLE



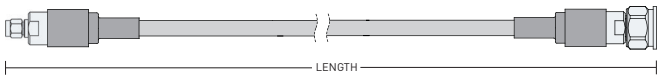
nnn - nnn - nnn nnnn

Note: 1 millimeter equals 0.03937 inches

- nnnn: Length in Inches (24.2" is 0242)
- nnn: Cable Series (SRC-190 cable is 190)
- nnn: Connector 'b' (N male is 257)
- nnn: Connector 'a' (SMA male is 157)

EXAMPLE PART NUMBER	157-257-1900242

STANDARD ASSEMBLY EXAMPLE



nnn - nnn - nnnn

Note: 1 millimeter equals 0.03937 inches

- nnnn: Length in Inches (24.2" is 0242)
- nnn: Connector 'b' (N male is 250)
- nnn: Connector 'a' (SMA male is 150)

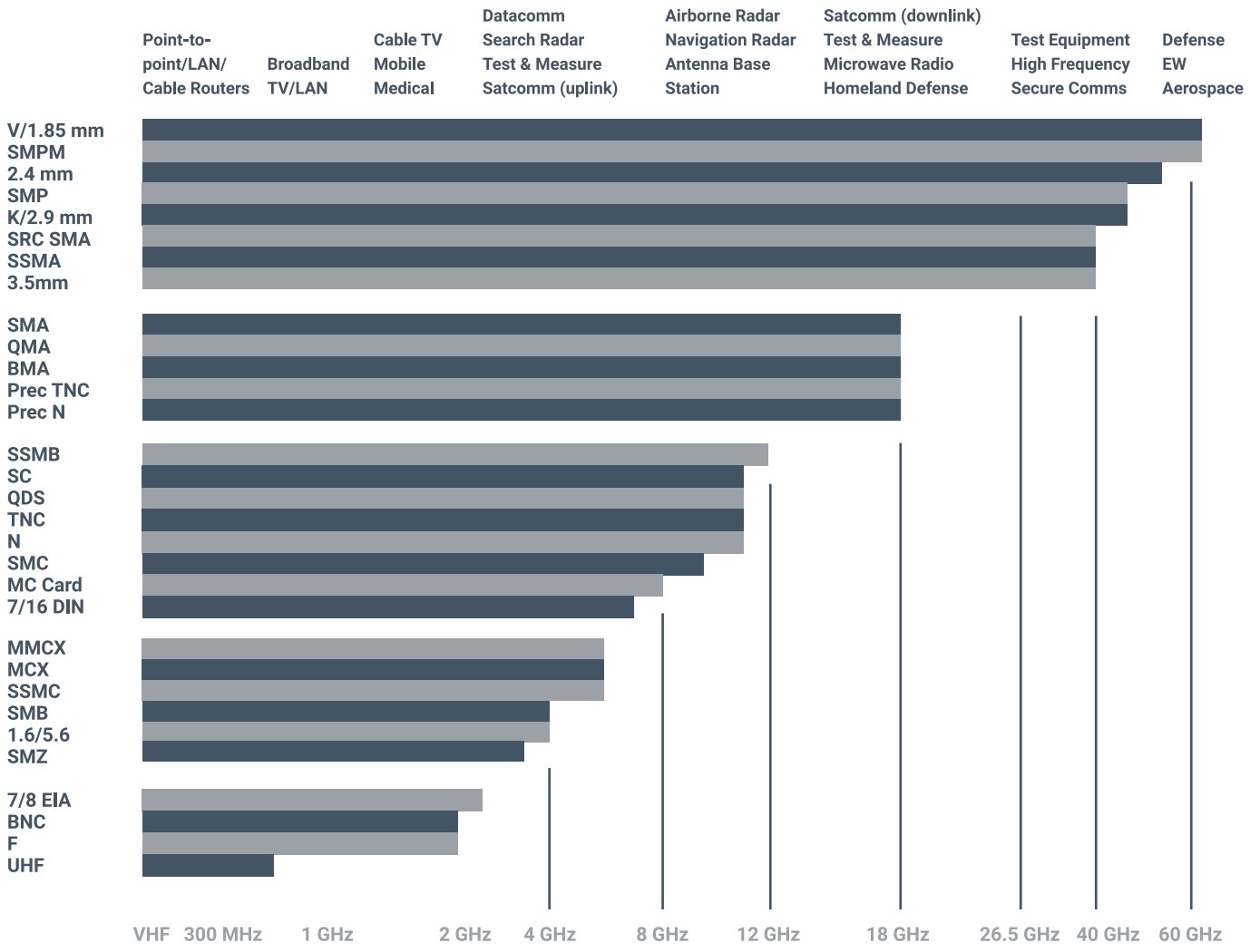
EXAMPLE PART NUMBER	150-250-0242

CONNECTOR TYPE	
SMA	1
N	2
BNC	3
SMB	4
TNC	5
MCX	6
SMC	7
F	8
SMZ	9
SMP	A
SSMA	B
SSMB	C
MMCX	D
2.9mm	E
UHF	F
UHF (mini)	G
SSMC	H
7/16 DIN	J
2.4mm	L
SMPM	M
BLINDMATE	N
1.6/5.6	P
3.5mm	Q
7/8 EIA	R
QMA	S
SC	T
V(1.85mm)	V
MC Card	X
HN	I
SC	T
QC-SMA	R
QC-2.9	K

CONNECTOR STYLE	
Male Straight	50
Male Right Angle	51
Male Low Profile	52
Male Reverse Polarity	53
Male Misc	54
Male Precision	55
With Wire Hole	56
Vortex	57
Female Straight	60
Female Bulkhead	61
Female 4 Hole Flange	62
Female 2 Hole Flange	63
Female Misc	64
Female Right Angle	65
CABLE TYPE	
RG6	06
RG8	17
RG58	58
RG59	59
RG142	86
SF142	91
RG174	00
RG178	99
RD178	11
RG179	85
RD179	92
RG188	18
RG196	68
RG213	13
RG214	14
RG223	23
RG316	83
RD316	84
RG393	39
RG400	44

CABLE TYPE (CONTINUED)	
LMR100	10
LMR195	96
LMR195DB	64
LMR195PVC	95
LMR200	87
LMR240	88
LMR300	73
LMR300DB	65
LMR400	89
LMR400DB	40
LMR500	93
LMR600	90
LMR600DB	62
LMR900DB	07
LMR1200	94
LMR1200DB	12
T-FLEX 401	24
T-FLEX 402	80
T-FLEX 405	82
VORTEX CABLES	
SRC-140	140
SRC-210	210
SRC-150	150
SRC-215	215
SRC-190	190
SRC-260	260
SRC-224	224
SRC-290	290
SRC-305	305
SRC-390	390

SRC CUSTOM CABLES	
HF047	27
HF086	28
HF141	29
SRC-402SF	66
SRC-405SF	67
SRC316	SRC 316
SRC316 Triple Shield	SRC 316TS
SEMI-RIGID	
.020 Copper	22
.034 Copper	36
.047 Copper	47
.047 Conformable	48
.047 Aluminum - Tin Plate	49
.047 Bare Copper	37
.085 Bare Copper	33
.085 Copper - Tin Plate	78
.085 Conformable	98
.085 Conf w/Jacket	05
.085 Aluminum - Tin Plate	77
.116 Copper	16
.141 Copper	76
.141 Conformable	97
.141 Conf w/Jacket	15
.141 Aluminum - Tin Plate	75
.141 Bare Copper	63
.250 Copper	25
.250 Aluminum-Tin Plated	19
.250 Conformable	26
MISCELLANEOUS CABLE TYPES	
.085 75 Ohm	71
1⁄4" Andrews Superflex	20
1⁄2" Andrews Superflex	03
1⁄2" Andrews Foam Helix	02


Point-to-point/LAN/ Cable Routers
Broadband TV/LAN
Cable TV Mobile Medical
Datacomm Search Radar Test & Measure Satcomm (uplink)
Airborne Radar Navigation Radar Antenna Base Station
Satcomm (downlink) Test & Measure Microwave Radio Homeland Defense
Test Equipment High Frequency Secure Comms
Defense EW Aerospace
V/1.85 mm
SMPM
2.4 mm
SMP
K/2.9 mm
SRC SMA
SSMA
3.5mm
SMA
QMA
BMA
Prec TNC
Prec N
SSMB
SC
QDS
TNC
N
SMC
MC Card
7/16 DIN
MMCX
MCX
SSMC
SMB
1.6/5.6
SMZ
7/8 EIA
BNC
F
UHF
VHF
300 MHz
1 GHz
2 GHz
4 GHz
8 GHz
12 GHz
18 GHz
26.5 GHz
40 GHz
60 GHz

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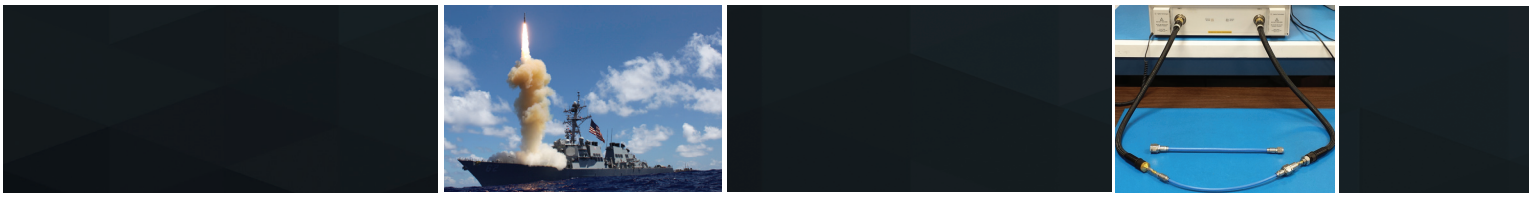

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