MICRO-COAX®
PROVEN RELIABLE

MICROWAVE & RF CABLE

Semi-Rigid, hand-formable & flexible microwave cable

STANDARD STAINLESS STEEL 50 OHM Semi-Rigid CABLES

Stainless steel 50 ohm Semi-Rigid cables are designed for applications where low thermal heat transfer is required such as cryogenic feed cables. Because these cables also utilize a solid PTFE dielectric, they are often the first choice for highly corrosive environments.

Micro-Coax Description		UT-020-SS	UT-020SS-SS	UT-034SS-SS	UT-085-SS	UT-085SS-SS
DIMENSIONS	Units					
Outer Conductor Diameter	inch	0.020 ± 0.001	0.020 ± 0.001	0.034 ± 0.001	0.0865 ± 0.0010	0.0865 ± 0.0010
	millimeter	0.508 ± 0.025	0.508 ± 0.025	0.864 ± 0.025	2.197 ± 0.025	2.197 ± 0.025
Center Conductor Diameter	inch	0.0045 ± 0.0005	0.0045 ± 0.0005	0.0080 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005
	millimeter	0.1143 ± 0.0127	0.1143 ± 0.0127	0.2032 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127
Straight Length (Maximum)	feet	10	10	15	20	20
	meter	3.05	3.05	4.57	6.10	6.10
MATERIALS						
Outer Conductor		304 SS	304 SS	304 SS	304 SS	304 SS
Outer Conductor Plating		None	None	None	None	None
Dielectric		PTFE	PTFE	PTFE	PTFE	PTFE
Center Conductor		SPCW	304 SS	304 SS	SPCW	304 SS
RoHS Compliant		Yes	Yes	Yes	Yes	Yes
MECHANICAL CHARACTERISTICS						
Outer Conductor Integrity Temp.	°C	175	175	200	225	225
Operating Temperature (Max.)	°C	150	150	175	200	200
Inside Bend Radius (Minimum)	inch	0.050	0.250	0.250	0.125	0.250
	millimeter	1.270	6.350	6.350	3.175	6.350
Weight	lbs/100 ft	0.07	0.07	0.20	1.30	1.30
	kg/100 m	0.11	0.11	0.30	1.95	1.95
ELECTRICAL CHARACTERISTICS						
Characteristic Impedance	ohm	50.0 ± 2.0	50.0 ± 2.0	50.0 ± 1.5	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	29.0	29.0	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	500	500	750	1500	1500
Voltage Withstanding	VRMS @ 60 Hz	1200	1200	2100	5400	5400
Higher Order Mode Frequency	GHz	270	270	155	61	61
Attenuation (dB/100 ft, Typical)	0.5 GHz	134.9	389.4	225.2	31.2	88.9
	1.0 GHz	191.0	550.9	318.8	44.4	126.0
	5.0 GHz	429.4	1,234.2	715.1	101.5	284.0
	10.0 GHz	609.7	1,747.8	1,013.7	146.0	404.1
	18.0 GHz	821.8	2,348.8	1,363.9	199.7	545.9
	26.5 GHz	1,001.0	2,853.8	1,658.7	246.2	666.3
	40.0 GHz	1,236.0	3,512.3	2,044.1	308.7	824.8
	50.0 GHz	1,386.2	3,931.3	2,289.8	349.5	926.5
	65.0 GHz	1,587.2	4,489.0	2,617.4	-	-
	90.0 GHz	1,878.9	5,293.4	3,091.1	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	7.6	2.6	8.3	142.7	49.2
	1.0 GHz	5.3	1.8	5.8	100.5	34.7
	5.0 GHz	2.4	0.8	2.6	44.2	15.4
	10.0 GHz	1.7	0.6	1.8	30.9	10.9
	18.0 GHz	1.2	0.4	1.4	22.7	8.1
	26.5 GHz	1.0	0.4	1.1	18.5	6.6
	40.0 GHz	0.8	0.3	0.9	14.8	5.4
	50.0 GHz	0.7	0.3	0.8	13.1	4.8
	65.0 GHz	0.6	0.2	0.7	-	-
	90.0 GHz	0.5	0.2	0.6	-	-

Micro-Coax Description		UT-085B-SS	UT-141-SS	UT-141B-SS
DIMENSIONS	Units			
Outer Conductor Diameter	inch	0.0865 ± 0.0010	0.141 ± 0.001	0.141 ± 0.001
	millimeter	2.197 ± 0.025	3.581 ± 0.025	3.581 ± 0.025
Center Conductor Diameter	inch	0.0201 ± 0.0005	0.0359 ± 0.0010	0.0362 ± 0.0007
	millimeter	0.5105 ± 0.0127	0.9119 ± 0.0254	0.9195 ± 0.0178
Straight Length (Maximum)	feet	20	20	20
	meter	6.10	6.10	6.10
MATERIALS				
Outer Conductor		304 SS	304 SS	304 SS
Outer Conductor Plating		None	None	None
Dielectric		PTFE	PTFE	PTFE
Center Conductor		SP BeCu	SPCW	SP BeCu
RoHS Compliant		Yes	Yes	Yes
MECHANICAL CHARACTERISTICS				
Outer Conductor Integrity Temp.	°C	225	225	225
Operating Temperature (Max.)	°C	200	200	200
Inside Bend Radius (Minimum)	inch	0.250	0.250	0.500
	millimeter	6.350	6.350	12.700
Weight	lbs/100 ft	1.31	3.05	3.06
	kg/100 m	1.97	4.58	4.59
ELECTRICAL CHARACTERISTICS				
Characteristic Impedance	ohm	50.0 ± 1.5	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	1900	1900	1900
Voltage Withstanding	VRMS @ 60 Hz	5400	9600	9600
Higher Order Mode Frequency	GHz	61	34	34
Attenuation (dB/100 ft, Typical)	0.5 GHz	31.2	17.7	17.8
	1.0 GHz	44.4	25.3	25.4
	5.0 GHz	101.5	58.9	59.2
	10.0 GHz	146.0	85.8	86.1
	18.0 GHz	199.7	118.9	119.4
	26.5 GHz	246.2	148.2	148.7
	40.0 GHz	308.7	-	-
	50.0 GHz	349.5	-	-
	65.0 GHz	-	-	-
	90.0 GHz	-	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	142.7	347.1	346.2
	1.0 GHz	100.5	243.6	243.1
	5.0 GHz	44.2	105.7	105.5
	10.0 GHz	30.9	73.1	73.0
	18.0 GHz	22.7	53.1	53.0
	26.5 GHz	18.5	42.9	42.8
	40.0 GHz	14.8	-	-
	50.0 GHz	13.1	-	-
	65.0 GHz	-	-	-
	90.0 GHz	-	-	-