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.

CarlisleIT 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	821.9	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	-	-