Standard Spline Copper 50 ohm Semi-Rigid Cables

Spline Semi-Rigid cables offer the ultimate in low attenuation, better phase stability with temperature, and a higher operating temperature when compared to traditional Semi-Rigid cables. Due to their larger size and minimum bend radius, these cables are typically used for longer assemblies where phase stability is less critical.

CarlisleIT Description		UT-S(3)-250	UT-S(5)-325	UT-S(5)-390	UT-S(5)-500
CarlisleIT Description (Tin Plated)		UT-S(3)-250-TP	UT-S(5)-325-TP	UT-S(5)-390-TP	UT-S(5)-500-TP
Dimensions	**Units**				
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.250 ± 0.002	0.325 ± 0.002	0.390 ± 0.002	0.500 ± 0.002
	millimeter	6.350 ± 0.051	8.255 ± 0.051	9.906 ± 0.051	12.700 ± 0.051
Center Conductor Diameter	inch	0.0870 ± 0.0010	0.1100 ± 0.0010	0.1360 ± 0.0010	0.1740 ± 0.0010
	millimeter	2.2098 ± 0.0254	2.7940 ± 0.0254	3.4544 ± 0.0254	4.4196 ± 0.0254
Straight Length (Maximum)	feet	20	20	20	20
	meter	6.10	6.10	6.10	6.10
Materials					
Outer Conductor		Copper	Copper	Copper	Copper
Outer Conductor Plating		None or Tin	None or Tin	None or Tin	None or Tin
Dielectric		Spline	Spline	Spline	Spline
Center Conductor		SPC	SPC	SPC	SPC
RoHS Compliant		Yes	Yes	Yes	Yes
Mechanical Characteristics					
Outer Conductor Integrity Temp.	°C	250	250	250	250
Operating Temperature (Max.)	°C	250[\1]	250[\1]	250[\1]	250[\1]
Inside Bend Radius (Minimum)	inch	3.000	5.000	5.000	6.000
	millimeter	76.200	127.000	127.000	152.400
Weight	lbs/100 ft	6.75	11.40	17.82	24.89
	kg/100 m	10.13	17.11	26.75	37.37
Electrical Characteristics					
Characteristic Impedance	ohm	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	23.4	23.4	23.4	23.4
	pF/m	76.8	76.8	76.8	76.8
Velocity of Propagation	%	88	88	88	88
Corona Extinction Voltage	VRMS @ 60 Hz	1400	2000	2200	3000
Voltage Withstanding	VRMS @ 60 Hz	6600	8700	9900	13500
Higher Order Mode Frequency	GHz	21	17	14	10
Attenuation (dB/100 ft, Typical)	0.5 GHz	3.4	2.7	2.3	1.7
	1.0 GHz	4.9	3.8	3.3	2.5
	5.0 GHz	11.5	9.0	7.8	6.0
	10.0 GHz	16.7	13.2	11.5	9.0
	18.0 GHz	23.2	-	-	-
	26.5 GHz	-	-	-	-
	40.0 GHz	-	-	-	-
	50.0 GHz	-	-	-	-
	65.0 GHz	-	-	-	-
	90.0 GHz	-	-	-	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	630.0	825.0	1012.3	1304.9
	1.0 GHz	431.0	559.6	682.3	867.8
	5.0 GHz	169.5	213.6	254.7	310.1
	10.0 GHz	109.9	136.1	160.3	190.6
	18.0 GHz	97.7	-	-	-
	26.5 GHz	-	-	-	-
	40.0 GHz	-	-	-	-
	50.0 GHz	-	-	-	-
	65.0 GHz	-	-	-	-
	90.0 GHz	-	-	-	-

[\1] 225 deg C for tin plated outer conductor