

Standard Copper 50 ohm Semi-Rigid Cables

Standard copper 50 ohm Semi-Rigid cables feature low attenuation and VSWR covering the entire microwave spectrum. With numerous connector options available off-the-shelf, this family of cables is one of the most versatile available today. They meet the demands of package density and provide total shielding for elimination of signal loss and noise.

CarlisleIT Description		UT-013	UT-020	UT-034	UT-034-TP	UT-034-SP
MIL-DTL-17 Description		-	-	UT-034-M17	UT-034-TP-M17	-
MIL-DTL-17 Part Number		-	-	M17/154-00001	M17/154-00002	-
Dimensions		Units				
Outer Conductor Diameter	inch	0.013 ± 0.001	0.023 ± 0.001	0.034 ± 0.001	0.034 +0.002/-0.001	0.034 +0.002/-0.001
	millimeter	0.330 ± 0.025	0.584 ± 0.025	0.864 ± 0.025	0.864 +0.051/-0.025	0.864 +0.051/-0.025
Dielectric Diameter	inch	-	-	0.026 ± 0.001	0.026 ± 0.001	-
	millimeter	-	-	0.660 ± 0.025	0.660 ± 0.025	-
Center Conductor Diameter	inch	0.0031 ± 0.0005	0.0050 ± 0.0005	0.0080 ± 0.0005	0.0080 ± 0.0005	0.0080 ± 0.0005
	millimeter	0.0787 ± 0.0127	0.1270 ± 0.0127	0.2032 ± 0.0127	0.2032 ± 0.0127	0.2032 ± 0.0127
Straight Length (Maximum)	feet	10	10	15	15	15
	meter	3.05	3.05	4.57	4.57	4.57
Coiled Length (Maximum) ¹	feet	-	-	25	25	25
	meter	-	-	7.62	7.62	7.62

¹ Add "TYPE" to the part description for coiled lengths, example: UT-034-TYPE

Materials					
Outer Conductor		Copper	Copper	Copper	Copper
Outer Conductor Plating		None	None	None	Tin
Dielectric		PTFE	PTFE	PTFE	PTFE
Center Conductor		SPCW	SPCW	SPCW	SPCW
RoHS Compliant		Yes	Yes	Yes	Yes

Mechanical Characteristics					
Outer Conductor Integrity Temp.	°C	150	150	150	150
Operating Temperature (Max.)	°C	125	125	125	125
Inside Bend Radius (Minimum)	inch	0.050	0.050	0.050	0.050
	millimeter	1.270	1.270	1.270	1.270
Weight	lbs/100 ft	0.03	0.10	0.22	0.22
	kg/100 m	0.05	0.15	0.33	0.33

Electrical Characteristics					
Characteristic Impedance	ohm	50.0 ± 2.0	50.0 ± 2.0	50.0 ± 1.5	50.0 ± 1.5
Capacitance	pF/ft	29.0	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	150	500	750	750
Voltage Withstanding	VRMS @ 60 Hz	900	1500	2100	2100
Higher Order Mode Frequency	GHz	402	239	155	155
Attenuation (dB/100 ft, Typical)	0.5 GHz	87.8	51.6	34.0	34.0
	1.0 GHz	124.4	73.3	48.3	48.3
	5.0 GHz	280.5	166.1	110.4	110.4
	10.0 GHz	399.1	237.4	158.5	158.5
	18.0 GHz	539.3	322.3	216.5	216.5
	26.5 GHz	658.2	394.9	266.6	266.6
	40.0 GHz	814.9	491.4	333.7	333.7
	50.0 GHz	915.5	553.8	377.5	377.5
	65.0 GHz	1,050.4	638.1	437.0	437.0
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	6.4	17.2	35.7	30.5
	1.0 GHz	4.5	12.1	25.2	21.5
	5.0 GHz	2.0	5.4	11.1	9.5
	10.0 GHz	1.4	3.8	7.7	6.6
	18.0 GHz	1.0	2.8	5.7	4.8
	26.5 GHz	0.9	2.3	4.6	3.9
	40.0 GHz	0.7	1.8	3.7	3.0
	50.0 GHz	0.6	1.6	3.3	2.8
	65.0 GHz	0.5	1.4	2.8	2.4
90.0 GHz	0.5	1.2	2.4	2.0	