

# Standard Copper 50 ohm Semi-Rigid Cables

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CarlisleIT Description		UT-034C	UT-047	UT-047-TP	UT-047-SP	UT-047C	UT-056
MIL-DTL-17 Description		-	UT-047-M17	UT-047-TP-M17	-	-	-
MIL-DTL-17 Part Number		-	M17/151-00001	M17/151-00002	-	-	-
Dimensions		Units					
Outer Conductor Diameter	inch	0.034 ± 0.001	0.047 ± 0.001	0.047 +0.002/-0.001	0.047 +0.002/-0.001	0.047 ± 0.001	0.056 ± 0.002
	millimeter	0.864 ± 0.025	1.194 ± 0.025	1.194 +0.051/-0.025	1.194 +0.051/-0.025	1.194 ± 0.025	1.422 ± 0.051
Dielectric Diameter	inch	-	0.037 ± 0.001	0.037 ± 0.001	-	-	-
	millimeter	-	0.940 ± 0.025	0.940 ± 0.025	-	-	-
Center Conductor Diameter	inch	0.0080 ± 0.0005	0.0113 ± 0.0005	0.0113 ± 0.0005	0.0113 ± 0.0005	0.0113 ± 0.0005	0.0113 ± 0.0005
	millimeter	0.2032 ± 0.0127	0.2870 ± 0.0127	0.2870 ± 0.0127	0.2870 ± 0.0127	0.2870 ± 0.0127	0.2870 ± 0.0127
Straight Length (Maximum)	feet	15	20	20	20	20	20
	meter	4.57	6.10	6.10	6.10	6.10	6.10
Coiled Length (Maximum) <sup>11</sup>	feet	25	50	50	50	50	50
	meter	7.62	15.24	15.24	15.24	15.24	15.24

<sup>11</sup> Add "TYPE" to the part description for coiled lengths, example: UT-034-TYPE

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

Mechanical Characteristics							
Outer Conductor Integrity Temp.	°C	150	175	175	175	175	200
Operating Temperature (Max.)	°C	125	150	150	150	150	175
Inside Bend Radius (Minimum)	inch	0.063	0.050	0.050	0.050	0.125	0.125
	millimeter	1.600	1.270	1.270	1.270	3.175	3.175
Weight	lbs/100 ft	0.22	0.40	0.40	0.40	0.40	0.70
	kg/100 m	0.33	0.60	0.60	0.60	0.60	1.05

Electrical Characteristics							
Characteristic Impedance	ohm	50.0 ± 3.0	50.0 ± 1.5	50.0 ± 1.5	50.0 ± 1.5	50.0 ± 2.5	50.0 ± 2.5
Capacitance	pF/ft	29.0	29.0	29.0	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	750	1000	1000	1000	1000	1500
Voltage Withstanding	VRMS @ 60 Hz	2100	3000	3000	3000	3000	3000
Higher Order Mode Frequency	GHz	155	109	109	109	109	109
Attenuation (dB/100 ft, Typical)	0.5 GHz	34.0	24.0	24.0	24.0	24.0	24.0
	1.0 GHz	48.3	34.2	34.2	34.2	34.2	34.2
	5.0 GHz	110.4	78.8	78.8	78.8	78.8	78.8
	10.0 GHz	158.5	113.8	113.8	113.8	113.8	113.8
	18.0 GHz	218.5	156.5	156.5	156.5	156.5	156.5
	26.5 GHz	266.6	193.8	193.8	193.8	193.8	193.8
	40.0 GHz	333.7	244.2	244.2	244.2	244.2	244.2
	50.0 GHz	377.5	277.5	277.5	277.5	277.5	277.5
	65.0 GHz	437.0	323.0	323.0	323.0	323.0	323.0
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	35.7	80.5	67.5	62.2	80.5	110.4
	1.0 GHz	25.2	56.6	47.4	43.8	56.6	77.6
	5.0 GHz	11.1	24.7	20.7	19.1	24.7	34.0
	10.0 GHz	7.7	17.2	14.4	13.3	17.2	23.6
	18.0 GHz	5.7	12.6	10.5	9.7	12.6	17.3
	26.5 GHz	4.6	10.2	8.5	7.9	10.2	14.0
	40.0 GHz	3.7	8.1	6.8	6.3	8.1	11.2
	50.0 GHz	3.3	7.2	6.0	5.5	7.2	9.9
	65.0 GHz	2.8	6.2	5.2	4.8	6.2	8.5
90.0 GHz	2.4	5.1	4.3	4.0	5.1	7.1	