MICRO-COAX®
PROVEN RELIABLE

MICROWAVE & RF CABLE

Semi-Rigid, hand-formable & flexible microwave cable

STANDARD ALUMINUM 50 OHM Semi-Rigid CABLES

Standard aluminum 50 ohm semi-rigid cables are ideal for hand forming or where weight savings is a premium. Connectors can be easily soldered to the tin plated aluminum outer conductor.

Micro-Coax Description		UT-047-AL-TP	UT-085-AL	UT-085-AL-TP
MIL-DTL-17 Description		-	UT-085-AL-M17	UT-085-AL-TP-M17
MIL-DTL-17 Part Number		-	M17/133-00012	M17/133-00013
DIMENSIONS	Units			
Outer Conductor Diameter	inch	0.047 +0.002/-0.001	0.0865 ± 0.0010	0.0865 +0.0020/-0.0010
	millimeter	1.194 +0.051/-0.025	2.197 ± 0.025	2.197 +0.051/-0.025
Dielectric Diameter	inch	-	0.066 ± 0.001	0.066 ± 0.001
	millimeter	-	1.676 ± 0.025	1.676 ± 0.025
Center Conductor Diameter	inch	0.0113 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005
	millimeter	0.2870 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127
Straight Length (Maximum)	feet	20	20	20
	meter	6.10	6.10	6.10
Coiled Length (Maximum)\1	feet	50	150	150
	meter	15.24	45.72	45.72
MATERIALS				
Outer Conductor		Aluminum	Aluminum	Aluminum
Outer Conductor Plating		Tin	None	Tin
Dielectric		PTFE	PTFE	PTFE
Center Conductor		SPCW	SPCW	SPCW
RoHS Compliant		Yes	Yes	Yes
MECHANICAL CHARACTERISTICS				
Outer Conductor Integrity Temp.	°C	225	225	225
Operating Temperature (Max.)	°C	225	225	225
Inside Bend Radius (Minimum)	inch	0.070	0.070	0.070
	millimeter	1.778	1.778	1.778
Weight	lbs/100 ft	0.21	0.72	0.72
	kg/100 m	0.32	1.08	1.08
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	1000	1500	1500
Voltage Withstanding	VRMS @ 60 Hz	3000	5400	5400
Higher Order Mode Frequency	GHz	109	61	61
Attenuation (dB/100 ft, Typical)	0.5 GHz	25.8	14.3	14.3
	1.0 GHz	36.7	21.0	21.0
	5.0 GHz	84.5	47.6	47.6
	10.0 GHz	121.9	72.0	72.0
	18.0 GHz	167.3	100.3	100.3
	26.5 GHz	206.9	125.6	125.6
	40.0 GHz	260.4	160.5	160.5
	50.0 GHz	295.5	183.9	183.9
	65.0 GHz	343.6	-	-
	90.0 GHz	415.5	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	85.4	231.8	237.5
	1.0 GHz	60.1	162.5	166.5
	5.0 GHz	26.3	70.1	71.9
	10.0 GHz	18.3	48.3	49.5
	18.0 GHz	13.4	35.0	35.8
	26.5 GHz	10.9	28.1	28.8
	40.0 GHz	8.7	22.2	22.8
	50.0 GHz	7.7	19.5	20.0
	65.0 GHz	6.7	-	-
	90.0 GHz	5.5	-	-

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

Micro-Coax Description		UT-141A-AL	UT-141A-AL-TP	UT-250C-AL-TP
MIL-DTL-17 Description		UT-141-SA-AL-M17	UT-141-SA-AL-TP-M17	-
MIL-DTL-17 Part Number		M17/133-00008	M17/133-00009	-
DIMENSIONS	Units			
Outer Conductor Diameter	inch	0.141 ± 0.001	0.141 +0.002/-0.001	0.250 +0.003/-0.002
	millimeter	3.581 ± 0.025	3.581 +0.051/-0.025	6.350 +0.076/-0.051
Dielectric Diameter	inch	0.1175 ± 0.0010	0.1175 ± 0.0010	-
	millimeter	2.985 ± 0.025	2.985 ± 0.025	-
Center Conductor Diameter	inch	0.0362 ± 0.0007	0.0362 ± 0.0007	0.0641 ± 0.0010
	millimeter	0.9195 ± 0.0178	0.9195 ± 0.0178	1.6281 ± 0.0254
Straight Length (Maximum)	feet	20	20	20
	meter	6.10	6.10	6.10
Coiled Length (Maximum)\1	feet	150	150	150
	meter	45.72	45.72	45.72
MATERIALS				
Outer Conductor		Aluminum	Aluminum	Aluminum
Outer Conductor Plating		None	Tin	Tin
Dielectric		PTFE	PTFE	PTFE
Center Conductor		SPCW	SPCW	SPC
RoHS Compliant		Yes	Yes	Yes
MECHANICAL CHARACTERISTICS				
Outer Conductor Integrity Temp.	°C	225	225	225
Operating Temperature (Max.)	°C	225	225	225
Inside Bend Radius (Minimum)	inch	0.125	0.125	0.250
	millimeter	3.175	3.175	6.350
Weight	lbs/100 ft	1.93	1.93	6.18
	kg/100 m	2.90	2.90	9.28
ELECTRICAL CHARACTERISTICS				
Characteristic Impedance	ohm	50.0 ± 1.0	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	3000
Voltage Withstanding	VRMS @ 60 Hz	9600	9600	16800
Higher Order Mode Frequency	GHz	34	34	19
Attenuation (dB/100 ft, Typical)	0.5 GHz	7.9	7.9	4.9
	1.0 GHz	11.5	11.5	7.2
	5.0 GHz	28.7	28.7	18.4
	10.0 GHz	43.3	43.3	28.4
	18.0 GHz	63.0	63.0	42.0
	26.5 GHz	80.3	80.3	-
	40.0 GHz	-	-	-
	50.0 GHz	-	-	-
	65.0 GHz	-	-	-
	90.0 GHz	-	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	557.7	571.7	1,395.1
	1.0 GHz	388.5	398.2	961.1
	5.0 GHz	163.4	167.5	387.6
	10.0 GHz	110.6	113.4	255.3
	18.0 GHz	78.5	80.5	176.2
	26.5 GHz	62.2	63.8	-
	40.0 GHz	-	-	-
	50.0 GHz	-	-	-
	65.0 GHz	-	-	-
	90.0 GHz	-	-	-

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