



**MICRO-COAX**  <sup>®</sup>  
PROVEN RELIABLE

## MICROWAVE & RF CABLE

Semi-Rigid, hand-formable & flexible microwave cable

# STANDARD LOW LOSS ALUMINUM 50 OHM Semi-Rigid CABLES

Low loss aluminum Semi-Rigid cables provide lower attenuation, better phase stability with temperature, and a higher operating temperature when compared to traditional solid PTFE aluminum Semi-Rigid cables. Low loss aluminum 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-047C-AL-TP-LL	UT-085C-AL-TP-LL	UT-141C-AL-TP-LL
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## DIMENSIONS

		Units		
Outer Conductor Diameter	inch	0.047 +0.002/-0.001	0.0865 +0.0020/-0.0010	0.141 +0.003/-0.002
	millimeter	1.194 +0.051/-0.025	2.197 +0.051/-0.025	3.581 +0.076/-0.051
Center Conductor Diameter	inch	0.0126 ± 0.0005	0.0226 ± 0.0005	0.0403 ± 0.0010
	millimeter	0.3200 ± 0.0127	0.5740 ± 0.0127	1.0236 ± 0.0254
Straight Length (Maximum)	feet	20	20	20
	meter	6.10	6.10	6.10

## MATERIALS

Outer Conductor	Aluminum	Aluminum	Aluminum
Outer Conductor Plating	Tin	Tin	Tin
Dielectric	LD PTFE	LD PTFE	LD PTFE
Center Conductor	SPC	SPC	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	0.250	0.500
	millimeter	3.175	6.350	12.700
Weight	lbs/100 ft	0.20	0.69	1.83
	kg/100 m	0.30	1.04	2.75

## ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 2.0	50.0 ± 2.0	50.0 ± 2.0
Capacitance	pF/ft	26.5	26.5	26.5
	pF/m	86.8	86.8	86.8
Velocity of Propagation	%	77	77	77
Corona Extinction Voltage	VRMS @ 60 Hz	1000	1500	1900
Voltage Withstanding	VRMS @ 60 Hz	2700	4800	8400
Higher Order Mode Frequency	GHz	116	65	37
Attenuation (dB/100 ft, Typical)	0.5 GHz	23.7	13.4	7.6
	1.0 GHz	33.6	19.0	10.8
	5.0 GHz	75.9	43.1	24.8
	10.0 GHz	108.0	61.7	35.7
	18.0 GHz	146.1	83.9	49.1
	26.5 GHz	178.4	102.9	60.7
	40.0 GHz	220.9	128.3	-
	50.0 GHz	248.3	144.7	-
	65.0 GHz	285.1	166.9	-
	90.0 GHz	338.7	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	92.7	262.7	642.5
	1.0 GHz	65.4	185.2	452.1
	5.0 GHz	29.1	81.9	198.1
	10.0 GHz	20.5	57.4	138.0
	18.0 GHz	15.2	42.4	101.1
	26.5 GHz	12.4	34.6	82.2
	40.0 GHz	10.1	27.9	-
	50.0 GHz	9.0	24.8	-
	65.0 GHz	7.8	21.5	-
	90.0 GHz	6.6	-	-