



MICRO-COAX  [®]
PROVEN RELIABLE

MICROWAVE & RF CABLE

Semi-Rigid, hand-formable & flexible microwave cable

STANDARD DIMENSIONALLY STABLE COPPER 50 OHM Semi-Rigid CABLES

Dimensionally stable "M" and "DS" Semi-Rigid cables utilize a unique dielectric that provides significantly improved thermal stability. Besides virtually eliminating dielectric protrusion from the heat of soldering, this feature make them ideal for applications that must operate at the most extreme temperatures.

Micro-Coax Description	UT-020-M	UT-034-M	UT-047-M	UT-085-DS
Micro-Coax Description (Tin Plated)	UT-020-TP-M	UT-034-TP-M	UT-047-TP-M	UT-085-TP-DS

DIMENSIONS

	Units				
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.023 ± 0.001	0.038 ± 0.001	0.050 ± 0.001	0.0865 ± 0.0010
	millimeter	0.584 ± 0.025	0.953 ± 0.025	1.257 ± 0.025	2.197 ± 0.025
Center Conductor Diameter	inch	0.0045 ± 0.0005	0.0080 ± 0.0005	0.0113 ± 0.0005	0.0201 ± 0.0005
	millimeter	0.1143 ± 0.0127	0.2032 ± 0.0127	0.2870 ± 0.0127	0.5105 ± 0.0127
Straight Length (Maximum)	feet	10	15	20	20
	meter	3.05	4.57	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	PTFE	PTFE	PTFE	PTFE
Center Conductor	SPCW	SPCW	SPCW	SPCW
RoHS Compliant	Yes	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	250	225	250	250
Operating Temperature (Max.)	°C	225	200	225	250 ¹
Inside Bend Radius (Minimum)	inch	0.032	0.050	0.063	0.050
	millimeter	0.813	1.270	1.600	1.270
Weight	lbs/100 ft	0.10	0.22	0.42	1.42
	kg/100 m	0.15	0.33	0.63	2.13

¹ 225 deg C for tin plated outer conductor

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 6.0	50.0 ± 4.0	50.0 ± 4.0	50.0 ± 1.0
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	250	750	750	1500
Voltage Withstanding	VRMS @ 60 Hz	1200	1800	3000	5400
Higher Order Mode Frequency	GHz	245	139	104	61
Attenuation (dB/100 ft, Typical)	0.5 GHz	51.6	29.4	22.4	13.6
	1.0 GHz	73.3	41.9	32.0	19.5
	5.0 GHz	166.1	95.9	73.8	46.0
	10.0 GHz	237.3	138.1	106.8	67.4
	18.0 GHz	322.2	189.0	147.1	94.3
	26.5 GHz	394.9	233.3	182.4	118.3
	40.0 GHz	491.3	292.8	230.3	151.5
	50.0 GHz	553.7	331.7	261.8	173.8
	65.0 GHz	638.0	384.8	305.2	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	30.9	75.8	125.4	306.9
	1.0 GHz	21.8	53.4	88.2	215.0
	5.0 GHz	9.6	23.4	38.5	92.5
	10.0 GHz	6.8	16.4	26.8	63.7
	18.0 GHz	5.0	12.0	19.6	46.0
	26.5 GHz	4.1	9.8	15.9	36.9
	40.0 GHz	3.3	7.8	12.7	29.1
	50.0 GHz	2.9	6.9	11.2	25.5
	65.0 GHz	2.6	6.0	9.6	-
90.0 GHz	2.1	5.0	8.0	-	

STANDARD DIMENSIONALLY STABLE COPPER 50 OHM Semi-Rigid CABLES

Micro-Coax Description	UT-085C-DS	UT-141-DS	UT-141C-DS
Micro-Coax Description (Tin Plated)	UT-085C-TP-DS	UT-141-TP-DS	UT-141C-TP-DS

DIMENSIONS

	Units			
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.0865 ± 0.0010	0.141 ± 0.001	0.141 ± 0.001
	millimeter	2.197 ± 0.025	3.581 ± 0.025	3.581 ± 0.025
Center Conductor Diameter	inch	0.0201 ± 0.0005	0.0362 ± 0.0007	0.0362 ± 0.0007
	millimeter	0.5105 ± 0.0127	0.9195 ± 0.0178	0.9195 ± 0.0178
Straight Length (Maximum)	feet	20	20	20
	meter	6.10	6.10	6.10

MATERIALS

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

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	250	250	250
Operating Temperature (Max.)	°C	250 ¹	250 ¹	250 ¹
Inside Bend Radius (Minimum)	inch	0.050	0.075	0.075
	millimeter	1.270	1.905	1.905
Weight	lbs/100 ft	1.43	3.29	3.32
	kg/100 m	2.15	4.94	4.98

¹ 225 deg C for tin plated outer conductor

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	1500	1900	1900
Voltage Withstanding	VRMS @ 60 Hz	5400	9600	9600
Higher Order Mode Frequency	GHz	61	34	34
Attenuation (dB/100 ft, Typical)	0.5 GHz	13.6	7.8	7.8
	1.0 GHz	19.5	11.3	11.3
	5.0 GHz	46.0	27.7	27.7
	10.0 GHz	67.4	41.6	41.6
	18.0 GHz	94.3	59.6	59.6
	26.5 GHz	118.3	76.2	76.2
	40.0 GHz	151.5	-	-
	50.0 GHz	173.8	-	-
	90.0 GHz	-	-	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	306.9	737.4	737.4
	1.0 GHz	215.0	513.0	513.0
	5.0 GHz	92.5	214.8	214.8
	10.0 GHz	63.7	145.0	145.0
	18.0 GHz	46.0	102.6	102.6
	26.5 GHz	36.9	81.2	81.2
	40.0 GHz	29.1	-	-
	50.0 GHz	25.5	-	-
	90.0 GHz	-	-	-