

Part Number Designation

Semi-Rigid

The UT® part number designation is easy to understand because it is simple and short, especially for standard cable. Some part numbers for standard cable have been shortened. Materials for component parts are indicated under individual cable



Code	Cable Outer Diameter
Value	Nominal Diameter in Thousandths of an inch. Always 3 digits.

Code	Inner Conductor Material
No Entry or A	Silver-Plated Copper Weld (SPCW)
AL	Aluminum Alloy 1100
B	Silver-Plated Beryllium Copper
C	Silver-Plated Copper (SPC)
SS	Stainless Steel Alloy 304

Code	Character Impedance
No Entry	50 Ohms
Value	Nominal Impedance in Ohms

Code	Miscellaneous
No Entry	PTFE
ULL	Ultra Low Density
DS	Dimensionally Stable PTFE
F	FEP Insulation Jacket
LL	Low Density PTFE
M	Low Dielectric Compression PTFE
M17	MIL-DTL-17 QPL Cable
Type	Long Length Cable

Code	Outer Conductor Finish
No Entry	No Plating
ED9010	Solder Plating (90% Tin / 10% Lead)
SP	Silver Plating
TP	Tin Plating

Code	Outer Conductor Material
No Entry	Copper
AL	Aluminum Alloy 1100
CuSS	Copper / Stainless Steel Composite
SS	Stainless Steel Alloy 304

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.

Micro-Coax 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	Copper
Outer Conductor Plating	None	None	None	Tin	Silver
Dielectric	PTFE	PTFE	PTFE	PTFE	PTFE
Center Conductor	SPCW	SPCW	SPCW	SPCW	SPCW
RoHS Compliant	Yes	Yes	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	150	150	150	150	150
Operating Temperature (Max.)	°C	125	125	125	125	125
Inside Bend Radius (Minimum)	inch	0.050	0.050	0.050	0.050	0.050
	millimeter	1.270	1.270	1.270	1.270	1.270
Weight	lbs/100 ft	0.03	0.10	0.22	0.22	0.22
	kg/100 m	0.05	0.15	0.33	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	50.0 ± 1.5
Capacitance	pF/ft	29.0	29.0	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	150	500	750	750	750
Voltage Withstanding	VRMS @ 60 Hz	900	1500	2100	2100	2100
Higher Order Mode Frequency	GHz	402	239	155	155	155
Attenuation (dB/100 ft, Typical)	0.5 GHz	87.8	51.6	34.0	34.0	34.0
	1.0 GHz	124.4	73.3	48.3	48.3	48.3
	5.0 GHz	280.5	166.1	110.4	110.4	110.4
	10.0 GHz	399.1	237.4	158.5	158.5	158.5
	18.0 GHz	539.3	322.3	216.5	216.5	216.5
	26.5 GHz	658.2	394.9	266.6	266.6	266.6
	40.0 GHz	814.9	491.4	333.7	333.7	333.7
	50.0 GHz	915.5	553.8	377.5	377.5	377.5
	65.0 GHz	1,050.4	638.1	437.0	437.0	437.0
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	6.4	17.2	35.7	30.5	28.5
	1.0 GHz	4.5	12.1	25.2	21.5	20.0
	5.0 GHz	2.0	5.4	11.1	9.5	8.8
	10.0 GHz	1.4	3.8	7.7	6.6	6.2
	18.0 GHz	1.0	2.8	5.7	4.8	4.5
	26.5 GHz	0.9	2.3	4.6	3.9	3.7
	40.0 GHz	0.7	1.8	3.7	3.2	3.0
	50.0 GHz	0.6	1.6	3.3	2.8	2.6
	65.0 GHz	0.5	1.4	2.8	2.4	2.3
90.0 GHz	0.5	1.2	2.4	2.0	1.9	

STANDARD COPPER 50 OHM Semi-Rigid CABLES

Micro-Coax 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) ¹	feet	25	50	50	50	50	50
	meter	7.62	15.24	15.24	15.24	15.24	15.24

¹Add "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	216.5	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	

STANDARD COPPER 50 OHM Semi-Rigid CABLES

Micro-Coax Description	UT-056-STR	UT-070C	UT-085-H	UT-085-H-TP	UT-085C-H
MIL-DTL-17 Description	-	-	UT-085-H-M17	UT-085-H-TP-M17	UT-085C-H-M17
MIL-DTL-17 Part Number	-	-	M17/133-RG-405	M17/133-00001	M17/133-00002

DIMENSIONS

	Units					
Outer Conductor Diameter	inch	0.056 ± 0.002	0.070 ± 0.001	0.0865 ± 0.0010	0.0865 +0.0020/-0.0010	0.0865 ± 0.0010
	millimeter	1.422 ± 0.051	1.778 ± 0.025	2.197 ± 0.025	2.197 +0.051/-0.025	2.197 ± 0.025
Dielectric Diameter	inch	-	-	0.066 ± 0.001	0.066 ± 0.001	0.066 ± 0.001
	millimeter	-	-	1.676 ± 0.025	1.676 ± 0.025	1.676 ± 0.025
Center Conductor Diameter	inch	7 x 0.004 ± 0.0005	0.0179 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005
	millimeter	7 x 0.1016 ± 0.0127	0.4547 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127
Straight Length (Maximum)	feet	20	20	20	20	20
	meter	6.10	6.10	6.10	6.10	6.10
Coiled Length (Maximum) ¹	feet	50	50	150	150	150
	meter	15.24	15.24	45.72	45.72	45.72

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

MATERIALS

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

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	200	135	175	175	175
Operating Temperature (Max.)	°C	175	100	125	125	125
Inside Bend Radius (Minimum)	inch	0.063	0.125	0.125	0.125	0.125
	millimeter	1.600	3.175	3.175	3.175	3.175
Weight	lbs/100 ft	0.72	0.80	1.42	1.42	1.43
	kg/100 m	1.08	1.20	2.13	2.13	2.15

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 4.0	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	29.0	29.0	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	1000	1200	1500	1500	1500
Voltage Withstanding	VRMS @ 60 Hz	3000	4800	5400	5400	5400
Higher Order Mode Frequency	GHz	111	68	61	61	61
Attenuation (dB/100 ft, Typical)	0.5 GHz	24.7	15.2	13.6	13.6	13.6
	1.0 GHz	35.2	21.7	19.5	19.5	19.5
	5.0 GHz	81.0	50.9	46.0	46.0	46.0
	10.0 GHz	117.0	74.4	67.4	67.4	67.4
	18.0 GHz	160.8	103.7	94.3	94.3	94.3
	26.5 GHz	199.0	129.7	118.3	118.3	118.3
	40.0 GHz	250.6	165.5	151.5	151.5	151.5
	50.0 GHz	284.6	189.4	173.8	173.8	173.8
	65.0 GHz	331.2	222.6	-	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	107.3	124.0	232.0	190.3	232.0
	1.0 GHz	75.4	86.9	162.5	133.2	162.5
	5.0 GHz	33.0	37.4	69.8	57.2	69.8
	10.0 GHz	23.0	25.7	47.9	39.3	47.9
	18.0 GHz	16.8	18.6	34.6	28.3	34.6
	26.5 GHz	13.6	14.9	27.7	22.7	27.7
	40.0 GHz	10.9	11.8	21.8	17.9	21.8
	50.0 GHz	9.6	10.3	19.1	15.7	19.1
	65.0 GHz	8.3	8.8	-	-	-
90.0 GHz	6.9	-	-	-	-	

STANDARD COPPER 50 OHM Semi-Rigid CABLES

Micro-Coax Description	UT-085C-H-TP	UT-085	UT-085-TP	UT-085-SP	UT-085C
MIL-DTL-17 Description	UT-085C-H-TP-M17	UT-085-M17	UT-085-TP-M17	UT-085-SP-M17	UT-085C-M17
MIL-DTL-17 Part Number	M17/133-00003	M17/133-00006	M17/133-00007	M17/133-00016	M17/133-00008

DIMENSIONS

		Units				
Outer Conductor Diameter	inch	0.0865 +0.0020/-0.0010	0.0865 ± 0.001	0.0865 +0.0020/-0.0010	0.0865 +0.0020/-0.0010	0.0865 ± 0.0010
	millimeter	2.197 +0.051/-0.025	2.197 ± 0.025	2.197 +0.051/-0.025	2.197 +0.051/-0.025	2.197 ± 0.025
Dielectric Diameter	inch	0.066 ± 0.001	0.066 ± 0.001	0.066 ± 0.001	0.066 ± 0.001	0.066 ± 0.001
	millimeter	1.676 ± 0.025	1.676 ± 0.025	1.676 ± 0.025	1.676 ± 0.025	1.676 ± 0.025
Center Conductor Diameter	inch	0.0201 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005
	millimeter	0.5105 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127
Straight Length (Maximum)	feet	20	20	20	20	20
	meter	6.10	6.10	6.10	6.10	6.10
Coiled Length (Maximum) ¹	feet	150	150	150	150	150
	meter	45.72	45.72	45.72	45.72	45.72

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

MATERIALS

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

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	175	175	175	175	175
Operating Temperature (Max.)	°C	125	125	125	125	125
Inside Bend Radius (Minimum)	inch	0.125	0.050	0.050	0.050	0.050
	millimeter	3.175	1.270	1.270	1.270	1.270
Weight	lbs/100 ft	1.43	1.42	1.42	1.42	1.43
	kg/100 m	2.15	2.13	2.13	2.13	2.15

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.5
Capacitance	pF/ft	29.0	29.0	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	1500	1500	1500	1500	1500
Voltage Withstanding	VRMS @ 60 Hz	5400	5400	5400	5400	5400
Higher Order Mode Frequency	GHz	61	61	61	61	61
Attenuation (dB/100 ft, Typical)	0.5 GHz	13.6	13.6	13.6	13.6	13.6
	1.0 GHz	19.5	19.5	19.5	19.5	19.5
	5.0 GHz	46.0	46.0	46.0	46.0	46.0
	10.0 GHz	67.4	67.4	67.4	67.4	67.4
	18.0 GHz	94.3	94.3	94.3	94.3	94.3
	26.5 GHz	118.3	118.3	118.3	118.3	118.3
	40.0 GHz	151.5	151.5	151.5	151.5	151.5
	50.0 GHz	173.8	173.8	173.8	173.8	173.8
	65.0 GHz	-	-	-	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	190.3	232.0	190.3	173.5	232.0
	1.0 GHz	133.2	162.5	133.2	121.5	162.5
	5.0 GHz	57.2	69.8	57.2	52.2	69.8
	10.0 GHz	39.3	47.9	39.3	35.8	47.9
	18.0 GHz	28.3	34.6	28.3	25.8	34.6
	26.5 GHz	22.7	27.7	22.7	20.7	27.7
	40.0 GHz	17.9	21.8	17.9	16.3	21.8
	50.0 GHz	15.7	19.1	15.7	14.3	19.1
	65.0 GHz	-	-	-	-	-
90.0 GHz	-	-	-	-	-	

STANDARD COPPER 50 OHM Semi-Rigid CABLES

Micro-Coax Description	UT-085C-TP	UT-085C-SP	UT-141A-HA	UT-141A-H-TP	UT-141A
MIL-DTL-17 Description	UT-085C-TP-M17	-	UT-141-HA-M17	UT-141-HA-TP-M17	UT-141-SA-M17
MIL-DTL-17 Part Number	M17/133-00009	-	M17/130-RG-402	M17/130-00001	M17/130-00004

DIMENSIONS

	Units	UT-085C-TP	UT-085C-SP	UT-141A-HA	UT-141A-H-TP	UT-141A
Outer Conductor Diameter	inch	0.0865 +0.0020/-0.0010	0.0865 +0.0020/-0.0010	0.141 ± 0.001	0.141 +0.002/-0.001	0.141 ± 0.001
	millimeter	2.197 +0.051/-0.025	2.197 +0.051/-0.025	3.581 ± 0.025	3.581 +0.051/-0.025	3.581 ± 0.025
Dielectric Diameter	inch	0.066 ± 0.001	-	0.1175 ± 0.0010	0.1175 ± 0.0010	0.1175 ± 0.0010
	millimeter	1.676 ± 0.025	-	2.985 ± 0.025	2.985 ± 0.025	2.985 ± 0.025
Center Conductor Diameter	inch	0.0201 ± 0.0005	0.0201 ± 0.0005	0.0362 ± 0.0007	0.0362 ± 0.0007	0.0362 ± 0.0007
	millimeter	0.5105 ± 0.0127	0.5105 ± 0.0127	0.9195 ± 0.0178	0.9195 ± 0.0178	0.9195 ± 0.0178
Straight Length (Maximum)	feet	20	20	20	20	20
	meter	6.10	6.10	6.10	6.10	6.10
Coiled Length (Maximum) ¹	feet	150	150	150	150	150
	meter	45.72	45.72	45.72	45.72	45.72

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

MATERIALS

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

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	175	175	175	175	175
Operating Temperature (Max.)	°C	125	125	125	125	125
Inside Bend Radius (Minimum)	inch	0.050	0.050	0.250	0.250	0.075
	millimeter	1.270	1.270	6.350	6.350	1.905
Weight	lbs/100 ft	1.43	1.43	3.29	3.29	3.29
	kg/100 m	2.15	2.15	4.94	4.94	4.94

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 1.5	50.0 ± 1.5	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	29.0	29.0	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	1500	1500	1900	1900	1900
Voltage Withstanding	VRMS @ 60 Hz	5400	5400	9600	9600	9600
Higher Order Mode Frequency	GHz	61	61	34	34	34
Attenuation (dB/100 ft, Typical)	0.5 GHz	13.6	13.6	7.6	7.6	7.6
	1.0 GHz	19.5	19.5	11.3	11.3	11.3
	5.0 GHz	46.0	46.0	27.6	27.6	27.6
	10.0 GHz	67.4	67.4	41.6	41.6	41.6
	18.0 GHz	94.3	94.3	59.6	59.6	59.6
	26.5 GHz	118.3	118.3	76.2	76.2	76.2
	40.0 GHz	151.5	151.5	-	-	-
	50.0 GHz	173.8	173.8	-	-	-
	65.0 GHz	-	-	-	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	190.3	173.5	600.4	483.5	600.4
	1.0 GHz	133.2	121.5	450.0	336.2	450.0
	5.0 GHz	57.2	52.2	180.0	140.4	180.0
	10.0 GHz	39.3	35.8	120.0	94.6	120.0
	18.0 GHz	28.3	25.8	83.0	66.8	83.0
	26.5 GHz	22.7	20.7	65.6	52.7	65.6
	40.0 GHz	17.9	16.3	-	-	-
	50.0 GHz	15.7	14.3	-	-	-
	65.0 GHz	-	-	-	-	-
90.0 GHz	-	-	-	-	-	

STANDARD COPPER 50 OHM Semi-Rigid CABLES

Micro-Coax Description	UT-141A-TP	UT-141A-SP	UT-141C	UT-141C-TP	UT-141C-SP
MIL-DTL-17 Description	UT-141-SA-TP-M17	UT-141-SA-SP-M17	-	-	-
MIL-DTL-17 Part Number	M17/130-00005	M17/130-00012	-	-	-

DIMENSIONS

		Units				
Outer Conductor Diameter	inch	0.141 +0.002/-0.001	0.141 +0.002/-0.001	0.141 ± 0.001	0.141 +0.002/-0.001	0.141 +0.002/-0.001
	millimeter	3.581 +0.051/-0.025	3.581 +0.051/-0.025	3.581 ± 0.025	3.581 +0.051/-0.025	3.581 +0.051/-0.025
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	0.0362 ± 0.0007	0.0362 ± 0.0007	0.0362 ± 0.0007
	millimeter	0.9195 ± 0.0178	0.9195 ± 0.0178	0.9195 ± 0.0178	0.9195 ± 0.0178	0.9195 ± 0.0178
Straight Length (Maximum)	feet	20	20	20	20	20
	meter	6.10	6.10	6.10	6.10	6.10
Coiled Length (Maximum) ^{\1}	feet	150	150	150	150	150
	meter	45.72	45.72	45.72	45.72	45.72

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

MATERIALS

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

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	175	175	175	175	175
Operating Temperature (Max.)	°C	125	125	125	125	125
Inside Bend Radius (Minimum)	inch	0.075	0.075	0.075	0.075	0.075
	millimeter	1.905	1.905	1.905	1.905	1.905
Weight	lbs/100 ft	3.29	3.29	3.32	3.32	3.32
	kg/100 m	4.94	4.94	4.98	4.98	4.98

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	29.0	29.0	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	1900	1900	1900	1900	1900
Voltage Withstanding	VRMS @ 60 Hz	9600	9600	9600	9600	9600
Higher Order Mode Frequency	GHz	34	34	34	34	34
Attenuation (dB/100 ft, Typical)	0.5 GHz	7.6	7.6	7.6	7.6	7.6
	1.0 GHz	11.3	11.3	11.3	11.3	11.3
	5.0 GHz	27.6	27.6	27.6	27.6	27.6
	10.0 GHz	41.6	41.6	41.6	41.6	41.6
	18.0 GHz	59.6	59.6	59.6	59.6	59.6
	26.5 GHz	76.2	76.2	76.2	76.2	76.2
	40.0 GHz	-	-	-	-	-
	50.0 GHz	-	-	-	-	-
	65.0 GHz	-	-	-	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	483.5	436.4	600.4	483.5	436.4
	1.0 GHz	336.2	303.4	450.0	336.2	303.4
	5.0 GHz	140.4	126.7	180.0	140.4	126.7
	10.0 GHz	94.6	85.3	120.0	94.6	85.3
	18.0 GHz	66.8	60.3	83.0	66.8	60.3
	26.5 GHz	52.7	47.6	65.6	52.7	47.6
	40.0 GHz	-	-	-	-	-
	50.0 GHz	-	-	-	-	-
	65.0 GHz	-	-	-	-	-
90.0 GHz	-	-	-	-	-	

STANDARD COPPER 50 OHM Semi-Rigid CABLES

Micro-Coax Description	UT-215-TP	UT-250C	UT-250C-TP
MIL-DTL-17 Description	-	UT-250A-M17	UT-250A-TP-M17
MIL-DTL-17 Part Number	-	M17/129-RG-401	M17/129-00001

DIMENSIONS		Units		
Outer Conductor Diameter	inch	0.215 +0.003/-0.002	0.250 ± 0.001	0.250 +0.002/-0.001
	millimeter	5.461 +0.076/-0.051	6.350 ± 0.025	6.350 +0.051/-0.025
Dielectric Diameter	inch	-	0.209 ± 0.002	0.209 ± 0.002
	millimeter	-	5.309 ± 0.051	5.309 ± 0.051
Center Conductor Diameter	inch	0.0571 ± 0.0005	0.0641 ± 0.0010	0.0641 ± 0.0010
	millimeter	1.4503 ± 0.0127	1.6281 ± 0.0254	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

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

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

MECHANICAL CHARACTERISTICS				
Outer Conductor Integrity Temp.	°C	150	150	150
Operating Temperature (Max.)	°C	125	100	100
Inside Bend Radius (Minimum)	inch	0.375	0.125	0.125
	millimeter	9.525	3.175	3.175
Weight	lbs/100 ft	7.17	10.38	10.38
	kg/100 m	10.76	15.58	15.58

ELECTRICAL CHARACTERISTICS				
Characteristic Impedance	ohm	50.0 ± 2.0	50.0 ± 0.5	50.0 ± 0.5
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	3000	3000	3000
Voltage Withstanding	VRMS @ 60 Hz	15000	16800	16800
Higher Order Mode Frequency	GHz	22	19	19
Attenuation (dB/100 ft, Typical)	0.5 GHz	5.1	4.3	4.3
	1.0 GHz	7.5	6.7	6.7
	5.0 GHz	19.1	17.4	17.4
	10.0 GHz	29.4	27.0	27.0
	18.0 GHz	43.3	40.0	40.0
	26.5 GHz	-	-	-
	40.0 GHz	-	-	-
	50.0 GHz	-	-	-
	65.0 GHz	-	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	844.1	1,780.0	1,061.4
	1.0 GHz	581.2	914.8	728.6
	5.0 GHz	234.0	364.5	290.1
	10.0 GHz	154.0	238.3	189.5
	18.0 GHz	106.1	163.2	129.7
	26.5 GHz	-	-	-
	40.0 GHz	-	-	-
	50.0 GHz	-	-	-
	65.0 GHz	-	-	-

STANDARD COPPER 50 OHM Semi-Rigid CABLES

Micro-Coax Description	UT-250C-SP	UT-325C	UT-390C
MIL-DTL-17 Description	-	-	-
MIL-DTL-17 Part Number	-	-	-

DIMENSIONS

	Units			
Outer Conductor Diameter	inch	0.250 +0.002/-0.001	0.325 ± 0.002	0.390 ± 0.002
	millimeter	6.350 +0.051/-0.025	8.255 ± 0.051	9.906 ± 0.051
Dielectric Diameter	inch	-	-	-
	millimeter	-	-	-
Center Conductor Diameter	inch	0.0641 ± 0.0010	7 x 0.0312 ± 0.0010	0.102 ± 0.001
	millimeter	1.6281 ± 0.0254	7 x 0.7925 ± 0.0254	2.5908 ± 0.0254
Straight Length (Maximum)	feet	20	20	20
	meter	6.10	6.10	6.10
Coiled Length (Maximum) ¹	feet	150	-	-
	meter	45.72	-	-

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

MATERIALS

Outer Conductor	Copper	Copper	Copper
Outer Conductor Plating	Silver	None	None
Dielectric	PTFE	PTFE	PTFE
Center Conductor	SPC	Stranded SPC	SPC
RoHS Compliant	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	150	125	175
Operating Temperature (Max.)	°C	100	90	90
Inside Bend Radius (Minimum)	inch	0.125	0.750	0.750
	millimeter	3.175	19.050	19.050
Weight	lbs/100 ft	10.38	15.93	24.40
	kg/100 m	15.58	23.92	36.63

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 0.5	50.0 ± 1.0	50.0 ± 0.5
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	3000	3000	6000
Voltage Withstanding	VRMS @ 60 Hz	16800	22800	26700
Higher Order Mode Frequency	GHz	19	14	12
Attenuation (dB/100 ft, Typical)	0.5 GHz	4.3	3.5	3.0
	1.0 GHz	6.7	5.2	4.6
	5.0 GHz	17.4	13.8	12.5
	10.0 GHz	27.0	22.0	20.1
	18.0 GHz	40.0	-	-
	26.5 GHz	-	-	-
	40.0 GHz	-	-	-
	50.0 GHz	-	-	-
	65.0 GHz	-	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	951.8	1,702.4	3,425.8
	1.0 GHz	653.3	1,156.5	2,321.5
	5.0 GHz	260.0	443.6	883.1
	10.0 GHz	169.8	283.5	561.6
	18.0 GHz	116.3	-	-
	26.5 GHz	-	-	-
	40.0 GHz	-	-	-
	50.0 GHz	-	-	-
	65.0 GHz	-	-	-
90.0 GHz	-	-	-	

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

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

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	-	-	

STANDARD ALUMINUM 50 OHM Semi-Rigid CABLES

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

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

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	-	-	-
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	-	-	-	

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	-
	90.0 GHz	761.9	464.1	370.3	-
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	-	-
	65.0 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	-	-
	65.0 GHz	-	-	-
90.0 GHz	-	-	-	

STANDARD LOW LOSS COPPER 50 OHM Semi-Rigid CABLES

Low loss Semi-Rigid cables provide lower attenuation, better phase stability with temperature, and a higher operating temperature when compared to traditional solid PTFE Semi-Rigid cables.

Micro-Coax Description	UT-031-LL	UT-047C-LL	UT-070-LL	UT-085C-LL
Micro-Coax Description (Tin Plated)	UT-031-TP-LL	UT-047C-TP-LL	UT-070-TP-LL	UT-085C-TP-LL

DIMENSIONS

		Units			
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.031 ± 0.001	0.047 ± 0.001	0.070 ± 0.001	0.0865 ± 0.0010
	millimeter	0.787 ± 0.025	1.194 ± 0.025	1.778 ± 0.025	2.197 ± 0.025
Center Conductor Diameter	inch	0.0080 ± 0.0005	0.0126 ± 0.0005	0.0201 ± 0.0005	0.0226 ± 0.0005
	millimeter	0.2032 ± 0.0127	0.3200 ± 0.0127	0.5105 ± 0.0127	0.5740 ± 0.0127
Straight Length (Maximum)	feet	20	20	20	20
	meter	6.10	6.10	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	LD PTFE	LD PTFE	LD PTFE	LD PTFE
Center Conductor	SPCW	SPC	SPCW	SPC
RoHS Compliant	Yes	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	250	250	250	250
Operating Temperature (Max.)	°C	250 ^{\1}	250 ^{\1}	250 ^{\1}	250 ^{\1}
Inside Bend Radius (Minimum)	inch	0.063	0.125	0.250	0.250
	millimeter	1.600	3.175	6.350	6.350
Weight	lbs/100 ft	0.17	0.39	0.75	1.39
	kg/100 m	0.26	0.59	1.13	2.09

\1 225 deg C for tin plated outer conductor

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 2.0	50.0 ± 2.0	50.0 ± 1.5	50.0 ± 1.5
Capacitance	pF/ft	26.5	26.5	26.5	26.5
	pF/m	86.8	86.8	86.8	86.8
Velocity of Propagation	%	77	77	77	77
Corona Extinction Voltage	VRMS @ 60 Hz	500	1000	1200	1500
Voltage Withstanding	VRMS @ 60 Hz	1800	2700	4200	4800
Higher Order Mode Frequency	GHz	180	116	73	65
Attenuation (dB/100 ft, Typical)	0.5 GHz	33.6	21.9	13.8	12.4
	1.0 GHz	47.6	31.1	19.6	17.5
	5.0 GHz	107.1	70.2	44.5	39.9
	10.0 GHz	152.2	100.0	63.6	57.2
	18.0 GHz	205.4	135.2	86.4	77.8
	26.5 GHz	250.3	165.2	106.0	95.5
	40.0 GHz	309.3	204.8	132.0	119.2
	50.0 GHz	347.1	230.2	148.9	134.5
	65.0 GHz	397.7	264.4	171.7	155.3
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	60.2	125.6	265.5	343.4
	1.0 GHz	42.5	88.7	187.2	242.1
	5.0 GHz	18.9	39.4	82.8	106.9
	10.0 GHz	13.3	27.7	58.1	74.9
	18.0 GHz	9.9	20.5	42.9	55.3
	26.5 GHz	8.1	16.8	35.1	45.1
	40.0 GHz	6.6	13.6	28.2	36.3
	50.0 GHz	5.9	12.1	25.1	32.3
	65.0 GHz	5.1	10.6	21.8	28
	90.0 GHz	4.3	8.9	-	-

STANDARD LOW LOSS COPPER 50 OHM Semi-Rigid CABLES

Micro-Coax Description	UT-120C-LL	UT-141C-LL	UT-250C-LL
Micro-Coax Description (Tin Plated)	UT-120C-TP-LL	UT-141C-TP-LL	UT-250C-TP-LL

DIMENSIONS

	Units			
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.120 ± 0.001	0.141 ± 0.002	0.250 ± 0.002
	millimeter	3.048 ± 0.025	3.581 ± 0.051	6.350 ± 0.051
Center Conductor Diameter	inch	0.0359 ± 0.0005	0.0403 ± 0.0010	0.0720 ± 0.0010
	millimeter	0.9119 ± 0.0127	1.0236 ± 0.0254	1.8288 ± 0.0254
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	LD PTFE	LD PTFE	LD PTFE
Center Conductor	SPC	SPC	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	0.188	0.500	0.750
	millimeter	4.775	12.700	19.050
Weight	lbs/100 ft	2.01	3.18	9.40
	kg/100 m	3.02	4.77	14.11

¹ 225 deg C for tin plated outer conductor

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 1.0	50.0 ± 1.5	50.0 ± 1.0
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	1800	1900	3000
Voltage Withstanding	VRMS @ 60 Hz	7800	8400	15600
Higher Order Mode Frequency	GHz	41	37	20
Attenuation (dB/100 ft, Typical)	0.5 GHz	7.7	7.0	3.9
	1.0 GHz	11.0	10.0	5.6
	5.0 GHz	25.3	23.0	13.1
	10.0 GHz	36.4	33.2	19.3
	18.0 GHz	50.0	45.6	26.9
	26.5 GHz	61.8	56.5	-
	40.0 GHz	77.7	-	-
	50.0 GHz	-	-	-
	65.0 GHz	-	-	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	683.1	839.4	2130.7
	1.0 GHz	480.8	590.4	1492.3
	5.0 GHz	210.8	258.3	641.5
	10.0 GHz	146.9	179.7	440.9
	18.0 GHz	107.6	131.5	318.1
	26.5 GHz	87.5	106.7	-
	40.0 GHz	70	-	-
	50.0 GHz	-	-	-
	65.0 GHz	-	-	-
90.0 GHz	-	-	-	

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	-	-

STANDARD ULTRA LOW LOSS COPPER 50 OHM Semi-Rigid CABLES

Ultra low loss Semi-Rigid cables provide the lowest attenuation, better phase stability with temperature, and a higher operating temperature when compared to traditional Semi-Rigid cables. Due to their compact size and minimum bend radius, these cables are ideal for tight configurations where low insertion loss is critical.

Micro-Coax Description	UT-047C-ULL	UT-085C-ULL	UT-141C-ULL	UT-250C-ULL
Micro-Coax Description (Tin Plated)	UT-047C-TP-ULL	UT-085C-TP-ULL	UT-141C-TP-ULL	UT-250C-TP-ULL

DIMENSIONS

	Units				
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.047 ± 0.001	0.0865 ± 0.0010	0.141 ± 0.001	0.250 ± 0.001
	millimeter	1.194 ± 0.025	2.197 ± 0.025	3.581 ± 0.025	6.350 ± 0.025
Center Conductor Diameter	inch	0.0142 ± 0.0005	0.0253 ± 0.0005	0.0453 ± 0.0005	0.0808 ± 0.0010
	millimeter	0.3607 ± 0.0127	0.6426 ± 0.0127	1.1506 ± 0.0127	2.0523 ± 0.0254
Straight Length (Maximum)	feet	20	20	20	20
	meter	6.10	6.10	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	ULD PTFE	ULD PTFE	ULD PTFE	ULD PTFE
Center Conductor	SPC	SPC	SPC	SPC
RoHS Compliant	Yes	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	250	250	250	250
Operating Temperature (Max.)	°C	250 ¹	250 ¹	250 ¹	250 ¹
Inside Bend Radius (Minimum)	inch	0.250	0.375	0.500	0.625
	millimeter	6.350	9.525	12.700	15.875
Weight	lbs/100 ft	0.36	1.27	2.53	8.53
	kg/100 m	0.54	1.91	3.80	12.81

¹ 225 deg C for tin plated outer conductor

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 2.0	50.0 ± 1.5	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	24.5	24.5	24.5	24.5
	pF/m	80.5	80.5	80.5	80.5
Velocity of Propagation	%	83	83	83	83
Corona Extinction Voltage	VRMS @ 60 Hz	700	1400	2500	4300
Voltage Withstanding	VRMS @ 60 Hz	2100	3900	7500	12900
Higher Order Mode Frequency	GHz	119	66	36	21
Attenuation (dB/100 ft, Typical)	0.5 GHz	20.2	11.2	6.1	3.6
	1.0 GHz	28.6	15.9	8.7	5.1
	5.0 GHz	64.5	36.1	19.9	11.9
	10.0 GHz	91.8	51.5	28.6	17.3
	18.0 GHz	124.0	70.0	39.2	24.0
	26.5 GHz	151.2	85.7	48.4	-
	40.0 GHz	187.1	106.6	-	-
	50.0 GHz	210.1	120.1	-	-
	65.0 GHz	241.0	138.3	-	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	131.7	358.3	888.5	2113.2
	1.0 GHz	93.0	252.8	625.5	1482.9
	5.0 GHz	41.4	111.9	274.6	642.7
	10.0 GHz	29.1	78.6	191.6	444.2
	18.0 GHz	21.6	58	140.6	322.6
	26.5 GHz	20.5	55	132.9	304.3
	40.0 GHz	14.4	38.3	-	-
	50.0 GHz	12.8	34.1	-	-
	65.0 GHz	11.2	29.6	-	-
90.0 GHz	9.4	-	-	-	

STANDARD STAINLESS STEEL 50 OHM Semi-Rigid CABLES

Stainless steel 50 ohm Semi-Rigid cables are designed for applications where low thermal heat transfer is required such as cryogenic feed cables. Because these cables also utilize a solid PTFE dielectric, they are often the first choice for highly corrosive environments.

Micro-Coax Description		UT-020-SS	UT-020SS-SS	UT-034SS-SS	UT-085-SS	UT-085SS-SS
DIMENSIONS		Units				
Outer Conductor Diameter	inch	0.020 ± 0.001	0.020 ± 0.001	0.034 ± 0.001	0.0865 ± 0.0010	0.0865 ± 0.0010
	millimeter	0.508 ± 0.025	0.508 ± 0.025	0.864 ± 0.025	2.197 ± 0.025	2.197 ± 0.025
Center Conductor Diameter	inch	0.0045 ± 0.0005	0.0045 ± 0.0005	0.0080 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005
	millimeter	0.1143 ± 0.0127	0.1143 ± 0.0127	0.2032 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127
Straight Length (Maximum)	feet	10	10	15	20	20
	meter	3.05	3.05	4.57	6.10	6.10

MATERIALS

Outer Conductor	304 SS	304 SS	304 SS	304 SS	304 SS
Outer Conductor Plating	None	None	None	None	None
Dielectric	PTFE	PTFE	PTFE	PTFE	PTFE
Center Conductor	SPCW	304 SS	304 SS	SPCW	304 SS
RoHS Compliant	Yes	Yes	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	175	175	200	225	225
Operating Temperature (Max.)	°C	150	150	175	200	200
Inside Bend Radius (Minimum)	inch	0.050	0.250	0.250	0.125	0.250
	millimeter	1.270	6.350	6.350	3.175	6.350
Weight	lbs/100 ft	0.07	0.07	0.20	1.30	1.30
	kg/100 m	0.11	0.11	0.30	1.95	1.95

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 2.0	50.0 ± 2.0	50.0 ± 1.5	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	29.0	29.0	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	500	500	750	1500	1500
Voltage Withstanding	VRMS @ 60 Hz	1200	1200	2100	5400	5400
Higher Order Mode Frequency	GHz	270	270	155	61	61
Attenuation (dB/100 ft, Typical)	0.5 GHz	134.9	389.4	225.2	31.2	88.9
	1.0 GHz	191.0	550.9	318.8	44.4	126.0
	5.0 GHz	429.4	1,234.2	715.1	101.5	284.0
	10.0 GHz	609.7	1,747.8	1,013.7	146.0	404.1
	18.0 GHz	821.8	2,348.8	1,363.9	199.7	545.9
	26.5 GHz	1,001.0	2,853.8	1,658.7	246.2	666.3
	40.0 GHz	1,236.0	3,512.3	2,044.1	308.7	824.8
	50.0 GHz	1,386.2	3,931.3	2,289.8	349.5	926.5
	65.0 GHz	1,587.2	4,489.0	2,617.4	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	7.6	2.6	8.3	142.7	49.2
	1.0 GHz	5.3	1.8	5.8	100.5	34.7
	5.0 GHz	2.4	0.8	2.6	44.2	15.4
	10.0 GHz	1.7	0.6	1.8	30.9	10.9
	18.0 GHz	1.2	0.4	1.4	22.7	8.1
	26.5 GHz	1.0	0.4	1.1	18.5	6.6
	40.0 GHz	0.8	0.3	0.9	14.8	5.4
	50.0 GHz	0.7	0.3	0.8	13.1	4.8
	65.0 GHz	0.6	0.2	0.7	-	-
90.0 GHz	0.5	0.2	0.6	-	-	

STANDARD STAINLESS STEEL 50 OHM Semi-Rigid CABLES

Micro-Coax Description	UT-085B-SS	UT-141-SS	UT-141B-SS
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DIMENSIONS

		Units		
Outer Conductor Diameter	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	0.0359 ± 0.0010	0.0362 ± 0.0007
	millimeter	0.5105 ± 0.0127	0.9119 ± 0.0254	0.9195 ± 0.0178
Straight Length (Maximum)	feet	20	20	20
	meter	6.10	6.10	6.10

MATERIALS

Outer Conductor	304 SS	304 SS	304 SS
Outer Conductor Plating	None	None	None
Dielectric	PTFE	PTFE	PTFE
Center Conductor	SP BeCu	SPCW	SP BeCu
RoHS Compliant	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	225	225	225
Operating Temperature (Max.)	°C	200	200	200
Inside Bend Radius (Minimum)	inch	0.250	0.250	0.500
	millimeter	6.350	6.350	12.700
Weight	lbs/100 ft	1.31	3.05	3.06
	kg/100 m	1.97	4.58	4.59

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	1900	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	31.2	17.7	17.8
	1.0 GHz	44.4	25.3	25.4
	5.0 GHz	101.5	58.9	59.2
	10.0 GHz	146.0	85.8	86.1
	18.0 GHz	199.7	118.9	119.4
	26.5 GHz	246.2	148.2	148.7
	40.0 GHz	308.7	-	-
	50.0 GHz	349.5	-	-
	65.0 GHz	-	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	142.7	347.1	346.2
	1.0 GHz	100.5	243.6	243.1
	5.0 GHz	44.2	105.7	105.5
	10.0 GHz	30.9	73.1	73.0
	18.0 GHz	22.7	53.1	53.0
	26.5 GHz	18.5	42.9	42.8
	40.0 GHz	14.8	-	-
	50.0 GHz	13.1	-	-
	65.0 GHz	-	-	-
90.0 GHz	-	-	-	

STANDARD SPLINE COPPER 50 OHM Semi-Rigid CABLES

Spline Semi-Rigid Cables offer the ultimate in low attenuation, better phase stability with temperature, and a higher operating temperature when compared to traditional Semi-Rigid Cables. Due to their larger size and minimum bend radius, these cables are typically used for longer assemblies where space is less critical.

Micro-Coax Description	UT-S(3)-250	UT-S(5)-325	UT-S(5)-390	UT-S(5)-500
Micro-Coax Description (Tin Plated)	UT-S(3)-250-TP	UT-S(5)-325-TP	UT-S(5)-390-TP	UT-S(5)-500-TP

DIMENSIONS		Units			
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.250 ± 0.002	0.325 ± 0.002	0.390 ± 0.002	0.500 ± 0.002
	millimeter	6.350 ± 0.051	8.255 ± 0.051	9.906 ± 0.051	12.700 ± 0.051
Center Conductor Diameter	inch	0.0870 ± 0.0010	0.1100 ± 0.0010	0.1360 ± 0.0010	0.1740 ± 0.0010
	millimeter	2.2098 ± 0.0254	2.7940 ± 0.0254	3.4544 ± 0.0254	4.4196 ± 0.0254
Straight Length (Maximum)	feet	20	20	20	20
	meter	6.10	6.10	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	Spline	Spline	Spline	Spline
Center Conductor	SPC	SPC	SPC	SPC
RoHS Compliant	Yes	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS					
Outer Conductor Integrity Temp.	°C	250	250	250	250
Operating Temperature (Max.)	°C	250 ¹	250 ¹	250 ¹	250 ¹
Inside Bend Radius (Minimum)	inch	3.000	5.000	5.000	6.000
	millimeter	76.200	127.000	127.000	152.400
Weight	lbs/100 ft	6.75	11.40	17.82	24.89
	kg/100 m	10.13	17.11	26.75	37.37

¹ 225 deg C for tin plated outer conductor

ELECTRICAL CHARACTERISTICS					
Characteristic Impedance	ohm	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	23.4	23.4	23.4	23.4
	pF/m	76.8	76.8	76.8	76.8
Velocity of Propagation	%	88	88	88	88
Corona Extinction Voltage	VRMS @ 60 Hz	1400	2000	2200	3000
Voltage Withstanding	VRMS @ 60 Hz	6600	8700	9900	13500
Higher Order Mode Frequency	GHz	21	17	14	10
Attenuation (dB/100 ft, Typical)	0.5 GHz	3.4	2.7	2.3	1.7
	1.0 GHz	4.9	3.8	3.3	2.5
	5.0 GHz	11.5	9.0	7.8	6.0
	10.0 GHz	16.7	13.2	11.5	9.0
	18.0 GHz	23.2	-	-	-
	26.5 GHz	-	-	-	-
	40.0 GHz	-	-	-	-
	50.0 GHz	-	-	-	-
	65.0 GHz	-	-	-	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	630.0	825.0	1012.3	1304.9
	1.0 GHz	431.0	559.6	682.3	867.8
	5.0 GHz	169.5	213.6	254.7	310.1
	10.0 GHz	109.9	136.1	160.3	190.6
	18.0 GHz	97.7	-	-	-
	26.5 GHz	-	-	-	-
	40.0 GHz	-	-	-	-
	50.0 GHz	-	-	-	-
	65.0 GHz	-	-	-	-
90.0 GHz	-	-	-	-	

STANDARD SPLINE ALUMINUM 50 OHM Semi-Rigid CABLES

Spline aluminum Semi-Rigid cables offer the ultimate in low attenuation and weight savings, better phase stability with temperature, and a higher operating temperature when compared to traditional Semi-Rigid cables. Due to their larger size and minimum bend radius, these cables are typically used for longer assemblies where space is less critical.

Micro-Coax Description	UT-S(3)-250-AL	UT-S(5)-325-AL	UT-S(5)-390-AL	UT-S(5)-500-AL
Micro-Coax Description (Tin Plated)	UT-S(3)-250-AL-TP	UT-S(5)-325-AL-TP	UT-S(5)-390-AL-TP	UT-S(5)-500-AL-TP

DIMENSIONS

	Units				
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.250 ± 0.002	0.325 ± 0.002	0.390 ± 0.002	0.500 ± 0.002
	millimeter	6.350 ± 0.051	8.255 ± 0.051	9.906 ± 0.051	12.700 ± 0.051
Center Conductor Diameter	inch	0.0870 ± 0.0010	0.1100 ± 0.0010	0.1360 ± 0.0010	0.1740 ± 0.0010
	millimeter	2.2098 ± 0.0254	2.7940 ± 0.0254	3.4544 ± 0.0254	4.4196 ± 0.0254
Straight Length (Maximum)	feet	20	20	20	20
	meter	6.10	6.10	6.10	6.10

MATERIALS

Outer Conductor	Aluminum	Aluminum	Aluminum	Aluminum
Outer Conductor Plating	None or Tin	None or Tin	None or Tin	None or Tin
Dielectric	Spline	Spline	Spline	Spline
Center Conductor	SPC	SPC	SPC	SPC
RoHS Compliant	Yes	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	250	250	250	250
Operating Temperature (Max.)	°C	250 ¹	250 ¹	250 ¹	250 ¹
Inside Bend Radius (Minimum)	inch	3.000	5.000	5.000	6.000
	millimeter	76.200	127.000	127.000	152.400
Weight	lbs/100 ft	3.71	5.95	9.68	14.29
	kg/100 m	5.57	8.93	14.53	21.45

¹ 225 deg C for tin plated outer conductor

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	23.4	23.4	23.4	23.4
	pF/m	76.8	76.8	76.8	76.8
Velocity of Propagation	%	88	88	88	88
Corona Extinction Voltage	VRMS @ 60 Hz	1400	2000	2000	1400
Voltage Withstanding	VRMS @ 60 Hz	6600	8700	9900	13500
Higher Order Mode Frequency	GHz	21	17	14	10
Attenuation (dB/100 ft, Typical)	0.5 GHz	3.8	2.9	2.5	1.9
	1.0 GHz	5.4	4.2	3.6	2.7
	5.0 GHz	12.4	9.8	8.4	6.5
	10.0 GHz	18.1	14.3	12.4	9.7
	18.0 GHz	25.0	-	-	-
	26.5 GHz	-	-	-	-
	40.0 GHz	-	-	-	-
	50.0 GHz	-	-	-	-
	65.0 GHz	-	-	-	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	553.6	729.7	896.6	1067.1
	1.0 GHz	379.6	496.4	606.3	779.3
	5.0 GHz	150.6	191.4	229.0	282.2
	10.0 GHz	98.2	122.6	145.0	174.6
	18.0 GHz	87.4	-	-	-
	26.5 GHz	-	-	-	-
	40.0 GHz	-	-	-	-
	50.0 GHz	-	-	-	-
	65.0 GHz	-	-	-	-
90.0 GHz	-	-	-	-	

STANDARD NON-50 OHM IMPEDANCE Semi-Rigid CABLES

Cables with impedances from 10 to 100 ohms and diameters from 0.020 to 0.250 inch, Micro-Coax's ODD impedance Semi-Rigid cables are the right solution for any impedance matching requirement.

Micro-Coax Description	UT-034C-10	UT-043C-10	UT-070C-10	UT-075C-10	UT-044-12
Micro-Coax Description (Tin Plated)	UT-034C-10-TP	UT-043C-10-TP	UT-070C-10-TP	UT-075C-10-TP	UT-044-12-TP

DIMENSIONS		Units				
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.034 ± 0.001	0.043 ± 0.001	0.070 ± 0.001	0.075 ± 0.001	0.044 ± 0.002
	millimeter	0.864 ± 0.025	1.092 ± 0.025	1.778 ± 0.025	1.905 ± 0.025	1.118 ± 0.051
Center Conductor Diameter	inch	0.0201 ± 0.0005	0.0285 ± 0.0005	0.0403 ± 0.0005	0.0453 ± 0.0010	0.0226 ± 0.0005
	millimeter	0.5105 ± 0.0127	0.7239 ± 0.0127	1.0236 ± 0.0127	1.1506 ± 0.0254	0.5740 ± 0.0127
Straight Length (Maximum)	feet	15	15	20	20	15
	meter	4.57	4.57	6.10	6.10	4.57

MATERIALS						
Outer Conductor		Copper	Copper	Copper	Copper	Copper
Outer Conductor Plating		None	None	None	None	None
Dielectric		PFA	PFA	PTFE	PTFE	PFA
Center Conductor		SPC	SPC	SPC	SPC	SPCW
RoHS Compliant		Yes	Yes	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS						
Outer Conductor Integrity Temp.	°C	175	175	150	150	175
Operating Temperature (Max.)	°C	150	150	125	125	150
Inside Bend Radius (Minimum)	inch	0.125	0.125	0.125	0.125	0.125
	millimeter	3.175	3.175	3.175	3.175	3.175
Weight	lbs/100 ft	0.32	0.47	1.35	1.50	0.51
	kg/100 m	0.48	0.71	2.03	2.25	0.77

ELECTRICAL CHARACTERISTICS						
Characteristic Impedance	ohm	10.0 ± 1.5	10.0 ± 1.5	10.0 ± 2.0	10.0 ± 1.0	12.0 ± 2.0
Capacitance	pF/ft	145.1	145.1	145.1	145.1	120.9
	pF/m	476.0	476.0	476.0	476.0	396.6
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	200	200	500	500	150
Voltage Withstanding	VRMS @ 60 Hz	600	900	1200	1500	900
Higher Order Mode Frequency	GHz	117	82	58	51	100
Attenuation (dB/100 ft, Typical)	0.5 GHz	100.2	65.7	50.7	42.2	66.9
	1.0 GHz	142.0	93.2	72.0	59.9	94.9
	5.0 GHz	320.3	211.3	163.3	136.2	215.0
	10.0 GHz	456.0	301.9	233.4	195.1	307.1
	18.0 GHz	616.6	409.8	316.9	265.6	416.7
	26.5 GHz	752.9	502.0	388.4	326.1	510.5
	40.0 GHz	932.8	624.5	483.4	406.8	634.9
	50.0 GHz	1,048.4	703.7	544.8	459.2	715.3
	65.0 GHz	1,203.6	810.7	-	-	823.9
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	15.0	27.6	43.2	55.0	27.6
	1.0 GHz	10.6	19.5	30.5	38.8	19.5
	5.0 GHz	4.7	8.6	13.5	17.1	8.6
	10.0 GHz	3.3	6.0	9.5	12.0	6.0
	18.0 GHz	2.4	4.5	7.0	8.8	4.5
	26.5 GHz	2.0	3.6	5.7	7.2	3.7
	40.0 GHz	1.6	2.9	4.6	5.8	2.9
	50.0 GHz	1.4	2.6	4.1	5.1	2.6
	65.0 GHz	1.3	2.3	-	-	2.3
90.0 GHz	1.1	-	-	-	1.9	

STANDARD NON-50 OHM IMPEDANCE Semi-Rigid CABLES

Micro-Coax Description	UT-020-13	UT-085C-15	UT-141C-15	UT-034C-17	UT-062-18
Micro-Coax Description (Tin Plated)	UT-020-13-TP	UT-085C-15-TP	UT-141C-15-TP	UT-034C-17-TP	UT-062-18-TP

DIMENSIONS

	Units					
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.023 ± 0.001	0.0865 ± 0.0010	0.141 ± 0.001	0.034 ± 0.001	0.062 ± 0.001
	millimeter	0.584 ± 0.025	2.197 ± 0.025	3.581 ± 0.025	0.864 ± 0.025	1.575 ± 0.025
Center Conductor Diameter	inch	0.0126 ± 0.0005	0.0453 ± 0.0005	0.0800 ± 0.0010	0.0159 ± 0.0005	0.0320 ± 0.0005
	millimeter	0.3200 ± 0.0127	1.1506 ± 0.0127	2.0320 ± 0.0254	0.4039 ± 0.0127	0.8128 ± 0.0127
Straight Length (Maximum)	feet	10	20	20	15	20
	meter	3.05	6.10	6.10	4.57	6.10

MATERIALS

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

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	125	150	175	175	150
Operating Temperature (Max.)	°C	100	125	150	150	125
Inside Bend Radius (Minimum)	inch	0.050	0.250	0.188	0.125	0.125
	millimeter	1.270	6.350	4.775	3.175	3.175
Weight	lbs/100 ft	0.13	1.83	4.74	0.28	0.87
	kg/100 m	0.20	2.75	7.12	0.42	1.31

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	13.0 ± 3.0	15.0 ± 1.0	15.0 ± 1.0	17.0 ± 1.0	18.0 ± 2.0
Capacitance	pF/ft	111.6	96.7	96.7	85.3	80.6
	pF/m	366.1	317.3	317.3	280.0	264.4
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	150	850	750	200	1100
Voltage Withstanding	VRMS @ 60 Hz	600	2400	3900	1200	2100
Higher Order Mode Frequency	GHz	178	47	27	129	65
Attenuation (dB/100 ft, Typical)	0.5 GHz	112.2	24.4	15.0	55.5	29.8
	1.0 GHz	158.9	34.7	21.4	78.7	42.4
	5.0 GHz	357.5	79.9	50.2	178.3	97.0
	10.0 GHz	508.0	115.5	73.4	254.6	139.6
	18.0 GHz	685.4	158.7	102.2	345.4	191.1
	26.5 GHz	835.5	196.4	127.9	422.9	235.8
	40.0 GHz	1,032.7	247.5	-	525.8	295.9
	50.0 GHz	1,159.0	-	-	592.2	335.2
	65.0 GHz	1,328.1	-	-	681.9	388.9
	90.0 GHz	1,574.0	-	-	813.6	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	6.2	106.9	320.6	27.0	66.7
	1.0 GHz	4.4	75.2	224.7	19.0	46.9
	5.0 GHz	2.0	32.8	96.8	8.4	20.6
	10.0 GHz	1.4	22.8	66.6	5.9	14.3
	18.0 GHz	1.0	16.7	48.2	4.4	10.5
	26.5 GHz	0.8	13.5	38.7	3.6	8.6
	40.0 GHz	0.7	10.8	-	2.9	6.8
	50.0 GHz	0.6	-	-	2.6	6.1
	65.0 GHz	0.5	-	-	2.2	5.2
	90.0 GHz	0.4	-	-	1.9	-

STANDARD NON-50 OHM IMPEDANCE Semi-Rigid CABLES

Micro-Coax Description		UT-062C-18	UT-034-25	UT-038C-25	UT-047C-25	UT-070C-25
Micro-Coax Description (Tin Plated)		UT-062C-18-TP	UT-034-25-TP	UT-038C-25-TP	UT-047C-25-TP	UT-070C-25-TP
DIMENSIONS						
	Units					
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.062 ± 0.001	0.034 ± 0.001	0.038 ± 0.002	0.047 ± 0.003	0.070 ± 0.001
	millimeter	1.575 ± 0.025	0.864 ± 0.025	0.965 ± 0.051	1.194 ± 0.076	1.778 ± 0.025
Center Conductor Diameter	inch	0.0320 ± 0.0005	0.0126 ± 0.0005	0.0159 ± 0.0005	0.0159 ± 0.0005	0.0314 ± 0.0005
	millimeter	0.8128 ± 0.0127	0.3200 ± 0.0127	0.4039 ± 0.0127	0.4039 ± 0.0127	0.7976 ± 0.0127
Straight Length (Maximum)	inch	20	15	15	20	20
	millimeter	6.10	4.57	4.57	6.10	6.10

MATERIALS

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

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	150	175	175	175	150
Operating Temperature (Max.)	°C	125	150	150	150	125
Inside Bend Radius (Minimum)	inch	0.125	0.050	0.125	0.125	0.125
	millimeter	3.175	1.270	3.175	3.175	3.175
Weight	lbs/100 ft	0.89	0.28	0.33	0.58	1.04
	kg/100 m	1.34	0.42	0.50	0.87	1.56

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	18.0 ± 2.0	25.0 ± 2.0	25.0 ± 3.0	25.0 ± 3.0	25.0 ± 1.5
Capacitance	pF/ft	80.6	58.0	58.0	58.0	58.0
	pF/m	264.4	190.4	190.4	190.4	190.4
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	1100	200	200	850	1500
Voltage Withstanding	VRMS @ 60 Hz	2100	1200	1500	1500	3000
Higher Order Mode Frequency	GHz	65	148	120	120	60
Attenuation (dB/100 ft, Typical)	0.5 GHz	29.8	49.9	42.6	42.6	21.2
	1.0 GHz	42.4	70.7	60.5	60.5	30.3
	5.0 GHz	97.0	160.5	137.6	137.6	70.0
	10.0 GHz	139.6	229.4	197.1	197.1	101.4
	18.0 GHz	191.1	311.6	268.2	268.2	139.8
	26.5 GHz	235.8	382.0	329.3	329.3	173.5
	40.0 GHz	295.9	475.5	410.7	410.7	219.4
	50.0 GHz	335.2	536.0	463.6	463.6	249.7
	65.0 GHz	388.9	617.7	535.2	535.2	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	66.7	30.0	38.4	45.6	103.2
	1.0 GHz	46.9	21.2	27.1	32.2	72.5
	5.0 GHz	20.6	9.4	12.0	14.2	31.5
	10.0 GHz	14.3	6.6	8.4	9.9	21.9
	18.0 GHz	10.5	4.8	6.2	7.3	15.9
	26.5 GHz	8.6	4.0	5.0	6.0	12.9
	40.0 GHz	6.8	3.2	4.0	4.8	10.2
	50.0 GHz	6.1	2.8	3.6	4.3	9.0
	65.0 GHz	5.2	2.5	3.1	3.7	-
90.0 GHz	-	2.1	2.6	3.1	-	

STANDARD NON-50 OHM IMPEDANCE Semi-Rigid CABLES

Micro-Coax Description	UT-090C-25	UT-141C-25	UT-064SS-SS-30	UT-047C-35	UT-090C-35
Micro-Coax Description (Tin Plated)	UT-090C-25-TP	UT-141C-25-TP	-	UT-047C-35-TP	UT-090C-35-TP

DIMENSIONS

		Units				
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.090 ± 0.001	0.141 ± 0.001	0.064 +0.002/-0.001	0.047 ± 0.001	0.090 ± 0.001
	millimeter	2.286 ± 0.025	3.581 ± 0.025	1.626 +0.051/-0.025	1.194 ± 0.025	2.286 ± 0.025
Center Conductor Diameter	inch	0.0403 ± 0.0010	0.0640 ± 0.0010	0.0201 ± 0.0010	0.0159 ± 0.0005	0.0320 ± 0.0010
	millimeter	1.0236 ± 0.0254	1.6256 ± 0.0254	1.6256 ± 0.0254	0.4039 ± 0.0127	0.8128 ± 0.0254
Straight Length (Maximum)	inch	20	20	20	20	20
	meter	6.10	6.10	6.10	6.10	6.10

MATERIALS

Outer Conductor	Copper	Copper	304 SS	Copper	Copper
Outer Conductor Plating	None	None	None	None	None
Dielectric	PTFE	PTFE	PTFE	PTFE	PTFE
Center Conductor	SPC	SPC	304 SS	SPC	SPC
RoHS Compliant	Yes	Yes	Yes	Yes	Yes

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	175	175	225	175	150
Operating Temperature (Max.)	°C	125	125	200	150	125
Inside Bend Radius (Minimum)	inch	0.125	0.188	0.25	0.125	0.125
	millimeter	3.175	4.775	6.35	3.175	3.175
Weight	lbs/100 ft	1.69	4.02	0.88	0.43	1.51
	kg/100 m	2.54	6.04	1.31	0.65	2.27

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	25.0 ± 1.0	25.0 ± 1.0	30.0 ± 4.0	35.0 ± 1.5	35.0 ± 1.0
Capacitance	pF/ft	58.0	58.0	48.4	41.5	41.5
	pF/m	190.4	190.4	158.7	136.0	136.0
Velocity of Propagation	%	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	750	1000	900	850	1500
Voltage Withstanding	VRMS @ 60 Hz	3900	6300	2700	2400	4800
Higher Order Mode Frequency	GHz	46	29	85	100	50
Attenuation (dB/100 ft, Typical)	0.5 GHz	16.1	10.1	161.7	26.2	13.3
	1.0 GHz	23.0	14.6	228.9	37.3	19.1
	5.0 GHz	53.8	34.8	514.1	85.7	45.1
	10.0 GHz	78.5	51.7	729.5	123.6	66.2
	18.0 GHz	109.2	73.2	982.6	169.7	92.6
	26.5 GHz	136.3	92.7	1196.1	209.8	116.2
	40.0 GHz	173.7	-	1475.7	263.9	148.9
	50.0 GHz	-	-	1654.3	299.4	170.9
	65.0 GHz	-	-	1892.8	348.1	-
	90.0 GHz	-	-	-	420.8	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	205.1	472.5	23.5	74.1	200.7
	1.0 GHz	143.8	329.7	16.6	52.1	140.4
	5.0 GHz	62.1	139.7	7.4	22.8	60.2
	10.0 GHz	42.8	95.0	5.2	15.9	41.3
	18.0 GHz	31.0	67.8	3.9	11.6	29.7
	26.5 GHz	25.0	54.0	3.2	9.4	23.8
	40.0 GHz	19.7	-	2.6	7.5	18.7
	50.0 GHz	-	-	2.3	6.7	16.4
	65.0 GHz	-	-	2.0	5.8	-
	90.0 GHz	-	-	-	4.8	-

STANDARD NON-50 OHM IMPEDANCE Semi-Rigid CABLES

Micro-Coax Description	UT-141C-35	UT-047-70	UT-141-70	UT-141C-70	UT-085-75	UT-141-75
Micro-Coax Description (Tin Plated)	UT-141C-35-TP	UT-047-70-TP	UT-141-70-TP	UT-141C-70-TP	UT-085-75-TP	UT-141-75-TP

DIMENSIONS

	Units						
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.141 ± 0.001	0.047 ± 0.001	0.141 ± 0.001	0.141 ± 0.001	0.085 +0.002/-0.001	0.141 ± 0.001
	millimeter	3.581 ± 0.025	1.194 ± 0.025	3.581 ± 0.025	3.581 ± 0.025	2.159 +0.051/-0.025	3.581 ± 0.025
Center Conductor Diameter	inch	0.0508 ± 0.0010	0.0071 ± 0.0005	0.0201 ± 0.0005	0.0226 ± 0.0005	0.0113 ± 0.0005	0.0201 ± 0.0005
	millimeter	1.2903 ± 0.0254	0.1803 ± 0.0127	0.5105 ± 0.0127	0.5740 ± 0.0127	0.2870 ± 0.0127	0.5105 ± 0.0127
Straight Length (Maximum)	inch	20	20	20	20	20	20
	meter	6.10	6.10	6.10	6.10	6.10	6.10

MATERIALS

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

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	175	175	150	150	150	175
Operating Temperature (Max.)	°C	125	150	125	125	125	125
Inside Bend Radius (Minimum)	inch	0.250	0.050	0.188	0.188	0.125	0.075
	millimeter	6.350	1.270	4.775	4.775	3.175	1.905
Weight	lbs/100 ft	3.66	0.37	3.87	3.13	1.25	3.09
	kg/100 m	5.49	0.56	5.81	4.70	1.88	4.64

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	35.0 ± 2.0	70.0 ± 1.5	70.0 ± 1.0	70.0 ± 1.0	75.0 ± 1.0	75.0 ± 1.5
Capacitance	pF/ft	41.5	20.7	20.7	20.7	19.3	19.3
	pF/m	136.0	68.0	68.0	68.0	63.5	63.5
Velocity of Propagation	%	70	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	1500	1000	2000	1500	1200	2000
Voltage Withstanding	VRMS @ 60 Hz	7800	3600	9600	11100	6600	11400
Higher Order Mode Frequency	GHz	31	117	43	38	67	38
Attenuation (dB/100 ft, Typical)	0.5 GHz	8.6	24.6	9.2	8.2	14.5	8.4
	1.0 GHz	12.4	35.0	13.3	11.8	20.7	12.1
	5.0 GHz	30.1	80.5	32.0	28.7	48.7	29.4
	10.0 GHz	45.0	116.2	47.7	43.0	71.3	44.1
	18.0 GHz	64.1	159.8	67.8	61.5	99.4	62.9
	26.5 GHz	81.7	197.7	86.2	78.5	124.5	80.2
	40.0 GHz	-	249.1	112.1	-	159.1	-
	50.0 GHz	-	282.9	-	-	182.3	-
	65.0 GHz	-	329.2	-	-	214.5	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	552.5	78.1	409.5	463.2	144.0	549.1
	1.0 GHz	384.6	55.0	285.4	322.2	100.8	382.3
	5.0 GHz	161.5	24.0	120.2	134.7	43.4	160.6
	10.0 GHz	109.2	16.7	81.5	90.9	29.8	108.6
	18.0 GHz	77.5	12.2	57.9	64.3	21.5	77.1
	26.5 GHz	61.3	9.9	46.0	50.8	17.3	61.0
	40.0 GHz	-	7.9	35.7	-	13.6	-
	50.0 GHz	-	7.0	-	-	11.9	-
	65.0 GHz	-	6.0	-	-	10.2	-
90.0 GHz	-	5.0	-	-	-	-	

STANDARD NON-50 OHM IMPEDANCE Semi-Rigid CABLES

Micro-Coax Description	UT-141C-75	UT-250-75	UT-085-93	UT-130-93	UT-034-95	UT-141-100
Micro-Coax Description (Tin Plated)	UT-141C-75-TP	UT-250-75-TP	UT-085-93-TP	UT-130-93-TP	UT-034-95-TP	UT-141-100-TP

DIMENSIONS

	Units						
Outer Conductor Diameter (+ 0.001 inch for tin plate)	inch	0.141 ± 0.001	0.250 ± 0.001	0.085 ± 0.001	0.130 ± 0.001	0.034 ± 0.001	0.141 ± 0.001
	millimeter	3.581 ± 0.025	6.350 ± 0.025	2.159 ± 0.025	3.302 ± 0.025	0.864 ± 0.025	3.581 ± 0.025
Center Conductor Diameter	inch	0.0201 ± 0.0005	0.0359 ± 0.0010	0.0080 ± 0.0005	0.0113 ± 0.0005	0.0028 ± 0.0005	0.0100 ± 0.0005
	millimeter	0.5105 ± 0.0127	0.9119 ± 0.0254	0.2032 ± 0.0127	0.2870 ± 0.0127	0.0711 ± 0.0127	0.2540 ± 0.0127
Straight Length (Maximum)	feet	20	20	20	20	15	20
	meter	6.10	6.10	6.10	6.10	6.10	6.10

MATERIALS

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

MECHANICAL CHARACTERISTICS

Outer Conductor Integrity Temp.	°C	175	150	150	175	150	150
Operating Temperature (Max.)	°C	125	100	125	125	125	125
Inside Bend Radius (Minimum)	inch	0.250	0.500	0.125	0.188	0.050	0.250
	millimeter	6.350	12.700	3.175	4.775	1.270	6.350
Weight	lbs/100 ft	3.10	9.15	1.03	2.86	0.19	3.03
	kg/100 m	4.65	13.74	1.55	4.29	0.29	4.55

ELECTRICAL CHARACTERISTICS

Characteristic Impedance	ohm	75.0 ± 1.5	75.0 ± 1.5	93.0 ± 2.0	93.0 ± 1.5	95.0 ± 4.0	100.0 ± 4.0
Capacitance	pF/ft	19.3	19.3	15.6	15.6	15.3	14.5
	pF/m	63.5	63.5	51.2	51.2	50.1	47.6
Velocity of Propagation	%	70	70	70	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	2000	3000	1200	1500	1000	1500
Voltage Withstanding	VRMS @ 60 Hz	11400	20700	7500	10800	2700	12600
Higher Order Mode Frequency	GHz	38	21	65	46	177	41
Attenuation (dB/100 ft, Typical)	0.5 GHz	8.4	4.8	15.6	11.2	42.5	11.1
	1.0 GHz	12.1	7.1	22.3	16.1	60.4	15.9
	5.0 GHz	29.4	18.1	52.2	38.2	137.4	37.9
	10.0 GHz	44.1	28.1	76.3	56.4	196.7	56.0
	18.0 GHz	62.9	41.4	106.1	79.5	267.7	79.0
	26.5 GHz	80.2	-	132.6	100.4	328.7	99.7
	40.0 GHz	-	-	169.2	129.5	410.1	128.7
	50.0 GHz	-	-	193.5	-	462.8	-
	65.0 GHz	-	-	227.3	-	534.4	-
Power (Watts CW @ 20 °C, Maximum for non plated outer conductor)	0.5 GHz	549.1	1,234.0	159.4	380.6	28.2	332.3
	1.0 GHz	382.3	849.1	111.8	266.1	19.9	232.2
	5.0 GHz	160.6	341.0	48.2	113.5	8.8	98.9
	10.0 GHz	108.6	224.0	33.2	77.6	6.1	67.5
	18.0 GHz	77.1	154.2	24.0	55.7	4.5	48.4
	26.5 GHz	61.0	-	19.3	44.5	3.7	38.6
	40.0 GHz	-	-	15.3	34.9	3.0	30.2
	50.0 GHz	-	-	13.4	-	2.6	-
	65.0 GHz	-	-	11.5	-	2.3	-
90.0 GHz	-	-	-	-	1.9	-	

Semi-Rigid Cable

Cable Preconditioning

[Per MIL-DTL-17]

The electro-mechanical performance specified for Semi-Rigid Cables is achieved by a compression fit between the outer conductor and the dielectric core which, in turn, necessitates manufacturing processes that cause deformation of the core by compression and elongation. The resulting stress that is initially non-uniform tends to equalize by cold flow within a few weeks after manufacturing, and will cause withdrawal of the core into the cable. If this occurs in cable that has become part of a cable assembly, the resultant development of an air-void of the cable-connector interface may cause VSWR increases. It is therefore advantageous to achieve core stress relief by preconditioning cable before it becomes a cable assembly.

Preconditioning is not effective on long lengths of cable. Bending of cable, which is usually involved with the manufacture of cable assemblies, tends to introduce non-uniform core stresses; therefore, Micro-Coax recommends preconditioning after bending and before attaching the connectors. Since preconditioning will result in the withdrawal of the dielectric into the cable, preparation of the cable assembly should allow for a $\frac{1}{4}$ " length on each cable end beyond the design dimension. The outer conductor and the core should not be cut to the final dimensions until preconditioning has been completed.

A recommended preconditioning procedure consists of three cycles of the following routine:

- ▶ **Step 1** Heat the specimen to the maximum operating temperature. Maintain at temperature for 1 hour minimum.
- ▶ **Step 2** Return specimen to room ambient temperature. Trim protruding core, if any, flush with the edge of the outer conductor.
- ▶ **Step 3** Maintain specimen at room temperature for 1 hour minimum.
- ▶ **Step 4** Cool specimen to -45°C and maintain for 1 hour minimum.
- ▶ **Step 5** Return specimen to room temperature and maintain for 1 hour minimum.

After the last temperature cycle, maintain the specimen at room temperature for 24 hours minimum before proceeding with further processing.

Special preconditioning requirements can be obtained by consulting the engineering staff at Micro-Coax.

PHASE VS. TEMPERATURE

Characteristics

Exposure of PTFE Insulated Cables to Elevated Temperatures

Exposure of cables with PTFE insulation to elevated temperatures causes stressing of the outer conductor since the thermal expansion coefficient of the core insulation is about ten times greater than that of the metal conductors. The effects of this outer conductor stressing require distinction of two temperature levels as cables are subjected to increasing temperatures.

Recommended Maximum Operating Temperature

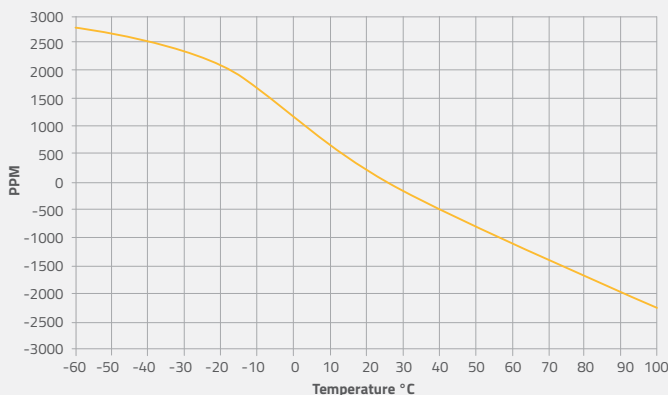
The first significant effect on cable characteristics occurs as the expansive forces on the core material exceed the yield strength of the outer conductor material, so that a permanent increase in impedance, and permanent decrease in capacitance, core adhesion, and corona extinction potential. The temperature at which such

changes begin is the maximum recommended operating temperature, which has been determined by testing 1 ft long specimens until a discernible increase in outer conductor OD was measured on 30% of the number of test specimens.

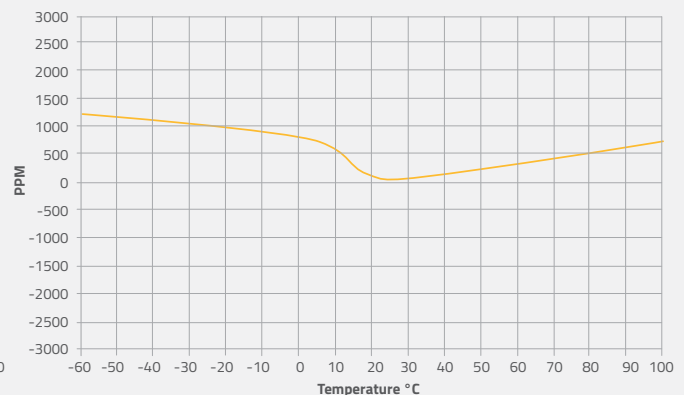
Outer Conductor Integrity Test Temperature

The second significant effect of temperature exposure is to cause catastrophic failure of the outer conductor as the core stresses exceed the tensile strength of the outer conductor material. This temperature is the outer conductor integrity test temperature, which has been determined by testing 2 ft long specimens, with no failures allowed at the rated temperature. (For test details, refer to MIL-DTL-17).

Typical Phase Change vs. Temperature Solid PTFE Cables



Typical Phase Change vs. Temperature Low Loss PTFE Cables



UTiFORM[®]

Hand-Formable Cable



UTiFORM cables are hand-formable and are designed to the same dimensions as many standard Semi-Rigid cables. UTiFORM cables employ a tin soaked copper braid that is easily solderable and allows the cable to be reshaped many times. UTiFORM cables are available with and without an FEP insulating jacket and are supplied in long continuous lengths, which make them ideal for automated cutting and stripping equipment.

UTiFORM FEATURES & BENEFITS

Hand-Formable

- ▶ No complicated bend specifications required
- ▶ Retains Shape
- ▶ Can be reformed with no damage

Available with Low-Density PTFE Dielectrics

- ▶ Improved insertion loss
- ▶ Higher operating temperatures
- ▶ Improved phase stability vs. temperature
- ▶ Increased power handling
- ▶ Dedicated connectors available

Easy to Use

- ▶ Accepts standard Semi-Rigid cable connectors
- ▶ Cuts and strips with standard Semi-Rigid cable machines
- ▶ Form and route at installation
- ▶ No bend tooling required
- ▶ Tinned outer conductor for improved solderability

Performance

- ▶ 100% shielding
- ▶ Higher temperature rating than standard Semi-Rigid cable
- ▶ Excellent attenuation and VSWR
- ▶ Low cost

Availability

- ▶ Stock
- ▶ Packaged on spools in lengths of 50, 100, 250, 500 & 1000 ft
- ▶ Metric lengths available
- ▶ Halogen-free jacket options available

Micro-Coax Description	UT-047-FORM	UT-047-FORM-F	UT-085-FORM	UT-085-FORM-F	UT-085C-FORM	UT-085C-FORM-F
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Dimensions

Units

Jacket Diameter	inch	-	0.063	-	0.106	-	0.106
	millimeter	-	1.600	-	2.692	-	2.692
Outer Conductor Diameter	inch	0.047 ± 0.003	0.047 ± 0.003	0.085 +0.0035/-0.003	0.085 +0.0035/-0.003	0.085 +0.0035/-0.003	0.085 +0.0035/-0.003
	millimeter	1.194 ± 0.076	1.194 ± 0.076	2.159 +0.089/-0.076	2.159 +0.089/-0.076	2.159 +0.089/-0.076	2.159 +0.089/-0.076
Dielectric Diameter	inch	0.034 ± 0.001	0.034 ± 0.001	0.063 ± 0.001	0.063 ± 0.001	0.063 ± 0.001	0.063 ± 0.001
	millimeter	0.864 ± 0.025	0.864 ± 0.025	1.588 ± 0.025	1.588 ± 0.025	1.588 ± 0.025	1.588 ± 0.025
Center Conductor Diameter	inch	0.0113 ± 0.0005	0.0113 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005	0.0201 ± 0.0005
	millimeter	0.2870 ± 0.0127	0.2870 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127	0.5105 ± 0.0127
Continuous Length (Minimum)	feet	50	50	50	50	50	50
	meter	15.2	15.2	15.2	15.2	15.2	15.2

Materials

Outer Jacket	-	FEP	-	FEP	-	FEP
Outer Conductor	Tin-Dipped Braid	Tin-Dipped Braid	Tin-Dipped Braid	Tin-Dipped Braid	Tin-Dipped Braid	Tin-Dipped Braid
Dielectric	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
Center Conductor	SPCW	SPCW	SPCW	SPCW	SPC	SPC
RoHS Compliant	Yes	Yes	Yes	Yes	Yes	Yes

Mechanical Characteristics

Operating Temperature (Max.)	°C	200	200	200	200	200	200
Inside Bend Radius (Minimum)	inch	0.100	0.100	0.125	0.125	0.125	0.125
	millimeter	2.540	2.540	3.175	3.175	3.175	3.175
Weight	lbs/100 ft	0.34	0.47	1.13	1.44	1.15	1.45
	kg/100 m	0.51	0.71	1.70	2.16	1.73	2.18

Electrical Characteristics

Characteristic Impedance	ohm	50	50	50	50	50	50
Capacitance	pF/ft	29	29	29	29	29	29
	pF/m	95	95	95	95	95	95
Velocity of Propagation	%	70	70	70	70	70	70
Maximum Voltage	VRMS @ 60 Hz	1000	1500	1500	1500	1500	1500
Voltage Withstanding	VRMS @ 60 Hz	2700	2700	4800	4800	4800	4800
Signal Delay	ns/ft	1.45	1.45	1.45	1.45	1.45	1.45
	ns/m	4.76	4.76	4.76	4.76	4.76	4.76
Frequency Range	GHz	DC - 20	DC - 20	DC - 20	DC - 20	DC - 20	DC - 20
Attenuation (dB/100 ft, Typical)	0.5 GHz	30.2	30.2	17.1	17.1	17.1	17.1
	1.0 GHz	42.9	42.9	24.4	24.4	24.4	24.4
	5.0 GHz	98.3	98.3	56.9	56.9	56.9	56.9
	10.0 GHz	141.5	141.5	82.9	82.9	82.9	82.9
	18.0 GHz	193.6	193.6	115.1	115.1	115.1	115.1
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	73.0	73.0	201.5	201.5	201.5	201.5
	1.0 GHz	51.4	51.4	141.4	141.4	141.4	141.4
	5.0 GHz	22.6	22.6	61.3	61.3	61.3	61.3
	10.0 GHz	15.8	15.8	42.4	42.4	42.4	42.4
	18.0 GHz	11.6	11.6	30.8	30.8	30.8	30.8

UTiFORM HAND-FORMABLE CABLES

Micro-Coax Description	UT-141-FORM	UT-141-FORM-F	UT-141C-FORM	UT-141C-FORM-F	UT-250C-FORM	UT-250C-FORM-F
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Dimensions

Units

Jacket Diameter	inch	-	0.161	-	0.161	-	0.277
	millimeter	-	4.089	-	4.089	-	7.036
Outer Conductor Diameter	inch	0.141 +0.002/-0.005	0.141 +0.002/-0.005	0.141 +0.002/-0.005	0.141 +0.002/-0.005	0.250 +0.002/-0.007	0.250 +0.002/-0.007
	millimeter	3.581 +0.051/-0.127	3.581 +0.051/-0.127	3.581 +0.051/-0.127	3.581 +0.051/-0.127	6.350 +0.051/-0.178	6.350 +0.051/-0.178
Dielectric Diameter	inch	0.116 ± 0.002	0.116 ± 0.002	0.116 ± 0.002	0.116 ± 0.002	0.208 ± 0.0025	0.208 ± 0.003
	millimeter	2.934 ± 0.051	2.934 ± 0.051	2.934 ± 0.051	2.934 ± 0.051	5.271 ± 0.064	5.271 ± 0.076
Center Conductor Diameter	inch	0.0362 ± 0.0007	0.0362 ± 0.0007	0.0362 ± 0.0007	0.0362 ± 0.0007	0.0641 ± 0.0006	0.0025 ± 0.0006
	millimeter	0.9195 ± 0.0178	0.9195 ± 0.0178	0.9195 ± 0.0178	0.9195 ± 0.0178	1.6281 ± 0.0152	0.0635 ± 0.0152
Continuous Length (Minimum)	feet	50	50	50	50	50	50
	meter	15.2	15.2	15.2	15.2	15.2	15.2

Materials

Outer Jacket	-	FEP	-	FEP	-	FEP
Outer Conductor	Tin-Dipped Braid	Tin-Dipped Braid	Tin-Dipped Braid	Tin-Dipped Braid	Tin-Dipped Braid	Tin-Dipped Braid
Dielectric	PTFE	PTFE	PTFE	PTFE	PTFE	PTFE
Center Conductor	SPCW	SPCW	SPC	SPC	SPC	SPC
RoHS Compliant	Yes	Yes	Yes	Yes	Yes	Yes

Mechanical Characteristics

Operating Temperature (Max.)	°C	200	200	200	200	200	200
Inside Bend Radius (Minimum)	inch	0.375	0.375	0.375	0.375	0.500	0.500
	millimeter	9.525	9.525	9.525	9.525	12.700	12.700
Weight	lbs/100 ft	2.89	3.36	2.93	3.39	9.21	10.31
	kg/100 m	4.34	5.04	4.40	5.09	13.83	15.48

Electrical Characteristics

Characteristic Impedance	ohm	50	50	50	50	50	50
Capacitance	pF/ft	29	29	29	29	29	29
	pF/m	95	95	95	95	95	95
Velocity of Propagation	%	70	70	70	70	70	70
Maximum Voltage	VRMS @ 60 Hz	1900	1900	1900	1900	3000	3000
Voltage Withstanding	VRMS @ 60 Hz	9300	9300	9300	9300	16800	16800
Signal Delay	ns/ft	1.45	1.45	1.45	1.45	1.45	1.45
	ns/m	4.76	4.76	4.76	4.76	4.76	4.76
Frequency Range	GHz	DC - 20	DC - 20	DC - 20	DC - 20	DC - 20	DC - 20
Attenuation (dB/100 ft, Typical)	0.5 GHz	9.8	9.8	9.8	9.8	5.7	5.7
	1.0 GHz	14.1	14.1	14.1	14.1	8.3	8.3
	5.0 GHz	33.9	33.9	33.9	33.9	20.8	20.8
	10.0 GHz	50.3	50.3	50.3	50.3	31.9	31.9
	18.0 GHz	71.3	71.3	71.3	71.3	46.6	46.6
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	491.7	491.7	491.7	491.7	1,207.2	1,207.2
	1.0 GHz	343.2	343.2	343.2	343.2	834.5	834.5
	5.0 GHz	145.5	145.5	145.5	145.5	341.0	341.0
	10.0 GHz	99.1	99.1	99.1	99.1	226.5	226.5
	18.0 GHz	70.8	70.8	70.8	70.8	157.6	157.6

UTiform LOW LOSS HAND-FORMABLE CABLES

Micro-Coax Description	UT-085C-FORM-LL	UT-085C-FORM-LL-F	UT-141C-FORM-LL	UT-141C-FORM-LL-F
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Dimensions

	Units				
Outer Conductor Diameter	inch	0.085 +0.0035/-0.003	0.085 +0.0035/-0.003	0.141 +0.002/-0.005	0.141 +0.002/-0.005
	millimeter	2.159 +0.089/-0.076	2.159 +0.089/-0.076	3.581 +0.051/-0.127	3.581 +0.051/-0.127
Dielectric Diameter	inch	0.067 ± 0.002	0.067 ± 0.002	0.118 ± 0.002	0.118 ± 0.002
	millimeter	1.702 ± 0.051	1.702 ± 0.051	2.985 ± 0.051	2.985 ± 0.051
Center Conductor Diameter	inch	0.0226 ± 0.0005	0.0226 ± 0.0005	0.0403 ± 0.0005	0.0403 ± 0.0005
	millimeter	0.5740 ± 0.0127	0.5740 ± 0.0127	1.0236 ± 0.0127	1.0236 ± 0.0127
Continuous Length (Minimum)	feet	50	50	50	50
	meter	15.2	15.2	15.2	15.2

Materials

Outer Jacket	-	FEP	-	FEP
Outer Conductor	Tin-Dipped Braid	Tin-Dipped Braid	Tin-Dipped Braid	Tin-Dipped Braid
Dielectric	LD PTFE	LD PTFE	LD PTFE	LD PTFE
Center Conductor	SPC	SPC	SPC	SPC
RoHS Compliant	Yes	Yes	Yes	Yes

Mechanical Characteristics

Operating Temperature (Max.)	°C	225	225	225	225
Inside Bend Radius (Minimum)	inch	0.250	0.250	0.500	0.500
	millimeter	6.350	6.350	12.700	12.700
Weight	lbs/100 ft	1.11	1.42	2.76	3.23
	kg/100 m	1.67	2.13	4.14	4.85

Electrical Characteristics

Characteristic Impedance	ohm	50	50	50	50
Capacitance	pF/ft	27	27	27	27
	pF/m	87	87	87	87
Velocity of Propagation	%	77	77	77	77
Maximum Voltage	VRMS @ 60 Hz	1500	1500	1900	1900
Voltage Withstanding	VRMS @ 60 Hz	4800	4800	8400	8400
Signal Delay	ns/ft	1.33	1.33	1.33	1.33
	ns/m	4.33	4.33	4.33	4.33
Frequency Range	GHz	DC - 20	DC - 20	DC - 20	DC - 20
Attenuation (dB/100 ft, Typical)	0.5 GHz	15.5	15.5	8.9	8.9
	1.0 GHz	22.1	22.1	12.6	12.6
	5.0 GHz	50.0	50.0	28.9	28.9
	10.0 GHz	71.4	71.4	41.5	41.5
	18.0 GHz	96.9	96.9	56.8	56.8
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	223.5	223.5	549.7	549.7
	1.0 GHz	157.7	157.7	387.0	387.0
	5.0 GHz	69.8	69.8	170.1	170.1
	10.0 GHz	49.0	49.0	118.7	118.7
	18.0 GHz	36.2	36.2	87.2	87.2