

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
Inside Bend Radius (Minimum)	inch	0.375	0.375	0.375	0.375	0.500
	millimeter	9.525	9.525	9.525	9.525	12.700
Weight	lbs/100 ft	2.89	3.36	2.93	3.39	9.21
	kg/100 m	4.34	5.04	4.40	5.09	13.83

Electrical Characteristics

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