MICRO-COAX®
PROVEN RELIABLE

MICROWAVE & RF CABLE

Semi-Rigid, hand-formable & flexible microwave cable

FRENCH REPRESENTATIVE :

P2M

Semi-Rigid, hand-formable, flexible microwave, cable assemblies

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THE STORY OF MICRO-COAX

Proven Reliable.

For more than fifty years, designers throughout the world have come to rely on RF and microwave transmission line products from Micro-Coax®. We have built our reputation on delivering reliable, high-performance, cost-effective solutions to the most challenging cable configuration problems.

In 1962, the founders of UTI Corporation identified a need for a company that could supply high-performance Semi-Rigid microwave transmission lines at reasonable prices. They realized that microwave cables, because they must often transfer very low-level signals, must be precision components that deliver consistent performance under widely varying conditions.

With these challenges before them, the team founded the Micro-Delay Division of Uniform Tubes to design and manufacture Semi-Rigid cables that compromise nothing in order to achieve the best possible combination of performance and reliability.

The success of this division led to the formation of Micro-Coax, a wholly owned subsidiary, in 1985.

Today, Micro-Coax continues its success with a growing product line that includes: UTiFLEX® high performance flexible cable assemblies, M-FLEX® flexible microwave cable, ARACON® brand metal clad fiber, Semi-Rigid cable assemblies and delay lines, as well as the broadest range of Semi-Rigid cables in the industry.

Micro-Coax History

1962 Microwave Division of Uniform Tubes created

1985 The Microwave Division of Uniform Tubes becomes Micro-Coax, a wholly owned subsidiary of UTI Corporation

1988 UTiFLEX High-Performance Flexible Cable Assemblies are developed

Micro-Coax transmission line products are designed to meet or exceed military and commercial standards while maintaining a price/performance ratio that is unequalled in the industry.

Transferring signals from one point to another is just the beginning. Our experienced and extensive engineering staff welcomes your most demanding requirements. We have crafted thousands of custom cable assemblies and delay lines for applications ranging from military electronics to cellular base stations.

Micro-Coax has made reliability and quality a part of every area of the company. That commitment is rooted in our emphasis on quality assurance, which is evident in our AS9100 and ISO9001 certifications.

Micro-Coax was one of the first companies in the industry to adopt Statistical Process Control, and its techniques are employed throughout the facility to monitor both service and product quality with the goal of continuous improvement.

Under the guidance of a very experienced Quality Control team, Micro-Coax maintains its standards of quality through stringent controls in all areas of the manufacturing process, from inventory management to final test and shipping. The result is a combination of fast turnaround time and consistent reliability throughout our product lines, while maintaining extremely competitive prices.

Micro-Coax also maintains complete control over all processes by manufacturing all of our own cable, cable assemblies and many of our connectors. This is further enhanced by continuous investment in new products and processes with the goal of responding even faster and bringing even better products and services to the microwave transmission line market.

The products offered by Micro-Coax today serve more applications than ever before.

Our products can be found in systems ranging from military communications, radar, missile guidance, and satellites, to cellular telephones, cellular transmitters and receivers, and a wide range of test equipment.

When you want the most innovative transmission line solutions, there is just one name to remember: Micro-Coax.

1990 Micro-Coax forms UK joint-venture with Rosenberger

2000 UTiFORM Hand-Formable Cable Developed

2002 Micro-Coax acquires assets of Precision Tubes Coaxitube division; M-FLEX Flexible Cable Developed

2006 Micro-Coax acquires assets of ARACON from DuPont™

MICROWAVE CABLE
Selection Guide

In order to simplify the selection process, microwave cables are divided into three families: Semi-Rigid coaxial cable, UTiFORM Conformable Coaxial Cable, and M-FLEX Flexible Coaxial Cable. Each cable family has unique properties best suited for different applications. Use the following table and information to select the cable that best suits your needs.

	Semi-Rigid CABLE	UTiFORM CABLE	M-FLEX CABLE
RF Shielding	-130 dB	-90 dB (prior to bending)	-90 dB (prior to bending)
Attenuation	Best	Good	Better
VSWR	Best	Good	Better
Maximum Frequency	110 GHz	20 GHz	26.5 GHz
Ease of Installation	Typically preformed to specific drawing dimensions. Some minor adjustments can be made during integration. Aluminum jacketed cables are often hand formed. Installation can be made more difficult by the inability of cable to be "snaked" through tight spaces.	Typically hand formed. While not truly flexible, cable can be reshaped up to about 10 times.	A true flexible cable that can be easily routed without need for preforming. Can be flexed thousands of times and be "snaked" through tight spaces.
Packaging Density	Maximum efficiency due to small cable diameter, tight bend radius, and ability to control cable routing by forming to exact dimensions.	Very good efficiency due to small cable diameter and ability of cable to retain its shape after being formed.	Good efficiency due to the ease of the cable to be shaped during installation. Consideration must be given to the limited bending allowed at the connector to cable interface. Bend restrictors are often used for this reason.

Semi-Rigid Coaxial Cable

Micro-Coax offers more Semi-Rigid coaxial cable options than any other cable. Cables with a large range of impedances, diameters, materials, and finishes are available for immediate delivery. Semi-Rigid cable comes as close as possible to the ideal coaxial cable and should be the first choice by any RF/Microwave Engineer.

MIL-DTL-17 Qualified Cables
A full range of MIL-DTL-17 qualified cables are available from Micro-Coax. These cables undergo additional testing to ensure they are fully capable of satisfying the most demanding military applications.

Standard 50 Ohm Cables
Diameters from 0.013 to 0.390 inch in lengths up to 150 feet on select cables. Many standard connectors are available from numerous suppliers.

Dimensionally Stable "DS" 50 Ohm Cables
Micro-Coax's newest addition to its Semi-Rigid cable product line utilizes a unique solid PTFE dielectric that provides significantly improved thermal stability when compared to traditional solid PTFE Semi-Rigid cables. The improved thermal stability reduces the need for temperature preconditioning and virtually eliminates the dielectric protrusion when soldering. All other mechanical and electrical performance is equal or better than the traditional solid PTFE equivalents.

Low Loss 50 Ohm Cables
When even better performance is required, specify Micro-Coax Low Loss Semi-Rigid coaxial cables. These cables typically lower the attenuation by another 20% and extend the operating temperature to 250° C.

Aluminum 50 Ohm Cables
Available in both standard and low loss versions, aluminum jacketed cables offer easier bending and significant weight reduction.

Stainless Steel 50 Ohm Cables
Stainless steel cables satisfy cryogenic or medical applications where low thermal conductivity or hypo allergenic properties are required.

Non-50 Ohm Impedance Cables
Impedances from 5 to 100 ohms ranging in diameters from 0.020 to 0.250 inch.

Spline Cables
Available in both copper and aluminum outer conductors, spline Semi-Rigid cables are the ultimate in low attenuation, better phase stability with temperature when compared to traditional Semi-Rigid cables.

Custom Made-To-Order Cables
Semi-Rigid cables have been built with a large spectrum of materials, every size imaginable, almost any impedance, and tested to the toughest requirements. Semi-Rigid cables can be insulated with an FEP or other polymer jackets as required by special request. If you cannot find the Semi-Rigid cable you need in this catalog, contact Micro-Coax, we may already have the special cable you need or are more than happy to build your custom configuration.

UTiFORM® Tin-Dipped Hand-Formable Cable

UTiFORM conformable cables were originally designed for the telecommunications market where the performance requirements were a little less demanding. Since then, UTiFORM cables have found broad applications across many markets. UTiFORM cables are hand formable and are designed to the same dimensions as many standard Semi-Rigid cables. This allows the use of connectors designed for Semi-Rigid cable to be used with no assembly procedure changes. 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. The FEP jacket is recommended for humid environment applications since complete environmental sealing cannot be guaranteed by the tin soaked copper braid by itself. UTiFORM cables are supplied in long continuous lengths, which make them ideal for automated cutting and stripping equipment.

M-FLEX® Flexible Microwave Coaxial Cable

M-FLEX is a family of flexible cables able to accept connectors designed for Semi-Rigid cable. Unlike other single or double braided "RG" type flexible cables, M-FLEX cables are true microwave cables capable of operating to frequencies of 26.5 GHz. The extended frequency range is the result of a precision helically wrapped silver plated copper foil inner shield. This inner shield allows for outstanding flexibility while providing 100% coverage. The electrical performance of the M-FLEX cables approaches that of their Semi-Rigid counterparts.

M-FLEX cables are intended for static installations and are not recommended for applications that require extended flexing like a test lead. M-FLEX cables are supplied in long continuous lengths, which make them ideal for automated cutting and stripping equipment.

Selection Guide
The Center Conductor

Function

The center conductor is either a solid or stranded metal wire which acts as the primary electrical signal carrier for any coaxial cable. Most attenuation occurs at the surface of the center conductor due to the "skin effect" of microwave signals making the finish or plating a very important element. Stranded center conductors are generally only used in flexible cable constructions for added flexibility and longer flex life. In comparison, solid center conductors have lower attenuation and tend to be more amplitude stable with flexure while stranded center conductors tend to be more phase stable with flexure. For larger Semi-Rigid cables, a tubular center conductor can be substituted. The tubular center conductor reduces weight and thermal conductivity without any impact to the electrical performance.

Materials

Silver plated copper (SPC) per ASTM B-298 and silver plated copper clad steel, also referred to as silver plated copper weld (SPCW) per ASTM B-501, are the two most common center conductor materials. Silver plating, besides being an excellent electrical conductor, prevents oxidization during manufacture and improves the solderability of the finished cable. Stainless steel and beryllium copper are also used when low thermal conductivity is a priority. Other materials, including many copper alloys are available on special request.

Guide to Center Conductor Selection

Center Conductor Material	DC Resistance ($\Omega \cdot in^2$ / ft)	Microwave Frequency Conductivity Compared to Copper (Ratio)	Thermal Conductivity	Used with "Pin Less" Connector	Magnetic	Ease of Soldering	RoHS Compliant
Silver Plated Copper	10.4	1.0:1	Very High	No	No	Excellent	Yes
Silver Plated Copper Clad Steel	93.1	1.0:1	Low	Yes	Yes	Excellent	Yes
Stainless Steel	464.6	44.8:1	Very Low	No	Slightly	Poor	Yes
Silver Plated Beryllium Copper	47.7	1.0:1	Low	No	No	Excellent	Yes

Selection Guide
The Dielectric

Function

The insulating material between the center and outer conductor maintains the spacing and geometry of the cable and ensures mechanical integrity during forming and bending. Most transmission losses are caused either directly or indirectly by the dielectric. Cables with a low dielectric constant, while offering lower bulk dielectric losses, also require a larger center conductor diameter to maintain the same characteristic impedance. The larger center conductor can significantly lower the overall cable attenuation. In addition, the dielectric determines the velocity of propagation, temperature range, power rating, phase and amplitude stability, and contributes to cable flexibility.

Materials

The most commonly used dielectric for high performance microwave coaxial cable is Polytetrafluoroethylene (PTFE), in both full density and low density (a.k.a. low loss or micro-porous) forms. PTFE is an excellent choice for a cable dielectric due to its low reactivity to chemicals, an operating temperature that can withstand the heat of soldering, and low dielectric constant that is stable at microwave frequencies. Full density PTFE meets all the requirements of MIL-DTL-17, Type F-1.

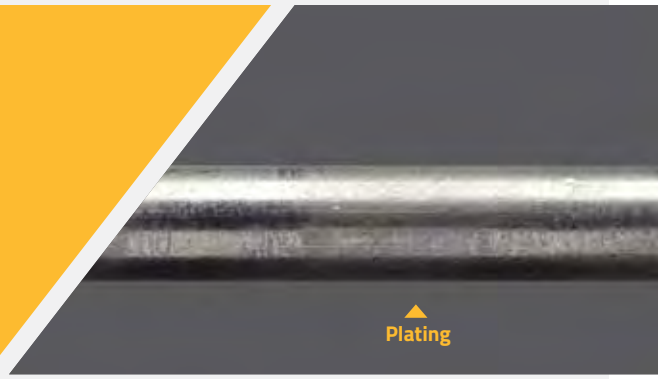
Most cables utilize full density PTFE in the solid form, however, larger Semi-Rigid cables are also available in a spline configuration. Spline dielectrics have a thin layer of material around the center conductor with 3 to 5 spokes projecting radially outward. A majority of a spline insulator is air which yields an effective relative dielectric constant as low as 1.3. Low density and ultra low density PTFE utilizes the same base material as the full density version, just less dense. As a result of the lower density, both the dielectric constant and dissipation factor are reduced, leading to an overall lowering of the cable attenuation. Low density PTFE is also much more thermally stable than solid PTFE. The trade-off being that anytime the dielectric density is reduced, the mechanical integrity is also reduced. As a result, cables employing a low density or spline dielectric will have larger minimum bend radii than the solid full density versions.

Fluorinated Ethylene Propylene (FEP) and Perfluroalkoxy (PFA) are two other dielectrics that are often used when very thin walls are required like those on low impedance cables. Both FEP and PFA have properties that are similar to PTFE. Other materials, including polyethylene are available on special request.

Guide to Dielectric Selection

Dielectric Material	Dielectric Constant	Dissipation Factor	Phase Stability vs. Temperature	Maximum Service Temp. °C	Thermal Stability	RoHS Compliant
Solid PTFE	2.03	0.0002	Good	260	Good	Yes
Spline PTFE	1.35	0.0001	Very Good	260	Excellent	Yes
Low Density PTFE	1.70	0.0001	Very Good	260	Excellent	Yes
Ultra Low Density PTFE	1.45	0.0001	Very Good	260	Excellent	Yes
FEP	2.05	0.0010	Good	204	Good	Yes
PFA	2.06	0.0003	Good	260	Good	Yes

Selection Guide
The Outer Conductor



Function

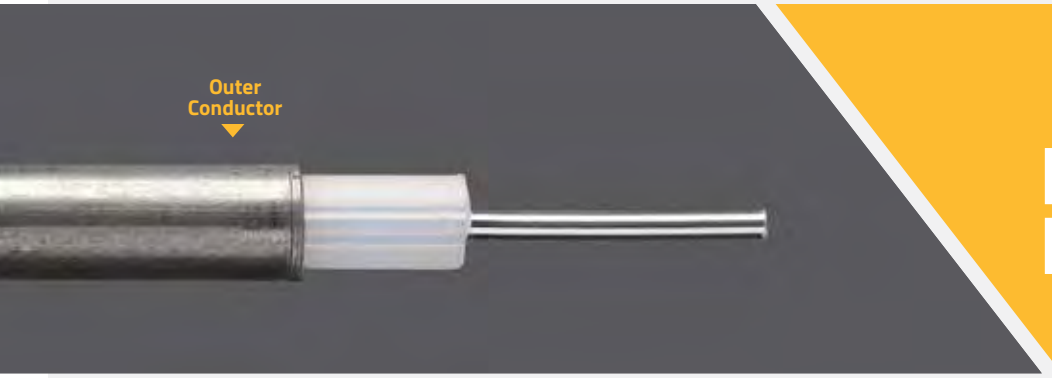
The outer conductor serves many purposes. It is the electrical shield which contributes to cable attenuation and controls RF leakage. Through precision mechanical tolerances, the outer conductor minimizes return loss (VSWR) by maintaining a constant characteristic impedance. The outer conductor is the primary strength member that keeps connectors firmly attached to the cable. It often provides environmental protection and determines the flexibility or how easy the cable can be formed or bent.

Materials

The most commonly used materials are copper and aluminum due to their low DC resistance. These materials can be in many forms such as tube for Semi-Rigid cable, tin coated braid for conformable cable, or a foil in high performance flexible cables. Material selection typically involves trade-offs between electrical performance, size, and flexibility.

Guide to Outer Conductor Selection

Outer Conductor Material	DC Resistance (Ω·in2/ft)	Microwave Frequency Conductivity Compared to Copper (Ratio)	Thermal Conductivity	Weight	Magnetic	Ease of Soldering	RoHS Compliant
Copper	10.4	1.0:1	Very High	Very High	No	Excellent	Yes
Aluminum	18.3	1.8:1	High	Low	No	Poor	Yes
Stainless Steel 304	464.6	44.8:1	Very Low	High	Slightly	Poor	Yes



PLATING & FINISHES

Plating and Finishes

Copper and aluminum conductors are often plated for additional corrosion protection and solderability. The most common plating materials are tin and silver. Both materials are very soft and ductile.

Silver has superior electrical conductive properties along with being very corrosive resistant to atmospheric oxygen, although vulnerable to tarnish by atmospheric sulfides and nitrates. Silver plating is the preferred inner conductor plating. The material is part of the conductive path inside the cable. For Semi-Rigid cables, silver plating the outer conductor is not recommended for high humidity or salt water environments due to its susceptibility to galvanic corrosion.

Tin is economical, corrosion resistant, has excellent solderability, and is the preferred plating for Semi-Rigid cable outer conductors. Tin plating can be prone to tin whiskers which are electrically conductive, crystalline structures of tin that sometimes grow from surfaces where tin is used as a final finish. Tin whiskers have been observed to grow to lengths of several millimeters. Tin whiskers have the potential to cause short circuits by bridging closely-spaced circuit elements maintained at different electrical potentials.

Other plating and finishes are available by special request.

Guide to Semi-Rigid Cable Outer Conductor Plating Selection

Plating Material	Specification	Part Number Suffix	Remarks	RoHS Compliant
Silver	ASTM B-700	SP	Excellent corrosion protection and solderability, not susceptible to silver whiskers, not recommended for high humidity or salt water environments	Yes
Tin	ASTM B-545	TP	Lowest cost, excellent corrosion protection and improves solderability, low melting point of 220° C, susceptible to tin whiskers	Yes
Tin-Lead (90/10)	SAE-AMS-P-81728	EDS9010	Very good corrosion protection and solderability, low melting point of 220° C, not susceptible to tin whiskers	No

MICRO-COAX Semi-Rigid COAXIAL CABLE

Semi-Rigid Cable Features & Benefits

Semi-Rigid coaxial cables are available in a wide variety of sizes, materials, and characteristic impedances. To be considered a Semi-Rigid coaxial cable, the cable must employ a solid metallic tube for the outer conductor. Most Semi-Rigid coaxial cables are less than a 0.250 inch in diameter, however some select cables are as large as 0.500 inch. A silver plated copper center conductor, polytetrafluoroethylene (PTFE) dielectric, and copper outer conductor are the most common materials. Impedances are available from 5 to 100 ohms. Typical maximum operating temperatures range from 125° to 250° C.

Semi-Rigid coaxial cables are used to transmit and receive microwave signals up to 110 GHz. These cables are the best pure microwave transmission medium available in the world.

- RF shielding in excess of -130 dB
- Lowest attenuation and lightest weight for any given geometry
- Unequalled impedance control and VSWR performance
- Smallest overall diameters available in a microwave cable
- Very tight bend radii allow utilization in the tightest configurations
- Environmentally sealed with no concern over jacket cuts or abrasions
- Numerous connector options available off-the-shelf from many different suppliers

Because Semi-Rigid coaxial cables can be precisely formed, they allow maximum packaging efficiency with no wasted space. While Semi-Rigid cables will hold their shape once formed, most are still pliable enough to provide some flexibility during system integration.

Semi-Rigid coaxial cables are the benchmark for which all other coaxial cables are compared.

Typical Applications for Semi-Rigid Coaxial Cable

Semi-Rigid coaxial cable finds applications from very low frequencies through 110 GHz.

Almost any system operating above 500 MHz and in need of good operational performance and total shielding should use Semi-Rigid coaxial cable including defense electronics, test & measurement instrumentation, medical electronics, telecommunications, and space flight systems among other precision applications. In componentry, Semi-Rigid coaxial cable is used in oscillators, amplifiers, printed circuit boards, delay lines, and capacitor sections.

The Micro-Coax Advantage

Micro-Coax represents nearly 100 years of combined experience between the two original Semi-Rigid coaxial cable companies: Uniform Tubes, Inc. and Precision Tubes, Inc. The "UT" prefix in our part numbers is recognized around the world for its legacy of quality and reliable performance.

Micro-Coax is highly vertically integrated. Besides manufacturing all the cable it sells, Micro-Coax also extrudes the PTFE dielectric, draws down and plates the copper tubing for the outer conductor, straightens, and marks the cable all in-house. This vertical integration gives Micro-Coax more control over the raw material quality needed to make a high performance microwave cable and provides quick turn capability. It also allows Micro-Coax to be the Semi-Rigid cable cost leader.

Unlike many Semi-Rigid cable manufacturers, Micro-Coax Semi-Rigid cable is built in straight lengths* (not coils). Building cable in straight lengths allows better mechanical tolerance control, and more importantly, better control of the adhesion between the conductors and the dielectric. This is true even when employing secondary operations such as bending, coiling, temperature cycling, soldering, or stripping the outer conductor when preparing for connector installation. In addition, Micro-Coax is the only Semi-Rigid Cable manufacturer that marks its cable with our name, part number, and lot number for easy traceability.**

With the largest selection of Semi-Rigid coaxial cables in the industry, Micro-Coax has a solution for all of your cable configuration needs. Our extensive line of Semi-Rigid coaxial cable include:

- MIL-DTL-17 certified cables.
- Standard copper jacketed cables ranging from 0.013 to 0.390 inch and impedances from 5 to 100 ohms.
- Low loss cables employing a low density PTFE dielectric for improved attenuation, phase stability, and increased temperature range.
- Lightweight tin plated aluminum jacketed cables that can be hand formed.
- Stainless steel jacketed cables for cryogenic and medical applications where either low thermal conductivity or hypoallergenic qualities are required.

*For lengths under 21 feet only.
**For cable diameters of 0.085 inch and larger only.

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

UT — 141 C — 75 — AL — TP — LL

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

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

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

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
	90.0 GHz	1,247.3	762.1	525.5	525.5	525.5
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

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

\1 Add "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
	90.0 GHz	525.5	391.3	391.3	391.3	391.3	391.3
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

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	-	-	-
	90.0 GHz	400.9	-	-	-	-
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	-	-	-	-

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
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	-	-	-	-	-
	90.0 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	-	-	-	-	-

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

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					
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
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	-	-	-	-	-
	90.0 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	-	-	-	-	-

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

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	-	-	-	-	-
	90.0 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	-	-	-	-	-

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	-	-	-
	90.0 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	-	-	-
	90.0 GHz	-	-	-

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	-	-	-
	90.0 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	-	-

Micro-Coax Description		UT-141A-AL	UT-141A-AL-TP	UT-250C-AL-TP
MIL-DTL-17 Description		UT-141-SA-AL-M17	UT-141-SA-AL-TP-M17	-
MIL-DTL-17 Part Number		M17/133-00008	M17/133-00009	-
DIMENSIONS	Units			
Outer Conductor Diameter	inch	0.141 ± 0.001	0.141 +0.002/-0.001	0.250 +0.003/-0.002
	millimeter	3.581 ± 0.025	3.581 +0.051/-0.025	6.350 +0.076/-0.051
Dielectric Diameter	inch	0.1175 ± 0.0010	0.1175 ± 0.0010	-
	millimeter	2.985 ± 0.025	2.985 ± 0.025	-
Center Conductor Diameter	inch	0.0362 ± 0.0007	0.0362 ± 0.0007	0.0641 ± 0.0010
	millimeter	0.9195 ± 0.0178	0.9195 ± 0.0178	1.6281 ± 0.0254
Straight Length (Maximum)	feet	20	20	20
	meter	6.10	6.10	6.10
Coiled Length (Maximum)\1	feet	150	150	150
	meter	45.72	45.72	45.72
MATERIALS				
Outer Conductor		Aluminum	Aluminum	Aluminum
Outer Conductor Plating		None	Tin	Tin
Dielectric		PTFE	PTFE	PTFE
Center Conductor		SPCW	SPCW	SPC
RoHS Compliant		Yes	Yes	Yes
MECHANICAL CHARACTERISTICS				
Outer Conductor Integrity Temp.	°C	225	225	225
Operating Temperature (Max.)	°C	225	225	225
Inside Bend Radius (Minimum)	inch	0.125	0.125	0.250
	millimeter	3.175	3.175	6.350
Weight	lbs/100 ft	1.93	1.93	6.18
	kg/100 m	2.90	2.90	9.28
ELECTRICAL CHARACTERISTICS				
Characteristic Impedance	ohm	50.0 ± 1.0	50.0 ± 1.0	50.0 ± 1.0
Capacitance	pF/ft	29.0	29.0	29.0
	pF/m	95.2	95.2	95.2
Velocity of Propagation	%	70	70	70
Corona Extinction Voltage	VRMS @ 60 Hz	1900	1900	3000
Voltage Withstanding	VRMS @ 60 Hz	9600	9600	16800
Higher Order Mode Frequency	GHz	34	34	19
Attenuation (dB/100 ft, Typical)	0.5 GHz	7.9	7.9	4.9
	1.0 GHz	11.5	11.5	7.2
	5.0 GHz	28.7	28.7	18.4
	10.0 GHz	43.3	43.3	28.4
	18.0 GHz	63.0	63.0	42.0
	26.5 GHz	80.3	80.3	-
	40.0 GHz	-	-	-
	50.0 GHz	-	-	-
	65.0 GHz	-	-	-
	90.0 GHz	-	-	-
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	557.7	571.7	1,395.1
	1.0 GHz	388.5	398.2	961.1
	5.0 GHz	163.4	167.5	387.6
	10.0 GHz	110.6	113.4	255.3
	18.0 GHz	78.5	80.5	176.2
	26.5 GHz	62.2	63.8	-
	40.0 GHz	-	-	-
	50.0 GHz	-	-	-
	65.0 GHz	-	-	-
	90.0 GHz	-	-	-

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

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
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	-

\1 225 deg C for tin plated outer conductor

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
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	-	-	-
	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	-	-
	65.0 GHz	-	-	-
	90.0 GHz	-	-	-

\1 225 deg C for tin plated outer conductor

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
	90.0 GHz	471.3	314.4	-	-
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	-	-

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	-	-	-
	90.0 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
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	-	-

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, theses 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
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	-	-
	90.0 GHz	285.9	-	-	-
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	-	-	-

\1 225 deg C for tin plated outer conductor

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	-	-
	90.0 GHz	1,878.9	5,293.4	3,091.1	-	-
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	-	-

Micro-Coax Description		UT-085B-SS	UT-141-SS	UT-141B-SS
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	-	-	-
	90.0 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	-	-	-	-
	90.0 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	-	-	-	-

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
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	-	-	-	-
	90.0 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	-	-	-	-

\1 225 deg C for tin plated outer conductor

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
	90.0 GHz	1,430.4	-	-	-	983.6
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

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
Cener 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	-
	90.0 GHz	-	738.1	641.1	641.1	-
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	-

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	-
	90.0 GHz	-	398.6	-	-	-	-
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	-	-	-	-

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	-
	90.0 GHz	-	-	-	-	640.0	-
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 ¼" 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

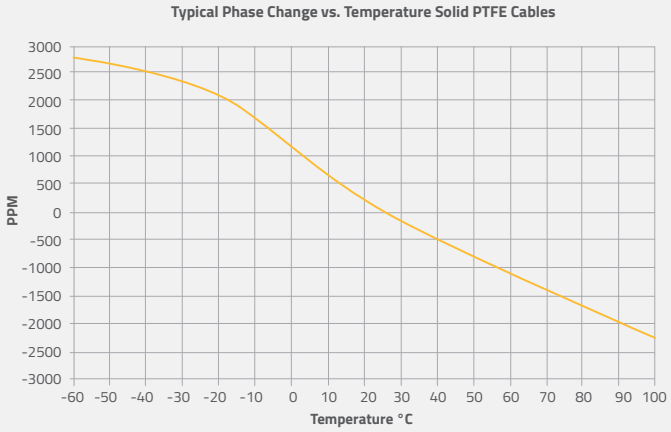
Exposure of cables with PTFE insulation to elevated temperatures causes stressing of the outer conductor since the thermal expansion coefficient of the core insulation is about ten times greater than that of the metal conductors. The effects of this outer conductor stressing require distinction of two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

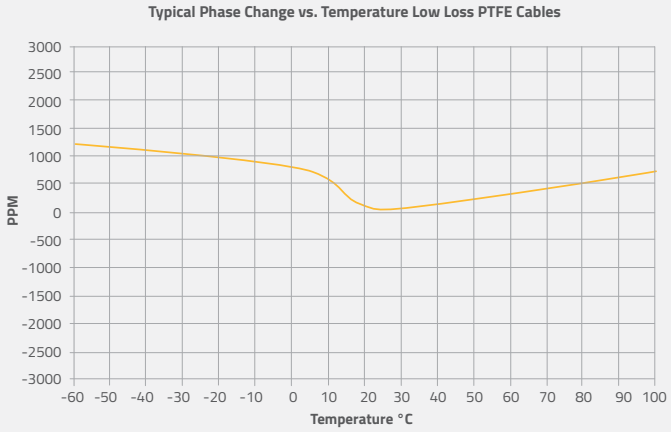
Recommended Maximum Operating Temperature

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).





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
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

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

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

M-FLEX®
Flexible Cable

M-FLEX Microwave coaxial cables are a family of flexible cables designed to accept connectors designed for Semi-Rigid cable. Unlike other single or double braided "RG" type flexible cables, M-FLEX cables are true microwave cables capable of operating to frequencies of 26.5 GHz. The extended frequency range is the result of a precision helically wrapped silver plated copper foil inner shield. This inner shield allows for outstanding flexibility while providing 100% coverage.

This precision approach results in unsurpassed improvements in shielding, durability and lower cost compared to similar products. M-FLEX is constructed from an improved solid PTFE dielectric core underneath a precision wound layer of metalized tape for nearly ideal microwave shielding. Strength and protection are then added via a round wire braid and FEP outer jacket. The result is a cable with true microwave performance and excellent mechanical characteristics. M-FLEX is also easy to use since it strips with standard tools and accepts standard solder-on connectors designed for Semi-Rigid cable.

M-FLEX FEATURES & BENEFITS

High Performance
- Helical shield for improved loss and phase stability
- Same line size as Semi-Rigid cable to optimize assembly loss and VSWR
- RF Shielding greater than 90 dB to minimize cross talk and maximize system performance

Easy to Use
- Fully flexible for ease of installation
- Uses standard machines for cutting and stripping, no added investment in time or equipment
- Designed for standard solder-on connectors, which are readily available and easy to use

Availability
- Stock
- Packaged on spools in lengths of 50 to 1000 feet to meet a wide variety of volume requirements
- Metric lengths available for added flexibility
- Low-smoke, zero halogen jacket options to meet specific requirements
- Pre-assembled with connectors upon request for added convenience

Micro-Coax Description		TGE055D	HFE100D	HFE160D
Dimensions	Units			
Cable Diameter	inch	0.055 ± 0.004	0.100 ± 0.004	0.160 ± 0.004
	millimeter	1.397 ± 0.102	2.540 ± 0.102	4.064 ± 0.102
Outer Shield Diameter	inch	0.044 ± 0.003	0.082 ± 0.003	0.138 ± 0.003
	millimeter	1.118 ± 0.076	2.083 ± 0.076	3.505 ± 0.076
Dielectric Diameter	inch	0.034 ± 0.001	0.066 ± 0.002	0.118 ± 0.002
	millimeter	0.864 ± 0.025	1.676 ± 0.051	2.997 ± 0.051
Center Conductor Diameter	inch	0.0113 ± 0.0005	0.0201 ± 0.0005	0.0359 ± 0.0005
	millimeter	0.287 ± 0.0127	0.5105 ± 0.0127	0.9119 ± 0.0127
Length (Minimum)	feet	25	25	25
	meter	7.6	7.6	7.6
Materials				
Outer Jacket		Blue PFA	Light Aqua FEP	Light Aqua FEP
Outer Shield		SPC	SPC	SPC
Inner Shield		SPC	SPC	SPC
Dielectric		PTFE	PTFE	PTFE
Center Conductor		SPCW	SPCW	SPCW
RoHS Compliant		Yes	Yes	Yes
Mechanical Characteristics				
Temperature Range	°C	-65 to 125	-65 to 125	-65 to 125
Inside Bend Radius (Minimum)	inch	0.125	0.250	0.500
	millimeter	3.175	6.350	12.700
Weight	lbs/100 ft	0.35	1.14	2.90
	kg/100 m	0.53	1.71	4.35
Electrical Characteristics				
Characteristic Impedance	ohm	50	50	50
Capacitance	pF/ft	29	29	29
	pF/m	95	95	95
Velocity of Propagation	%	70	70	70
Shielding Effectiveness	dB	> 70	> 90	> 90
Maximum Voltage	VRMS @ 60 Hz	1000	1500	1900
Signal Delay	ns/ft	1.45	1.45	1.45
	ns/m	4.76	4.76	4.76
Frequency Range	GHz	DC - 26.5	DC - 18	DC - 18
Attenuation (dB/100 ft, Typical)	0.5 GHz	25.9	13.4	7.6
	1.0 GHz	37.0	19.2	10.9
	5.0 GHz	84.8	45.2	26.8
	10.0 GHz	122.5	66.4	40.4
	18.0 GHz	168.1	92.9	58.0
	26.5 GHz	207.9	116.7	74.2
Power (Watts CW @ 20 °C, Maximum)	0.5 GHz	98.1	307.6	788.3
	1.0 GHz	59.0	215.5	548.5
	5.0 GHz	30.2	92.7	229.8
	10.0 GHz	21.0	53.8	155.1
	18.0 GHz	15.4	46.0	109.8
	26.5 GHz	12.5	37.0	86.9

EQUATIONS & SYMBOLS

CHARACTERISTIC IMPEDANCE

$$Z_o = \frac{138}{\sqrt{e}} \cdot \log\left(\frac{D}{d}\right) \text{ ohms}$$

DELAY

ENGLISH	METRIC
$T = 1.017 \cdot \sqrt{e}$ ns/ft	$T = 3.336 \cdot \sqrt{e}$ ns/m
$L = \frac{0.984 \cdot T}{\sqrt{e}}$ ft	$L = \frac{0.300 \cdot T}{\sqrt{e}}$ m

CUTOFF FREQUENCY

$$f_{co} = \frac{7.514}{\sqrt{e} \cdot (D + d)} \text{ GHz}$$

VELOCITY OF PROPAGATION

$$VP = \frac{1}{\sqrt{e}} \cdot 100 \quad \% \text{ OF FREE SPACE VELOCITY}$$

CABLE RISE TIME (10% TO 90% AMPLITUDE)

$$T_r = 1.315 \cdot A^2 \cdot L^2 \cdot 10^{-2} \text{ ps}$$

ATTENUATION (THEORETICAL) AT 20° C

$$\propto = \frac{0.434 \cdot \sqrt{f}}{Z_o}\left(\frac{\sqrt{R_1}}{d} + \frac{\sqrt{R_2}}{D}\right) + 2.78 \cdot f \cdot \sqrt{e} \cdot F_p \text{ dB/100ft}$$

SYMBOL KEY

$\propto$	Attenuation
A	Attenuation in db/100 feet at 1 GHz
d	Center conductor diameter, inches
D	Dielectric diameter, inches
e	Dielectric constant
f	Frequency in Mhz
f_{co}	Cutoff frequency in GHz
F_p	Dielectric power factor
L	Length
P^s	Picoseconds
R_1	Ratio of center conductor conductivity to copper
R_2	Ratio of outer conductor conductivity to copper
T	Time in nanoseconds (ns)
T_r	Rise time in picoseconds (ps)
VP	Velocity of Propagation
Z_o	Characteristic impedance

ORDERING & SERVICE INFORMATION

How to Order

Please order by catalog part number and/or drawing number adding any special requirements, such as plating. Lengths required, straight or coiled, must be given when purchasing any cable type.

Where to Order

Address all purchase orders and communications to:

In Europe : France
P2M
Z.A. Buisson de la Couldre
8, allée des Châtaigniers - 78 190 Trappes
Phone: 01 30 62 64 64
Fax: 01 30 62 40 10
Email: sroussel@p2m.com or commercial@p2m.com
www.p2m.com

Terms

Formal price quotations remain in effect for 30 days unless otherwise agreed upon. Terms of payment are Net 30 Days, subject to approval of credit. Estimated shipment is based on material availability and factory capacity at time of quote and as such, is subject to prior sale.

MICRO-COAX®
PROVEN RELIABLE

Sample Policy

Samples are normally available for most standard stock items. A cable sample quantity of 2 feet is applicable. Non-stock items may be sampled depending on availability at the time of the request.

Source Inspection

Prices quoted are based on inspection at destination. A charge per day or part of a day applies to any order requiring source inspection.

Shipments

Unless specific instructions accompany the order, shipment is made FOB Pottstown, PA. Micro-Coax will use its judgment as to the best method of shipment. Micro-Coax reserves the right to ship COD or upon receipt of advance payment if satisfactory credit cannot be established. All claims for shortages must be made within 10 days after receipt of material from Micro-Coax.

Return Policy

Please contact Micro-Coax for an RMA number before returning product. The RMA number should be referenced on the packing container and all associated paperwork.

Non-Recurring Engineering Charges

Non-recurring engineering charges, if any, reimburse Micro-Coax in part for tools and fixtures needed for a particular job. They do not give the customer any claim or right to remove these tools from the Micro-Coax plant or have say in the use or disposition of these tools. There will be no charge for upkeep or repair of tools and fixtures. Upon completion of order, Micro-Coax may dispose of said tools and fixtures as it sees fit.

OTHER PRODUCTS FROM MICRO-COAX

UTiFLEX® Cable Assemblies

- Low Loss Cable Assemblies
  - Outstanding mechanical integrity without sacrificing insertion loss, phase stability or SWR
- Miniature Low Loss Assemblies
  - Superior electrical performance in the smallest possible package for fixed installations.
- Ultra Low Loss Cable Assemblies
  - Optimized to provide the lowest insertion loss available in a flexible cable assembly
  - Improved electrical stability, greater resilience and flexibility

ARACON® Brand Metal Clad Fiber

- Ultra Lightweight braiding material
- Improved high frequency shielding
- Increased flexibility

Coaxial Delay Lines

- Extremely reliable way to generate short delays needed by base station amplifiers, radar, ECM, instrumentation, and many other applications
- Standard delays from 5 to 200 ns
- Wide choice of custom configurations
- Low loss cable options offer excellent phase stability and a high volume solution for telecommunications applications

Airframe Cables

- Airframe Cable Harnesses
  - Many available options for combining cable assemblies into harnesses
- Multipin Connector Housings
  - Size 8, 12 and 16 coaxial contacts
  - Various MIL-DTL-38999 compliant options
  - Quick disconnect
  - Blind mate
  - High Density

Space Flight Products

- UTiFLEX® spaceflight Cable Assemblies
  - Optimized for spaceflight applications
  - Provide the lightest weight, and lowest insertion loss in a flexible cable construction
  - Utilizes ARACON® brand metal clad fiber for outer shield, an ultra low density PTFE for the dielectric and a TEFZEL® jacket
- Spline Dielectric Semi-Rigid Cables

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