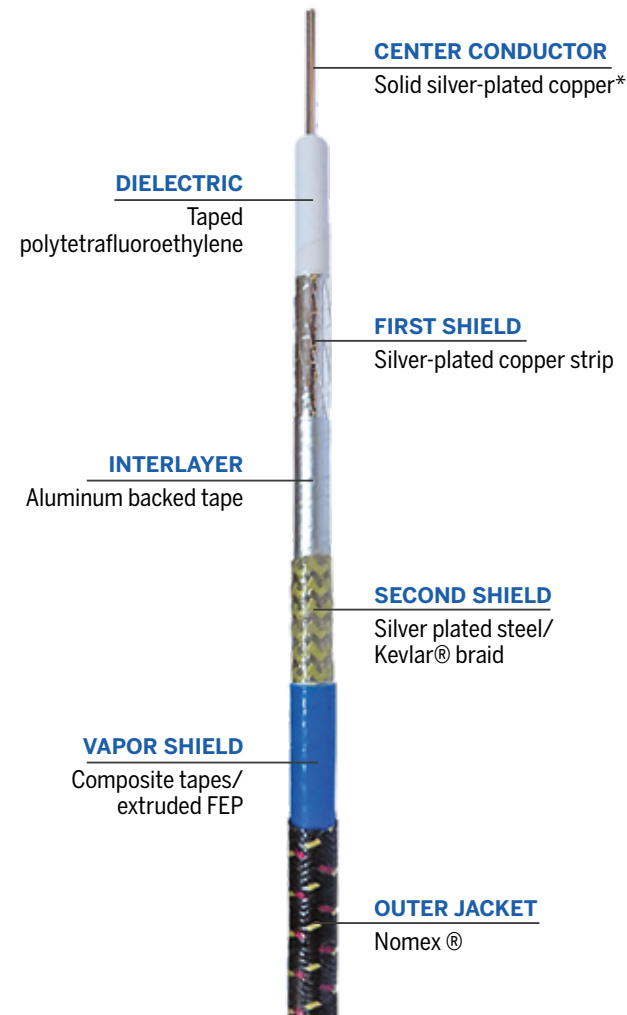


MILTECH® LITE CABLE ASSEMBLIES

The Times Qualified MilTech Lightweight (MTL) family of hermetically sealed flexible RF and microwave transmission line assemblies are optimized and qualified for commercial, military and other demanding applications. The proprietary spiral strip conductor returns the lowest loss and superior phase tracking without sacrificing flexibility! MTL cables provide the same electrical performance as MilTech cables but with lighter weights – ideal for application where both low loss and reduced weight are required. MTL cable assemblies exhibit extremely long life in the rigorous environments found in airborne, shipboard and ground based applications. Times Microwave Systems designs and manufactures the cable, the connectors, and the cable/connector junction. This engineered integration of cable and connectors makes Times cable assemblies unique within the RF interconnect industry. The control of the cable/connector interface guarantees the right mix of electrical and mechanical characteristics, strength and durability. These electromechanically optimized transitions are also engineered to meet a 1 x 10⁻⁵ cc/sec/ft vapor seal that ensures longevity within airframe, shipboard, military ground and other harsh environments.



* Solid silver-plated copper covered steel on MTL 130.
Stranded silver-plated copper on MTL 480

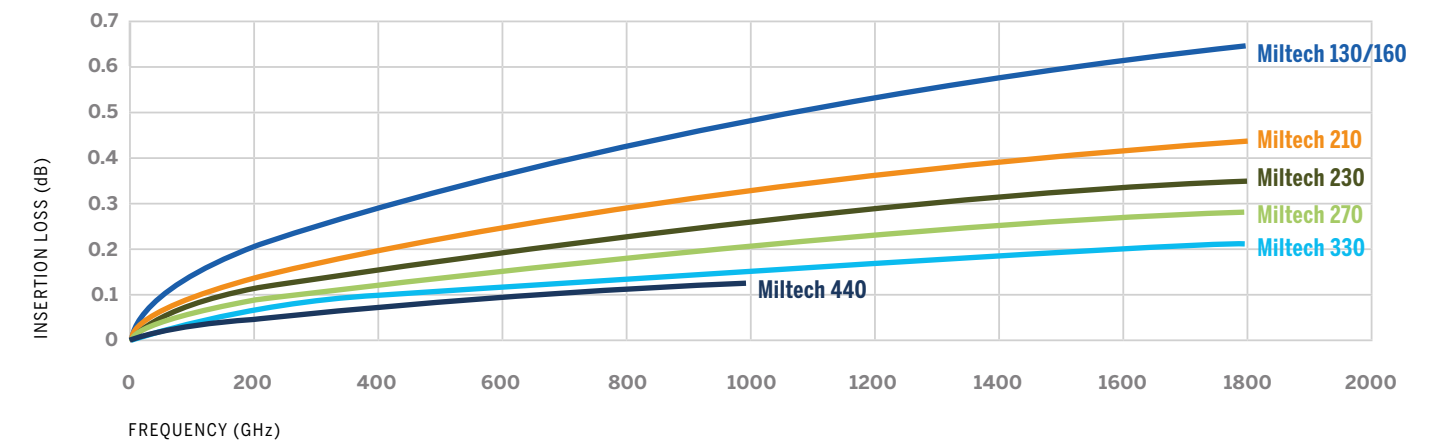
Specifications

Cable Type	Recommended Cable Clamp	Cable Diameter (In./mm.)	Loss@ 18 GHz (dB/ft.)	Minimum Bend Radius (In./mm.)	Mass
MT 130	MS21919-3	0.13/3.3	0.65	0.65/16.5	0.020lb/ft (30g/m)
MT 160	MS21919-3	0.16/4.1	0.65	0.65/16.5	0.021lb/ft (31g/m)
MT 210	MS21919-4	0.21/5.3	0.44	0.95/24.1	0.030lb/ft (45g/m)
MT 230	MS21919-4	0.23/5.8	0.36	1.03/26.2	0.037lb/ft (55g/m)
MT 270	MS21919-5	0.270/6.9	0.29	1.25/31.8	0.049lb/ft (73g/m)
MT 330	MS21919-6	0.34/8.6	0.22	1.75/44.5	0.068lb/ft (101g/m)
MT 440	MS21919-7	0.435/11.0	0.13 (@10 GHz)	2.50/63.5	0.135lb/ft (201g/m)

MILTECH® LITE CABLE ASSEMBLIES Insertion Loss

The following graph illustrates the cable insertion loss for each MilTech-Lite cable at specific frequencies. The insertion loss at intermediate frequencies can be calculated from the formula

below for each cable type. The loss for each pair of connectors must be added to the overall cable loss to determine the insertion loss for the complete cable assembly.



Calculation

$$IL = k1 \times \sqrt{FMHz} + K2 \times (FMHz) \text{ dB per 100 feet}$$

Where FMHz is the frequency in MHz

Connector Loss

Insertion Loss @23°C. For angled connectors add 0.1dB/conn

Cable Type	K1	K2
MT 130	0.46466	0.0001463
MT 160	0.46466	0.0001463
MT 210	0.31165	0.0001337
MT 230	0.2462	0.000144
MT 270	0.1946	0.0001337
MT 330	0.1442	0.000134
MT 440	0.1129	0.0001354

Frequency GHz	dB/pr
500	0.075
1000	0.10
2000	0.15
4000	0.20
6000	0.22
8000	0.25
10000	0.27
12000	0.28
14000	0.30
16000	0.31
18000	0.33