

DETAILED PERFORMANCE SPECIFICATIONS

Times qualified *MILTECH* flexible RF and microwave transmission line assemblies described here meet the following performance criteria:

Electrical Characteristics

Tested frequency range	0.5 to 18 GHz (10 GHz for <i>MILTECH</i> 480)
Characteristic impedance	50 Ohms
VSWR	1.4:1 maximum; add 0.05 per angle connector
Insertion loss	see following pages
Velocity of propagation	76% Nom. For <i>MILTECH</i> 210, 230, 265 80% Nom. For <i>MILTECH</i> 340/340XL 78% Nom. For <i>MILTECH</i> 480
Maximum operating voltage	2500 Volts (1000 Volts with SMA) 1000 Volts for <i>MILTECH</i> 210 and 230
RF leakage	-90 dB maximum per foot over tested Frequency range including connectors
Insertion loss stability	In accordance with MIL-T-81490
VSWR stability	In accordance with MIL-T-81490

Mechanical Characteristics

Temperature range	-55°C to +200°C
Chemical resistance	In accordance with MIL-T-81490 and MIL-C-87104
Flexure	In accordance with MIL-T-81490 and MIL-C-87104
Salt fog	In accordance with MIL-T-81490 and MIL-C-87104
Humidity	In accordance with MIL-T-81490 and MIL-C-87104
Abrasion resistance	In accordance with MIL-T-81490 and MIL-C-87104
Cable/connector tensile strength	45 lbs. minimum (<i>MILTECH</i> 210, 230, 265) 75 lbs. minimum (<i>MILTECH</i> 340/340XL, 480)
Vapor leakage	1×10^{-5} cc/sec/ft of Helium maximum including connectors
Vibration	In accordance with MIL-T-81490
Shock	In accordance with MIL-T-81490

Assembly Performance Overview

Electrical characteristics – All of the cable assembly styles noted above provide low loss, low VSWR and inherently stable performance. These sealed transmission line products provide the longest service life available.

Mechanical characteristics – The cable assemblies are designed, manufactured and tested to provide reliable interconnections in the most demanding installations and environments. This unparalleled combination of bending, torque and tensile strengths guarantee a long service life.

Insertion loss - Following is a graph of loss vs. frequency for *MILTECH* cables and equations to be used for calculating the loss at specific frequencies.

Testing - Each cable assembly is measured for insertion loss and VSWR over the test frequency range.

Connectors - All of the connectors used in these cable assemblies are of precision stainless steel design which meet or exceed the requirements of MIL-PRF-39012. They are uniquely designed to provide maximum electrical, mechanical and environmental performance.