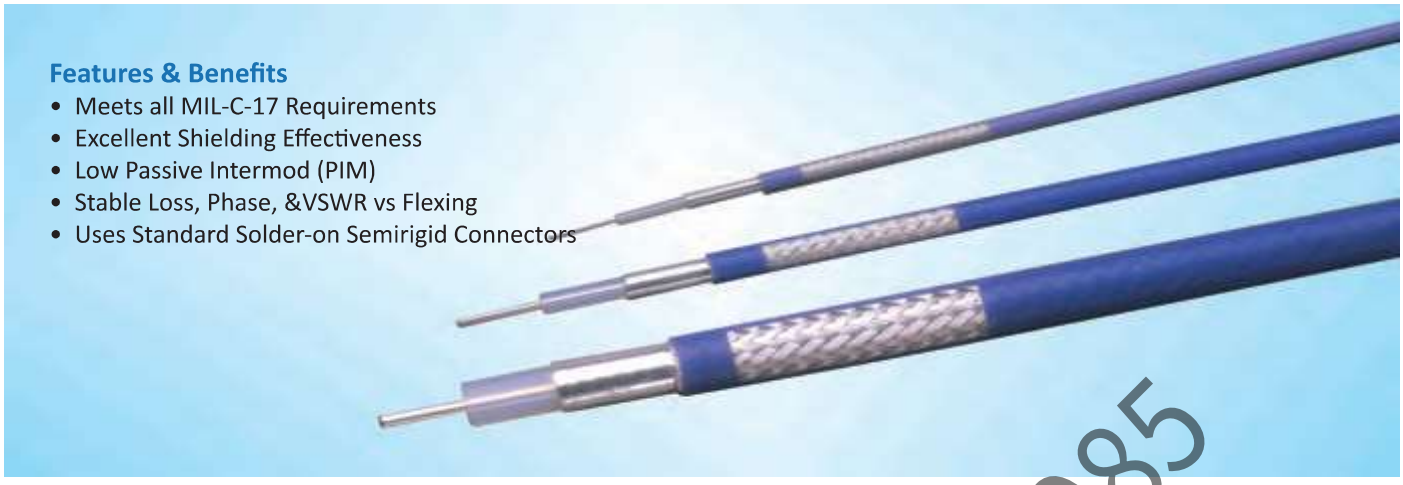
TFlex®



Features & Benefits

- Meets all MIL-C-17 Requirements
- Excellent Shielding Effectiveness
- Low Passive Intermod (PIM)
- Stable Loss, Phase, &VSWR vs Flexing
- Uses Standard Solder-on Semirigid Connectors

TFlex® employs a thin helical wrap of silver plated copper tape and overall braid sized such that standard solder-on connectors can be used.

TFlex® was developed 10 years ago and have been widely adopted by the commercial and military OEM's.

Some of the key characteristics of TFlex® are:

Passive Intermod – typically > -150dBc (2x20 watt carriers)

Shielding Effectiveness – comparable to standard semirigid and like semirigid is beyond measurable limits.

Small/Lightweight – same size but lighter weight than standard CL semirigid coax.

Phase Stable – the helical tape outer conductor minimized electrical length change with temperature to yield substantial improvement over equivalent size flexible cables.

Low Loss – can achieve loss comparable to standard CL semirigid coax.

Attenuation Stability – silver plated outer conductor prevents oxidation of the conductors thereby minimizing attenuation change vs time.

Power Handling – comparable to standard CL semirigid.

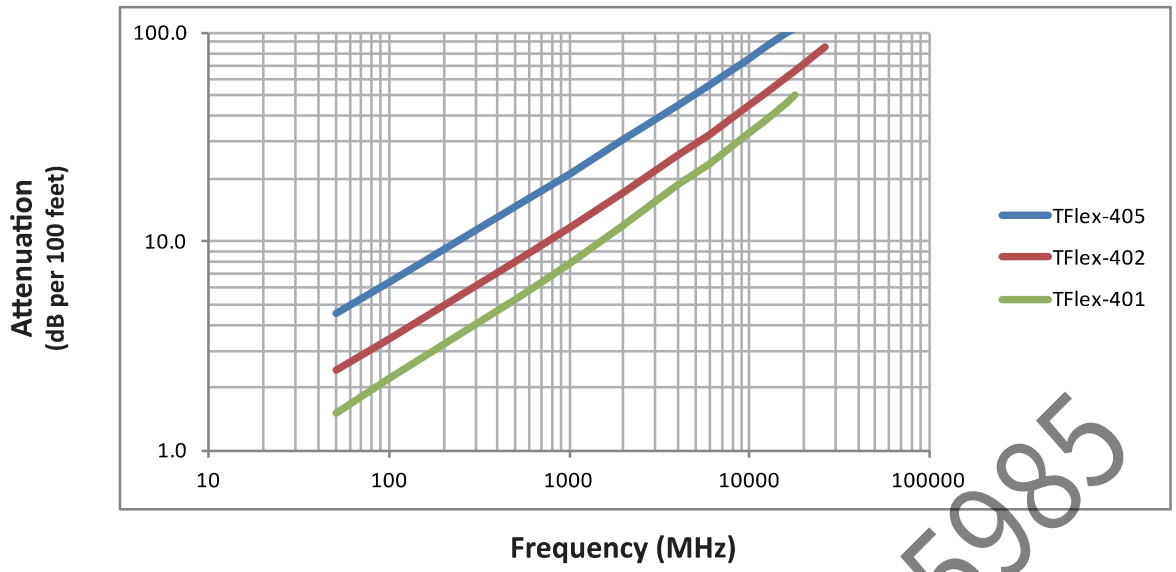
Corrosion Resistance – jacketing of the cable with FEP provides excellent protection when cable is deployed in a corrosive environment.

Formability – the flexible nature of TFlex eliminates the need for hand or precision machine bending. TFlex is preterminated in it's approximate desired length and just "plugged in" using the most convenient/desirable routing.

Connectors (Solder-on) – are available from a variety of sources to fit standard semirigid coax and TFlex.

Cable	AA number MI Number	Conductor in (mm)	Dielectric in (mm)	Shields in (mm)	Jacket in (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Temp. Range F (C)	Min.Bend Radius in (mm)	Cut-off Frequency (GHz)
TFlex-405	AA-7741 51670	SCCS 0.020 (0.51)	PTFE 0.064 (1.63)	SC 0.085 (2.16)	Blue FEP 0.104 (2.64)	0.015 (0.022)	50 +/-1 70%	29.3 (96.1)	-85 +267 (-65 +125)	0.25 (6.4)	61.87
TFlex-402	AA-7740 51688	SC 0.036 (0.91)	PTFE 0.118 (3.00)	SC 0.141 (3.58)	Blue FEP 0.160 (4.06)	0.033 (0.049)	50 +/-1 70%	29.3 (96.1)	-85 +267 (-65 +125)	0.25 (6.4)	33.86
TFlex-401	AA-8642 51778	SC 0.064 (1.63)	PTFE 0.208 (5.28)	SC 0.249 (6.32)	Blue FEP 0.270 (6.9)	0.095 (0.142)	50 +/-1 70%	29.3 (96.1)	-85 +267 (-65 +125)	0.25 (6.4)	19.16

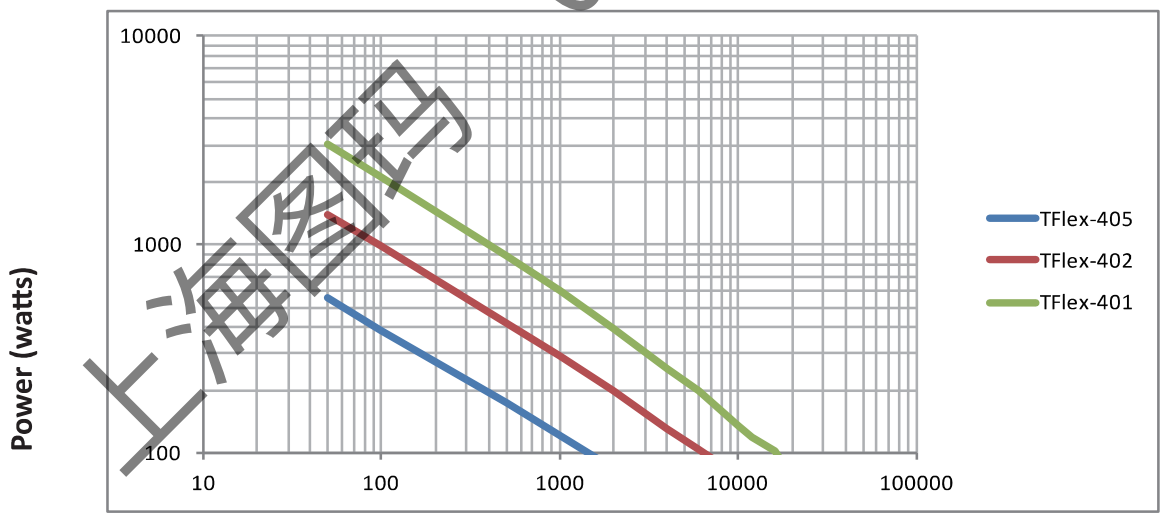
Attenuation vs. Frequency (Typical)



Frequency (MHz)	50	100	500	1,000	2,000	4,000	6,000	10,000	12,000	16,000	18,000	26,500	40,000	K1	K2
TFlex-405	4.5	6.4	14.7	21.1	30.5	44.6	56.0	75.0	83.4	98.9	106.1	134.4	174.0	0.63000	0.00120
TFlex-402	2.4	3.4	8.0	11.6	17.1	25.7	32.8	45.0	50.6	60.9	65.9	85.5		0.33000	0.00120
TFlex-401	1.5	2.2	5.3	7.8	11.8	18.8	23.5	33.0	37.4	45.8	50.0			0.21000	0.00120

Attenuation at Any Frequency = [k1 x SQRT (Fmhz)] + [k2 x Fmhz]; dB per 100 feet

Power Handling vs. Frequency (Maximum)



Frequency (MHz)	50	100	500	1,000	2,000	4,000	6,000	10,000	12,000	16,000	18,000	26,500	40,000
TFlex-405	560	390	173	121	85	59	47	36	33	28	26	21	17
TFlex-402	1386	980	418	290	198	132	105	78	69	58	54	41	
TFlex-401	3010	2095	885	595	394	257	198	136	120	102	88		

Watts; Sea Level; Ambient +40C; VSWR 1:1