

## 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.

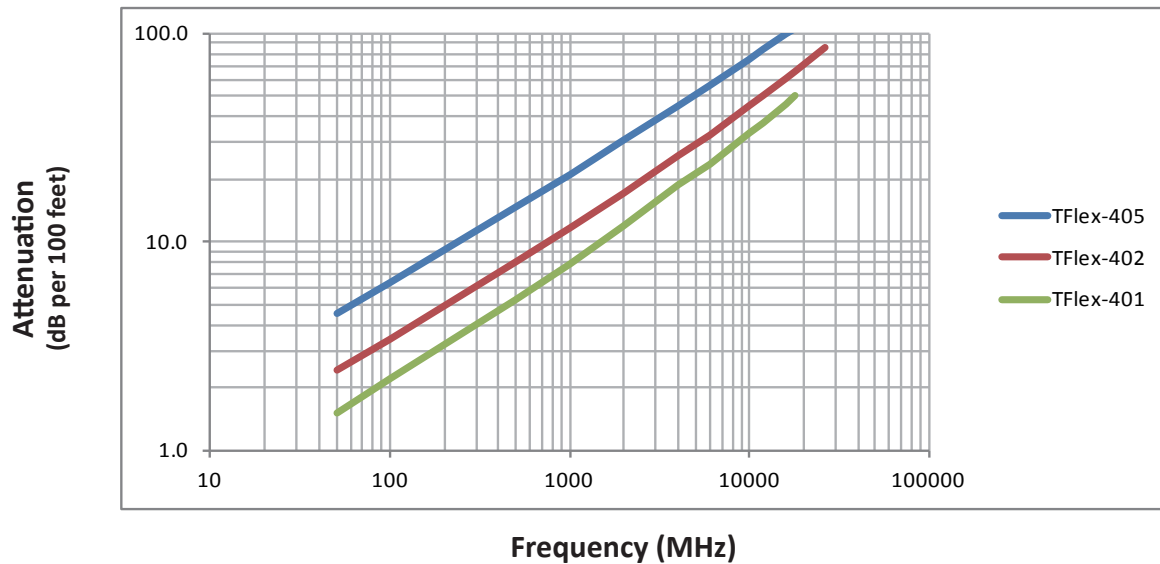
**Corrosion Resistance** – jacketing of the cable with FEP provides excellent protection when cable is deployed in a corrosive environment.

**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

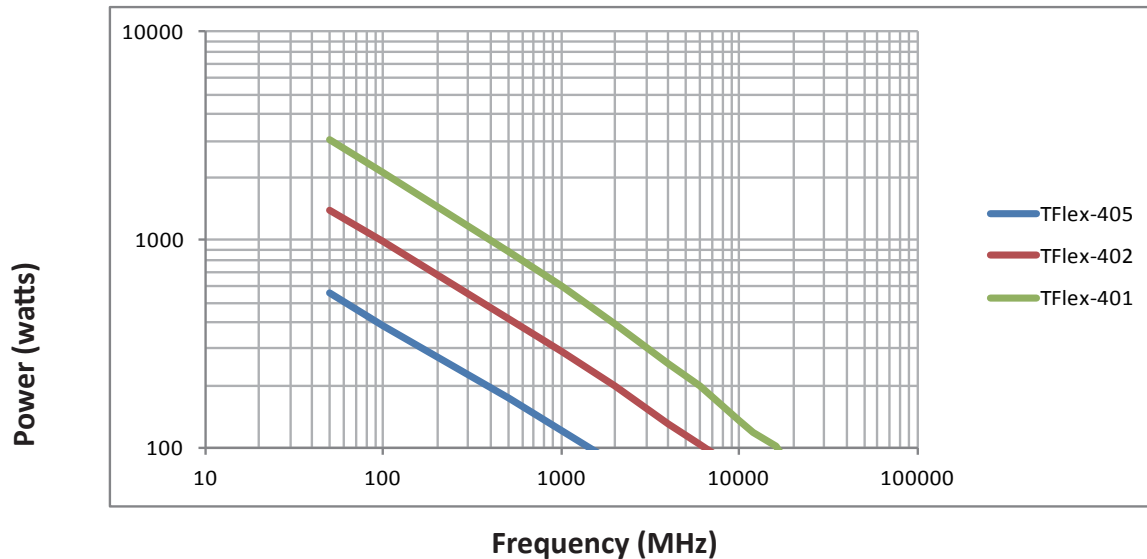
### Attenuation vs. Frequency (Typical)



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

# Connectors & Cable Assemblies

Times Microwave Systems designs and manufactures high performance RF and Microwave coaxial cables, connectors and cable assemblies for military, aerospace, telecommunications, compliance testing and industrial applications. We are an engineering organization committed to innovation and development of new products for demanding applications, but also a fully integrated manufacturer of cable, connectors and assemblies with cost effective production facilities and the resources of Amphenol behind us.

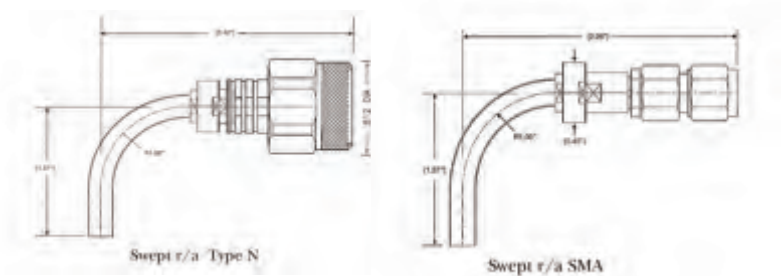
We offer a full range of connectors with all standard interfaces designed to match our microwave and provide optimum performance. Our integrated design and production expertise positions to provide custom cable assemblies to meet your requirements including phase matching, special testing, custom connectors, improved strain relief, armoring, special markings, traceability, color coding, kitting and other special requirements.

Here is the summary of the connectors we have developed for microwave cables:

Cable Connector	HF-160	HF-190	HF-290	SFT-316	SFT-142	SFT-205	SFT-304	TFlex-405	TFlex-402
SMA Male Straight	CF	3190-2722	3190-2604	3190-2738	3190-2793	3190-2289	3190-2288	3190-2711	3190-6248
SMA Male Right Angle	CF	3190-6042	CF	3190-2952	CF	3190-2733	CF	3190-2901	3190-2902
SMA Male Swept	CF	3190-6105	CF	CF	CF	3190-6089	CF	CF	CF
N Male Straight	CF	3190-2710	3190-2605	3190-2996	3190-2794	3190-2291	3190-2290	CF	3190-2921
N Male Right Angle	CF	CF	3190-6117	CF	CF	CF	CF	CF	CF
N Male Swept	CF	3190-6106	CF	CF	CF	3190-6090	CF	CF	CF
TNC Male Straight	CF	3190-2723	3190-2606	3190-2994	CF	3190-2676	3190-2584	CF	CF
TNC Male Swept	CF	3190-6107	CF	CF	CF	3190-6091	CF	CF	CF
3.5MM Male Straight	CF	3190-6044	CF	CF	CF	3190-2925	CF	CF	CF
3.5MM Male Swept	CF	3190-6108	CF	CF	CF	3190-6156	CF	CF	CF
2.92MM Male Straight	3190-6269	CF	CF	CF	CF	CF	CF	3190-6225	3190-2842
2.92MM Male Swept	3190-6308	CF	CF	CF	CF	CF	CF	CF	CF
Straighteel Armor Option	MI-10642	MI-10630	MI-10635	CF	CF	MI-10630	CF	CF	CF

\*CF: Consulting Factory

Swept option: Swept replaceable screw tube is available to satisfy the right angle requirement with an effective cost, while the performance could be maintained the same as the straight connectors.



\* Dimension is just for reference, detailed information please contact factory.

Armored option: Steel armor is available as an option to provide the cable assembly the additional protection for rough field application.

