HeliFoil®

Features & Benefits:

- Lowest Insertion Loss Available, DC-18GHz
- Ultra Stable Loss, Phase and VSWR with Flexing
- Excellent Phase Tracking Performance over Temperature
- Extremely Flexible, Low Minimum Bend Radius
- Superior Shielding Effectiveness (>100 dB)

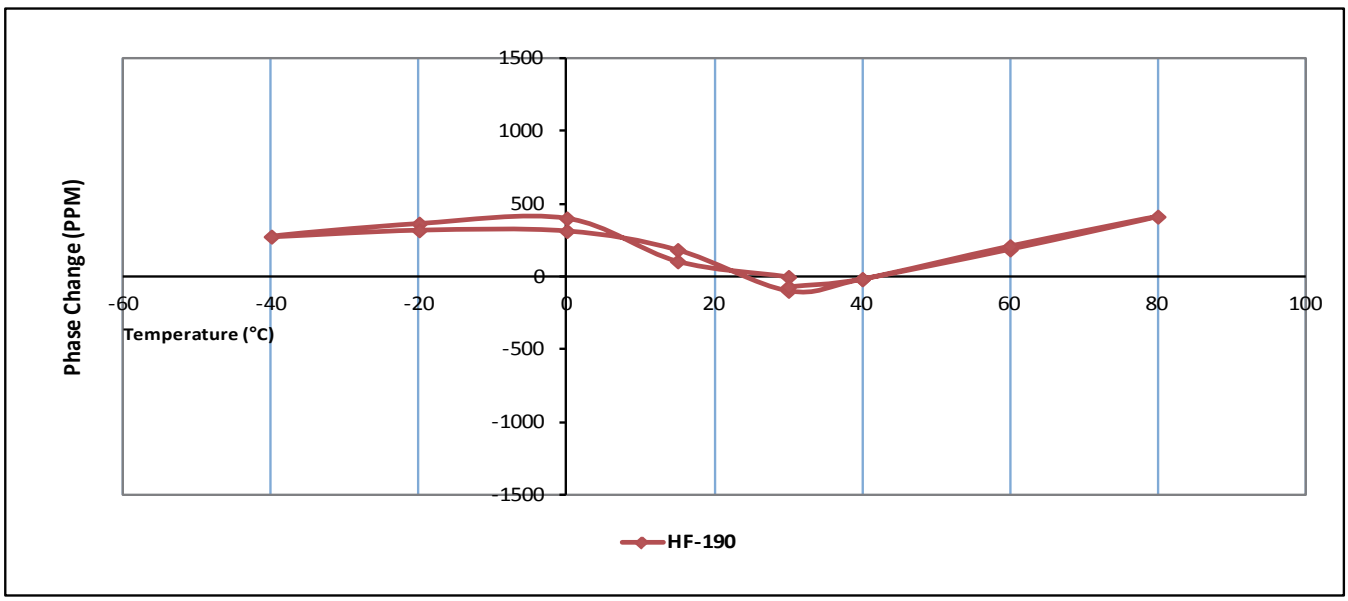
HeliFoil® ultra low loss, flexible microwave coaxial cable and assemblies provide excellent performance over the DC-18 GHz frequency range. HeliFoil® cable comes in four different sizes, with options of stranded center conductors for better flexibility. All sizes provide lowest attenuation, excellent phase stability, broad operating temperature range and high power handling making them a good choice for interconnect and testing applications in both field and laboratory conditions.

Installation of the connectors requires induction soldering and is only recommended for experienced assembly shops. Custom assemblies can be provided to meet your requirements.

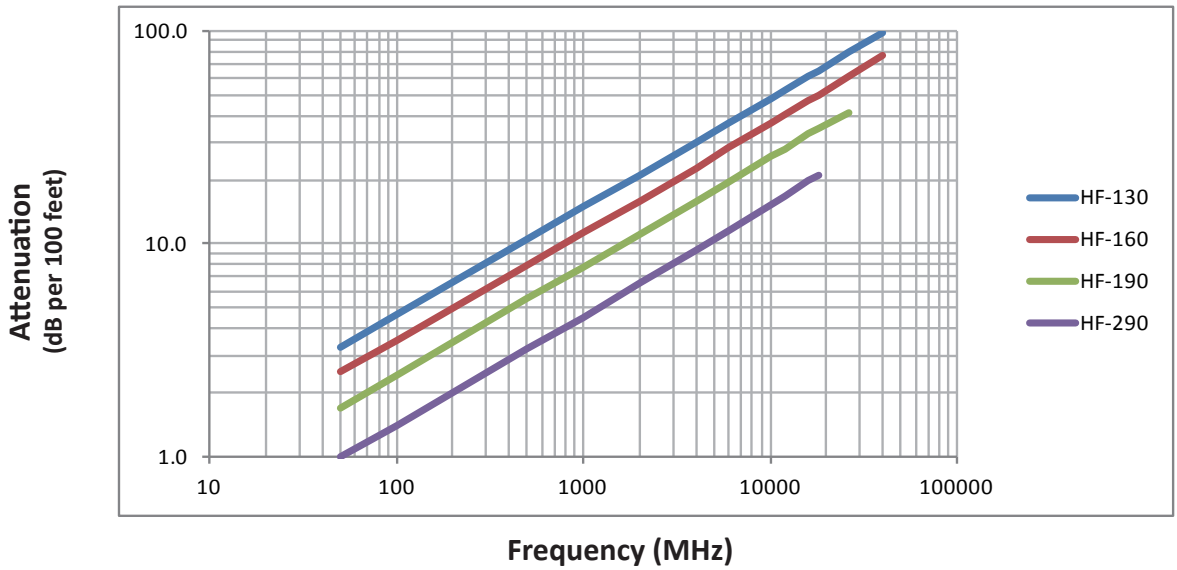
Cable	AA number MI Number	Conductor in (mm)	Dielectric in (mm)	Shields in (mm)	Outer braid in (mm)	Jacket in (mm)	Weight lb/ft (kg/m)	Impedance ohms Vp (%)	Capacitance pF/ft (pF/m)	Temp. Range F (C)	Min.Bend Radius in (mm)	Cut-off Frequency (GHz)
HF-130	AA-11427 510-0065	SC 0.029 0.74	PTFE 0.087 2.21	SC 0.094 2.39	SC 0.112 2.84	Blue FEP 0.130 3.30	0.021 (0.032)	50 +/-1 74%	26.5 (86.9)	-67 +342 (-55 +150)	0.75 (19.05)	47.84
HF-160	AA-11594 510-0101	SC 0.036 0.91	PTFE 0.105 2.67	SC 0.112 2.84	SC 0.130 3.30	Blue FEP 0.150 3.81	0.025 (0.038)	50 +/-1 80%	25.4 (83.3)	-67 +342 (-55 +150)	0.75 (19.05)	42.68
HF-190	AA-9185 51881	SC 0.052 1.32	PTFE 0.145 3.68	SC 0.158 4.01	SC 0.175 4.45	Blue FEP 0.197 5.00	0.042 (0.063)	50 +/-1 83%	24.0 (78.7)	-67 +342 (-55 +150)	1.00 (25.4)	31.25
HF-290	AA-9186 51909	SC 0.088 2.24	PTFE 0.240 6.10	SC 0.255 6.48	SC 0.273 6.93	Blue FEP 0.301 7.65	0.092 (0.138)	50 +/-1 83%	24.6 (80.7)	-67 +342 (-55 +150)	1.50 (38.1)	18.96

* PUR Jacket is available as an option, for detailed information please consult the factory.

HF-190 Phase Change vs. Temperature



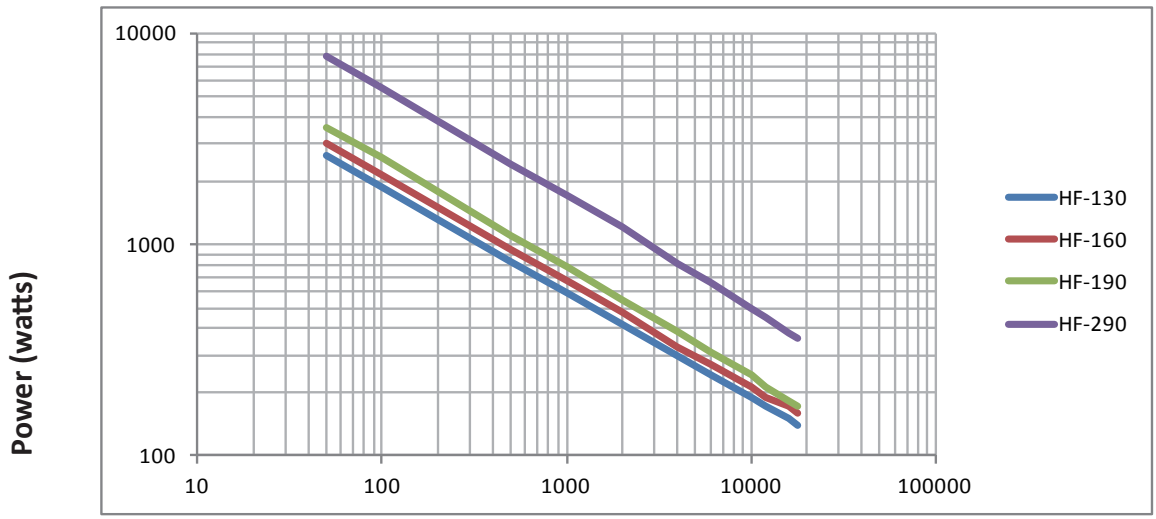
Attenuation vs. Frequency (Typical)



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
HF-130	3.3	4.7	10.5	14.8	21.1	30.0	36.9	47.9	52.7	61.1	65.0	79.5	98.8	0.46466	0.00015
HF-160	2.5	3.5	7.9	11.2	15.9	22.8	28.1	36.6	40.3	46.9	50.0	61.4	76.8	0.34880	0.00018
HF-190	1.7	2.4	5.5	7.8	11.1	15.9	19.6	26.0	28.0	33.0	35.0	40.9		0.24210	0.00014
HF-290	1.0	1.4	3.2	4.5	6.5	9.3	11.6	15.2	16.8	19.7	21.0			0.13896	0.00013

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
HF-130	2630	1860	830	590	420	300	240	190	170	150	140	120	100
HF-160	3000	2130	950	670	475	330	270	210	190	170	160	130	105
HF-190	3600	2600	1100	790	550	390	310	240	210	180	170	160	
HF-290	7800	5500	2400	1700	1200	820	660	500	450	380	360		

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.

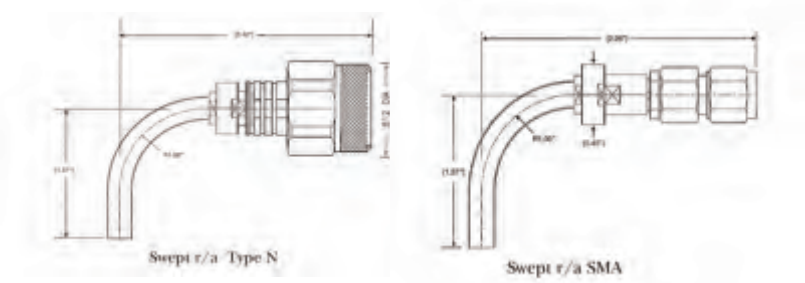
We offer a full range of connectors with all standard interfaces designed to match our microwave and provide optimum performance. Our integrated design and production expertise positions to provide custom cable assemblies to meet your requirements including phase matching, special testing, custom connectors, 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.