

FEATURES

- Ultra Low Loss < 0.7 dB/meter @18GHz (much lower loss than solid PTFE dielectric cable)
- Loss, VSWR & Phase are stable with bending and temperature
- Superior Shielding Effectiveness over -95 dB

APPLICATIONS

- Radars, EW Systems for lowest loss and phase stability.
- Conform to airborne needs of temp. cycling, vibration etc.
- Applications needing ultra phase stable cables
- Test cables for Hi-Vacuum chambers



EQUIVALENT TO:

Semflex LA290 H&S Sucoflex 106 Radiall SHF8M

Electrical Specifications

Impedance	50 Ohms
Velocity of Propagation	> 80 %
Shielding Effectiveness	Better than -95dB
Capacitance	25 pF/ft 82 pF/m
Frequency Range	DC ~ 18 Ghz
Phase Stability Vs Flexures (360° wrap on a mandrel of 76.5mm diameter)	<0.4°/GHz, Typ. ±5.4°@18G
Phase Stability Vs Temp. (parts per million, ppm)	<10 ppm/degree (<1500 ppm in -40 ~ +85°)
Phase Stability Vs Temp. (degree/ meter / GHz)	<1° / m / GHz)
Atten. Stability Vs Temp.	<0.2 % /°C
Atten. Stability Vs Bending	± 0.2dB

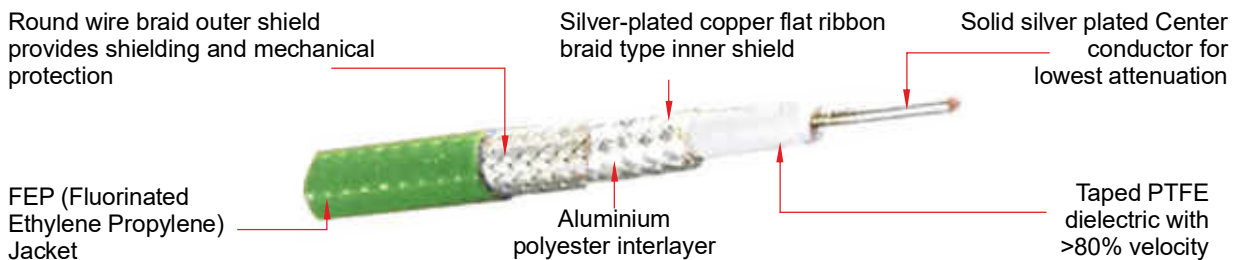
Physical & Mechanical Specifications

Dimensions	inches	mm
Outer diameter	0.30	7.62
Bend Radius (min.)	1.5	38.2
Weight	0.113 Kg/m	
Temperature Range	-55° ~ + 150°C	

Attenuation and Power Handling Data

Frequency	Insertion Loss		Av Power Watts
	dB/100ft	dB/100m	
500 MHz	3.7	12.1	2400
1 GHz	5.2	17.0	1700
2 GHz	7.5	24.5	1200
4 GHz	10.7	35.1	820
8 GHz	13.2	44.1	500
12 Ghz	16.5	55.4	450
18 GHz	20.4	68.1	330

Imported Ultra Low Loss, Triple Shielded Hi-Power Cable details



Ordering Codes Description

HF18G - (Length) □ □ - (Connector 1) □ (□ / □) - (Connector 2) □ (□ / □) - □
L L 1 2 3 1 2 3 U

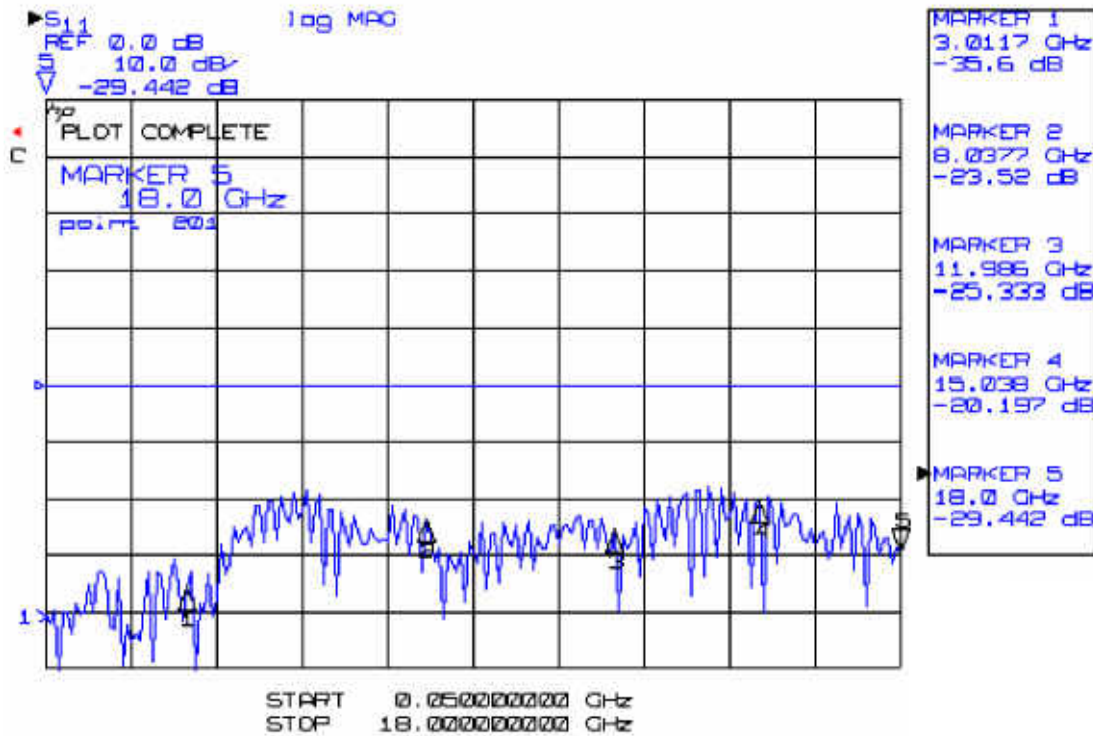
L L	Length	0.5 = 0.5 ; 1 = 1.0 ; 2 = 2.0
1	Connector Series	SMA = SMA, N = N, TNC = TNC
2	Male/Female Designator	M = Male
3	Orientation of Connector	ST = Straight
U	Unit of Length	M = Meter ; F = Feet ; I = Inch

1 meter cable set with SMA (Male) on both sides = HF18G-1.0-SMA(M/ST)-SMA(M/ST)-M

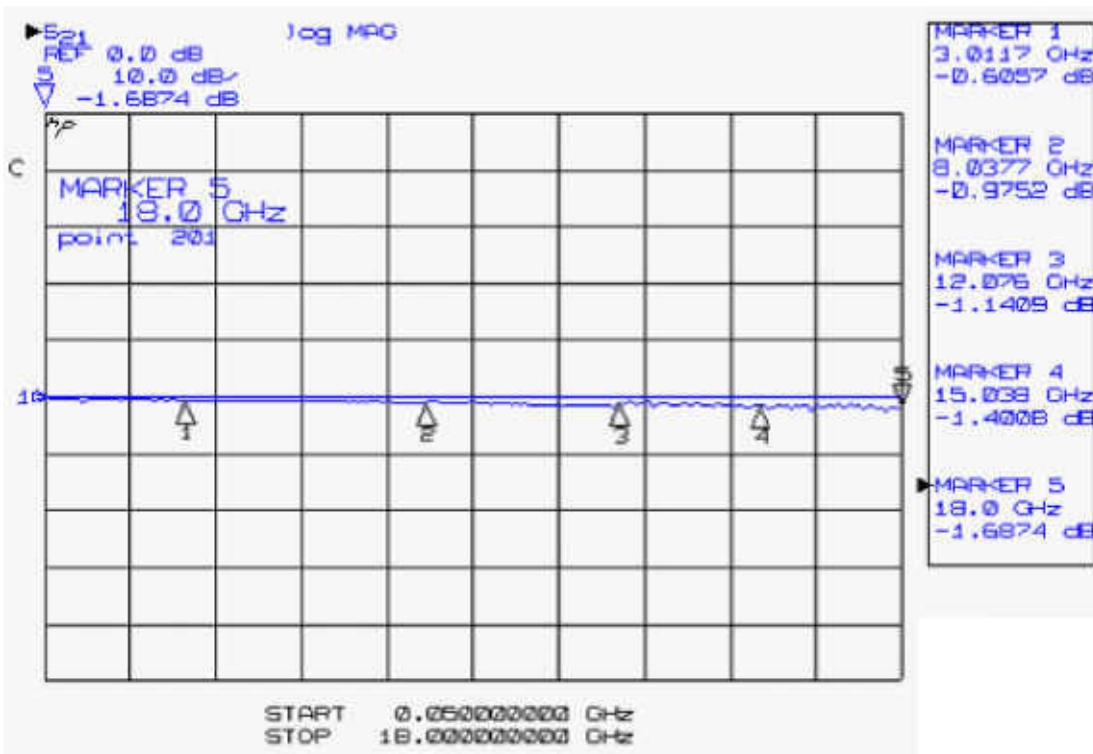
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S11 Plot of 2m HF18G Pre-Connectorized Cable Set with N(M) on both sides



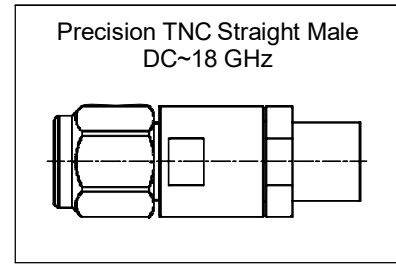
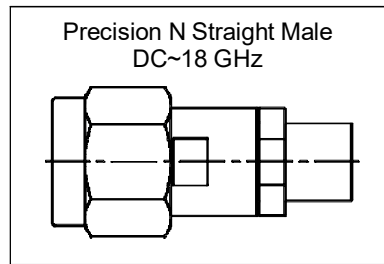
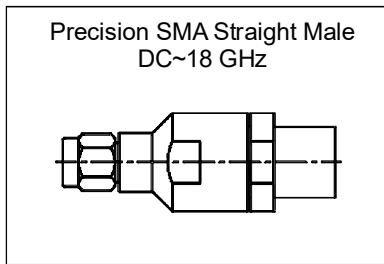
S21 Plot of 2m HF18G Pre-Connectorized Cable Set with N(M) on both sides



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Connectors for Ultra Low Loss & Phase Stable Cable Assemblies



Connectors Specifications

Specifications	SMA Connectors	N Connectors	TNC Connectors
Outer Conductor	Stainless Steel, Passivated	Stainless Steel, Passivated	Stainless Steel, Passivated
Center Conductor	BeCu, Gold Plated	BeCu, Gold Plated	BeCu, Gold Plated
Insulation	PTFE	PTFE	PTFE
Gaskets	Silicon Rubber	Silicon Rubber	Silicon Rubber
Nominal Impedance	50Ω	50Ω	50Ω
Frequency range	DC~18 GHz	DC~18 GHz	DC~18 GHz
Mating & Unmating	500 Operations min	500 Operations min	500 Operations min
Vibration	As per MIL-STD202, method 204, test condition D		
Mechanical Shock	As per MIL-STD202, method 213, test condition I		
Thermal Shock	As per MIL-STD202, method 107, test condition B		
Corrosion	As per MIL-STD202, method 101, test condition B		
Humidity	As per MIL-STD202, method 106		
Temperature Cycle	As per MIL-STD202, method 102A, test condition C		

Cable Set Ordering Codes (Other lengths and Connectors are available on request)

Ordering Code	Length	Insertion Loss (dB) Typical						
		1.5 GHz	3 GHz	6 GHz	9 GHz	12 GHz	13.5 GHz	18 GHz
SMA (Male) Straight - SMA (Male) Straight (DC to 18 GHz)								
HF18G-1.0-SMA(M/ST)-SMA(M/ST)-M	1m	0.28	0.40	0.57	0.72	0.81	0.88	1.03
HF18G-2.0-SMA(M/ST)-SMA(M/ST)-M	2m	0.46	0.67	0.97	1.21	1.39	1.50	1.76
HF18G-5.0-SMA(M/ST)-SMA(M/ST)-M	5m	1.02	1.50	2.16	2.70	3.10	3.34	3.94
N (Male) Straight - N (Male) Straight (DC to 18 GHz)								
HF18G-1.0-N(M/ST)-N(M/ST)-M	1m	0.31	0.43	0.60	0.75	0.84	0.91	1.06
HF18G-2.0-N(M/ST)-N(M/ST)-M	2m	0.49	0.70	1.00	1.24	1.42	1.53	1.79
HF18G-5.0-N(M/ST)-N(M/ST)-M	5m	1.05	1.53	2.19	2.73	3.13	3.37	3.97
TNC (Male) Straight - TNC (Male) Straight (DC to 18 GHz)								
HF18G-1.0-TNC(M/ST)-TNC(M/ST)-M	1m	0.33	0.48	0.62	0.77	0.86	0.93	1.08
HF18G-2.0-TNC(M/ST)-TNC(M/ST)-M	2m	0.52	0.73	1.02	1.26	1.44	1.55	1.81
HF18G-5.0-TNC(M/ST)-TNC(M/ST)-M	5m	1.07	1.55	2.21	2.75	3.15	3.39	4.00

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