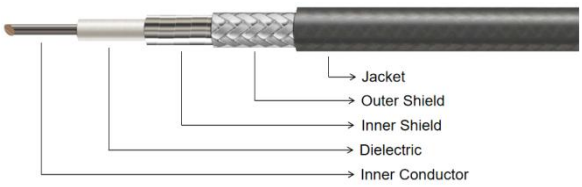
FS800A

18GHz, 50 Ohm, 7.9mm OD, Low-Loss Phase-Stable Flexible Cable, PFA Jacket.

Cable Construction



Construction Details

Description	OD (mm)	Material
Inner Conductor	2.30	Silver-plated copper
Dielectric	6.20	Low-density PTFE
Inner Shield	6.44	Silver-plated copper strip
Outer Shield	7.05	Silver-plated copper braid
Jacket	7.90	PFA

Electrical Specifications:

Operating Frequency: DC to 18 GHz
Nominal Impedance: 50 Ω
Velocity of Propagation: 83%
Shielding Effectiveness: ≥90 dB
Dielectric Withstanding Voltage: 3000 V DC
Passive Intermodulation (PIM): ≤-155 dBc
Phase Change vs. Temperature: ≤750 ppm over -55 °C to +85 °C

Mechanical Specifications:

Minimum Static Bend Radius: 39 mm
Minimum Dynamic Bend Radius: 79 mm
Weight: 130 g/m

Environmental Specifications:

Temperature: -55 °C to +165 °C

Typical Attenuation(dB/100m)[1] and Power handling (W)[2]

Freq. (GHz)	1	2	3	6	8	10	12.4	16	18
Attenuation[1]	14.7	21	26	37.3	43.4	48.8	54.8	62.8	67
Avg. Power[2]	2303	1614	1309	912	783	696	620	541	507
K1: 0.456300; K2: 0.000320									

1: Typical values at +25°C with VSWR=1.0.
2: Typical values at +40°C, sea level, with VSWR=1.0.
3: Typical Cable Attenuation Calculation Formula: $K1 * \sqrt{F(MHz)} + K2 * F(MHz)$.
4: Typical Connector insertion loss: 0.03*$\sqrt{F(GHz)}$; multiply by the number of connectors.

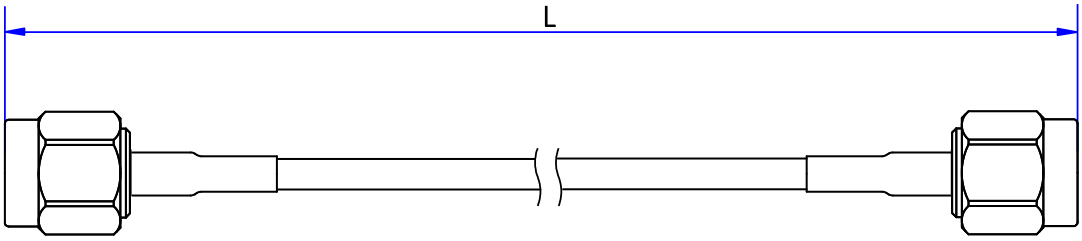
Connector Options

Connector Type	Male Code	Female Code	Max. Frequency	Max. VSWR
SMA	SM	SF	26.5 GHz	1.25:1
N	NM	NF	18 GHz	1.25:1
TNC	TM	TF	18 GHz	1.25:1

Notes:

- Other connector types and configurations are available upon request.
- Add suffix “R” for a right-angle connector and “H” for a bulkhead connector, e.g., SMR and SFH.

Typical Cable Assembly Outline



Notes:

- Connector styles shown are for illustration only. Actual connector types and geometries depend on the selected configuration.
- L = cable assembly length. For straight and bulkhead connectors, L is measured end to end. For right-angle connectors, L is measured from the connector centerline.
- Standard label content includes the part number, serial number, and company logo, unless otherwise specified.

Ordering Information

PN: Cable-Max. Freq.-Connector Configuration-Length (m)
E.g.: *FS800A-18-SMSF-1* means an FS800A cable assembly, DC to 18 GHz, SMA(m)-SMA(f), 1m.
For identical connectors on both ends, add “2” to the connector code, e.g., SM2; otherwise, list both codes in End A-to-End B order, e.g., SMSF.