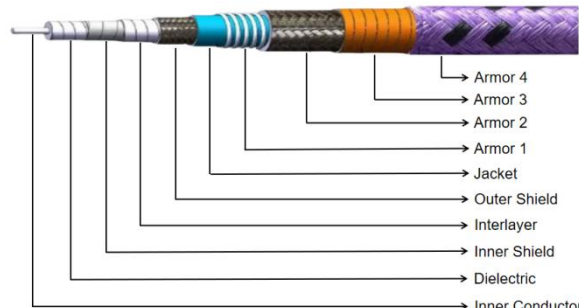


FS50TR

50GHz, 50 Ohm, Ø6.1mm, PTFE armor, Flexible Cable.

Structure:



Structure Details:

Cable Type	Dia.(mm)	Material
Inner Conductor	0.72	Silver plated Copper
Dielectric	2.10	Low Density PTFE
Inner Shield	2.25	Silver Plated Copper Strip
Interlayer	2.55	Low Density PTFE
Outer Shield	3.01	Silver Plated Copper Braid
Jacket	3.60	FEP
Armor* 1-2	5.10	Silver plated Copper
Armor* 3-4	6.10	PTFE

*Armor is optional. Without armor, cable designation is FS50T. With armor, the cable designation is FS50TR.

Electrical Specifications:

Operating Freq.: 50 GHz

Cut-off Freq.: 50 GHz

Impedance: 50 Ω

VSWR: ≤1.25@50 GHz

Phase Stability⁵: ±7°

Amplitude Stability⁵: ±0.05dB

Velocity of Propagation: 76%

Shielding Effectiveness: >90 dB

Dielectric Withstanding Voltage: 1200 V DC

Mechanical Specifications:

Static Bending Radius: 18 mm (without armor)

30 mm (with armor)

Dynamic Bending Radius: 36 mm (without armor)

60 mm (with armor)

Bending Life: 0.1M; Mating Cycles: 2000 Cycles

Weight: 31 g/m (without armor)

95 g/m (with armor)

Environmental Specifications:

Temperature: -55~+125 °C

Typical Attenuation(dB/100m) and Power handling (W)

Freq.(GHz)	1	2	3	6	8	10	12.4	18	26.5	40	50
Attenuation ¹	48.1	68.3	83.9	119.4	138.4	155.2	173.4	210.2	257.1	319.2	359.2
Avg. Power ²	506	356	290	204	176	157	140	116	95	76	68
K1: 1.507808, K2: 0.000440											

1: Typical value@+25 °C,VSWR=1.0;

2: Typical value@+40 °C,atmospheric pressure;

3: Typical Cable Attenuation Calculation, Formula: $K1 \cdot \sqrt{F(\text{MHz})} + K2 \cdot F(\text{MHz})$;

4: Typical Connector Attenuation Calculation, Formula: $0.03 \cdot \sqrt{F(\text{GHz})}$.

5: Based on 360°bending on a Ø61 mm mandrel

Cable Assemblies Naming Rule:

PN: Cable-Max. Freq.-Conn.1-Conn.2-Length(m)

Eg.: FS50TR-50-2M-2F-1 means FS50TR armored cable, DC-50GHz, 2.4mm(m)-2.4mm(f), 1m.

Add "R" for right-angle or "H" for bulkhead after the connector code (e.g., NMR, NfH)

Connector Options	2.4mm (2)	2.92mm (K)	3.5mm (3)	SMA (S)	N (N)
Frequency (Max)	50GHz	40GHz	33GHz	26.5GHz	18GHz
VSWR (Max)	1.30:1	1.25:1	1.25:1	1.25:1	1.25:1