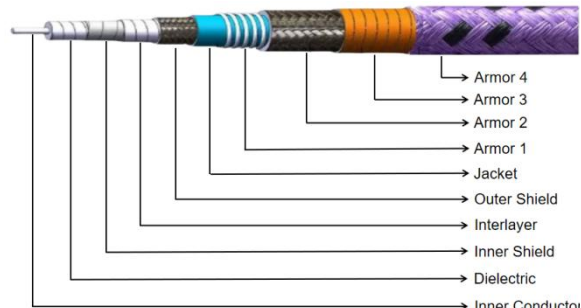


FS110TR

110GHz, 50 Ohm, Ø3.9mm, PTFE armor, Flexible Cable.

Structure:



Structure Details:

Cable Type	Dia.(mm)	Material
Inner Conductor	0.31	Silver plated Copper
Dielectric	0.88	Low Density PTFE
Inner Shield	1.00	Silver Plated Copper Strip
Interlayer	1.20	Low Density PTFE
Outer Shield	1.45	Silver Plated Copper Braid
Jacket	1.85	FEP
Armor* 1-2	2.70	Silver plated Copper
Armor* 3-4	3.90	PTFE

*Armor is optional. Without armor, cable designation is FS110T. With armor, the cable designation is FS110TR.

Electrical Specifications:

Operating Freq.: 110 GHz

Cut-off Freq.: 128 GHz

Impedance: 50 Ω

VSWR: ≤1.5@110GHz

Phase Stability⁵: ±10°

Amplitude Stability⁵: ±0.1dB

Velocity of Propagation: 77%

Shielding Effectiveness: >90 dB

Dielectric Withstanding Voltage: 600 V DC

Mechanical Specifications:

Static Bending Radius: 10 mm (without armor)

20 mm (with armor)

Dynamic Bending Radius: 20 mm (without armor)

40 mm (with armor)

Bending Life: 0.1M; Mating Cycles: 2000 Cycles

Weight: 8 g/m (without armor)

33 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	18	26.5	40	67	75	110
Attenuation ¹	113.7	161.6	198.5	282.9	328.0	499.3	611.5	760.4	1002.7	1065.9	1314.3
Avg. Power ²	39	27	22	16	14	9	7	6	4	4	3
K1: 3.557846, K2: 0.001221											

1: Typical value@+25 °C,VSWR=1.0;

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

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

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

5: Based on 360°bending on a Ø39 mm mandrel

Cable Assemblies Naming Rule:

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

Eg.: FS110TR-110-1M-1F-1 means FS110TR armored cable, DC-110GHz, 1.0mm(m)-1.0mm(f), 1m.

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

Connector Options	1.0mm (1)	1.85mm (V)	2.4mm (2)	2.92mm (K)	SMA (S)
Frequency (Max)	110GHz	67GHz	50GHz	40GHz	26.5GHz
VSWR (Max)	1.50:1	1.30:1	1.30:1	1.30:1	1.30:1