

# FR700

## Low Loss

**Features:**

- \* Low Insertion Loss
- \* High Weatherability
- \* UV Resistant

**Applications:**

- \* Wireless Communication
- \* Microwave Interconnect

**Electrical**

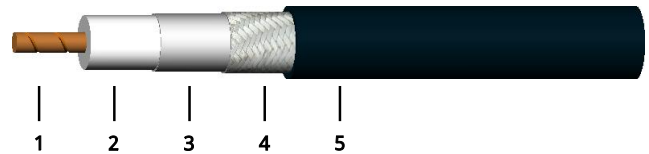
Frequency:	DC~5.8GHz
Cut-off Frequency:	24.5GHz
Impedance:	50Ω
Velocity of Propagation:	83%
Shielding Effectiveness:	90dB min.
Voltage Withstand:	2000V DC

**Mechanical**

Bend Radius (installation):	25.0mm
Bend Radius (repeated):	76.0mm
Weight:	80g/m

**Environmental**

Temperature:	-40~+85°C
Outdoor Life:	20 or 10 years

**Construction**


No.	Name	Size (mm)	Material
1	Inner Conductor	1.78	Copper
2	Dielectric	4.83	Foam PE
3	Outer Conductor	4.98	Double-edged aluminum foil
4	Outer Shield	5.72	Tin-plated copper braid
5	Jacket	7.60	PE or PVC

**Attenuation & Power Handling**

Frequency (GHz)	0.03	0.05	0.15	0.22	0.45	0.9	1.5	1.8	2	2.5	5.8
Attenuation*1 (dB/100m)	3.5	4.6	8.0	9.7	14.1	20.2	26.4	29.1	30.8	34.7	55.0
Average Power*2 (W)	2090	1620	920	760	520	360	280	250	240	210	130

[1] VSWR:1.0; Ambient: +25°C (77°F)

[2] VSWR:1.0; Ambient: +40°C (104°F); Sea level

Calculate Cable Attenuation: Attenuation (dB/100m) =  $0.6397638 * \sqrt{F} \text{ (MHz)} + 0.0010827 * F \text{ (MHz)}$

Calculate Connector Attenuation: Attenuation (dB) =  $0.03 * \sqrt{F} \text{ (GHz)}$

**How To Order**
**FR700-X-Y-Z**

- X: Frequency in GHz  
 Y: Connector type  
 Z: Length in meters

**Examples:**

To order a FR700 cable assembly, DC-5.8GHz, SMA male to SMA female, 1.5 meters, specify FR700-5.8-SSF-1.5.

**Connector naming rules:**

- S - SMA (6GHz, VSWR 1.35)
- N - N (6GHz, VSWR 1.35)
- T - TNC (6GHz, VSWR 1.35)
- X - MMCX (6GHz, VSWR 1.35)
- M - MCX (6GHz, VSWR 1.35)
- B - BNC (4Hz, VSWR 1.4)
- D - SMB (4GHz, VSWR 1.35)

Female Connector - Add 'F' after connector name

Right Angle - Add 'R' after connector name (VSWR increase 0.1)