

FR1000

Low Loss

Features:

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

Applications:

- * Wireless Communication
- * Microwave Interconnect

Electrical

Frequency:	DC~5.8GHz
Cut-off Frequency:	16.2GHz
Impedance:	50Ω
Velocity of Propagation:	84%
Shielding Effectiveness:	90dB min.
Voltage Withstand:	2500V DC

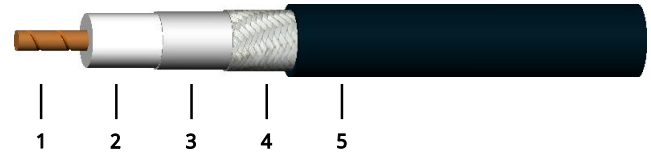
Mechanical

Bend Radius (installation):	25.0mm
Bend Radius (repeated):	100.0mm
Weight:	100g/m

Environmental

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

Construction



No.	Name	Size (mm)	Material
1	Inner Conductor	2.74	Copper-clad aluminum
2	Dielectric	7.24	Foam PE
3	Outer Conductor	7.39	Double-edged aluminum foil
4	Outer Shield	8.13	Tin-plated copper braid
5	Jacket	10.00	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)	2.2	2.9	5.1	6.2	8.9	12.8	16.9	18.6	19.7	22.3	35.6
Average Power* ² (W)	3330	2570	1470	1200	830	580	440	400	370	330	210

[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) = $0.4022310 * \sqrt{F} \text{ (MHz)} + 0.0008596 * F \text{ (MHz)}$

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

How To Order

FR1000-X-Y-Z

X: Frequency in GHz

Y: Connector type

Z: Length in meters

Examples:

To order a FR1000 cable assembly, DC-5.8GHz, N male, 1.5 meters, specify FR1000-5.8-NN-1.5.

Connector naming rules:

N - N (6GHz, VSWR 1.35)

T - TNC (6GHz, VSWR 1.35)

Female Connector - Add 'F' after connector name

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

Mating Connector

FCS-MCB-R1000-1

SMA male, Crimping type,
Ternary alloy plated brass
& Nickel plated brass

FCS-MRCB-R1000-1

SMA male, Right angle,
Crimping type, Ternary
alloy plated brass & Nickel
plated brass

FCN-MCB-R1000-1

N male, Crimping type,
Brass

FCN-FCB-R1000-1

N female, Crimping type,
Ternary alloy plated brass

