

FR500U

Low Loss, Ultra Flexible

Features:

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

Applications:

- * Wireless Communication
- * Microwave Interconnect

Electrical

Frequency:	DC~5.8GHz
Cut-off Frequency:	41GHz
Impedance:	50Ω
Velocity of Propagation:	80%
Shielding Effectiveness:	90dB min.
Voltage Withstand:	1000V DC

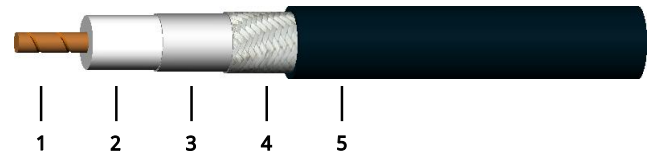
Mechanical

Bend Radius (installation):	12.0mm
Bend Radius (repeated):	50.0mm
Weight:	30g/m

Environmental

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

Construction



No.	Name	Size (mm)	Material
1	Inner Conductor	0.97	Stranded Copper
2	Dielectric	2.79	Foam PE
3	Outer Conductor	2.95	Double-edged aluminum foil
4	Outer Shield	3.53	Tin-plated copper braid
5	Jacket	5.00	TPE

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)	7.7	10.0	17.4	21.1	30.4	43.5	56.8	62.5	66.1	74.4	117.0
Average Power* ² (W)	780	610	350	280	200	140	100	90	90	80	50

[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) = $1.3943570 * \sqrt{F} (\text{MHz}) + 0.0018701 * F (\text{MHz})$

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

How To Order

FR500U-X-Y-Z

X: Frequency in GHz

Y: Connector type

Z: Length in meters

Examples:

To order a FR500U cable assembly, DC-5.8GHz, SMA male to SMA female, 1.5 meters, specify FR500U-5.8-SSF-1.5.

Connector naming rules:

S - SMA (6GHz, VSWR 1.35)

N - N (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)