

# FA810

## Ultra Low Loss & Phase Stable

**Features:**

- \* Low Insertion Loss
- \* High Phase Stability
- \* High Power
- \* Low PIM

**Applications:**

- \* Phased-array Radar
- \* Satellite Communication
- \* Avionics

**Electrical**

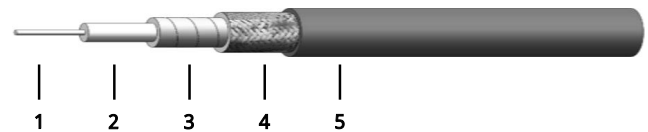
Frequency:	DC~18GHz
Cut-off Frequency:	18GHz
Impedance:	50Ω
Velocity of Propagation:	83%
Shielding Effectiveness:	90dB min.
Voltage Withstand:	2500V DC
PIM:	-155dBc
Phase Stability:	750PPM@-55°C~+85°C max.

**Mechanical**

Bend Radius (installation):	40.0mm
Bend Radius (repeated):	81.0mm
Weight:	140g/m

**Environmental**

Temperature: -55~+165°C

**Construction**


No.	Name	Size (mm)	Material
1	Inner Conductor	2.40	Silver-plated copper
2	Dielectric	6.36	Low density PTFE
3	Inner Shield	6.60	Silver-plated copper tape
4	Outer Shield	7.10	Silver-plated copper braid
5	Jacket	8.10	PFA

**Attenuation & Power Handling**

	0.1	0.3	0.5	1	3	6	10	12.4	18
Frequency (GHz)									
Attenuation*1 (dB/100m)	4.2	7.4	9.6	13.7	24.1	34.8	45.8	51.5	63.3
Average Power*2 (W)	6108	3503	2701	1894	1071	742	564	502	409

[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) =  $0.419490 * \sqrt{F \text{ (MHz)}} + 0.000389 * F \text{ (MHz)}$ 

 Calculate Connector Attenuation: Attenuation (dB) =  $0.03 * \sqrt{F \text{ (GHz)}}$ 
**How To Order**
**FA810-X-Y-Z**

X: Frequency in GHz

Y: Connector type

Z: Length in meters

**Examples:**

To order a FA810 cable assembly, DC-18GHz, N male to SMA female, 0.5 meter, specify FA810-18-SFN-0.5

**Connector naming rules:**

S - SMA (18GHz, VSWR 1.25)

N - N (18GHz, VSWR 1.25)

T - TNC (18GHz, VSWR 1.25)

Female Connector - Add 'F' after connector name

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

**Mating Connector**

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**FCS-MG-A810-1**

SMA male, Stainless steel

**FCS-FG-A810-1**

SMA female, Stainless steel

**FCN-MG-A810-1**

N male, Stainless steel

**FCN-FG-A810-1**

N female, Stainless steel

