

# FA220

## Ultra Low Loss & Phase Stable

**Features:**

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

**Applications:**

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

**Electrical**

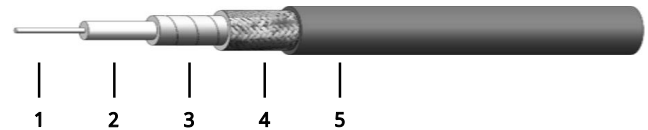
Frequency:	DC~50GHz
Cut-off Frequency:	83GHz
Impedance:	50Ω
Velocity of Propagation:	81%
Shielding Effectiveness:	90dB min.
Voltage Withstand:	400V DC
PIM:	-155dBc
Phase Stability:	750PPM@-55°C~+85°C max.

**Mechanical**

Bend Radius (installation):	8.8mm
Bend Radius (repeated):	22.0mm
Weight:	16g/m

**Environmental**

Temperature: -55~+125°C

**Construction**


No.	Name	Size (mm)	Material
1	Inner Conductor	0.50	Silver-plated copper
2	Dielectric	1.38	Low density PTFE
3	Inner Shield	1.54	Silver-plated copper tape
4	Outer Shield	1.95	Silver-plated copper braid
5	Jacket	2.20	PFA

**Attenuation & Power Handling**

Frequency (GHz)	0.3	0.5	1	2	6	10	12.4	18	26.5	35	40	50
Attenuation*1 (dB/100m)	34.6	44.8	63.7	90.8	160.4	209.8	235.2	287.1	354	412.4	444	502.8
Average Power*2 (W)	178	137	97	68	38	29	26	21	17	15	14	12

[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) =  $1.975832 * \sqrt{F \text{ (MHz)}} + 0.001221 * F \text{ (MHz)}$ 

 Calculate Connector Attenuation: Attenuation (dB) =  $0.03 * \sqrt{F \text{ (GHz)}}$ 
**How To Order**
**FA220-X-Y-Z**

X: Frequency in GHz

Y: Connector type

Z: Length in meters

**Examples:**

To order a FA220 cable assembly, DC-50GHz, 2.4mm male to 2.4mm female, 0.8 meter, specify FA220-50-22F-0.8.

**Connector naming rules:**

V - 1.85mm (50GHz, VSWR 1.5)

G - Mini-SMP (mateable with GPP0 &amp; SSMP, 50GHz, VSWR 1.6)

2 - 2.4mm (50GHz, VSWR 1.4)

K - 2.92mm (40GHz, VSWR 1.35)

A - SSMA (40GHz, VSWR 1.35)

P - SMP (40GHz, VSWR 1.4)

3 - 3.5mm (33GHz, VSWR 1.35)

S - SMA (26.5GHz, VSWR 1.3)

Female Connector - Add 'F' after connector name

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

## Mating Connector

**FCV-MG-A220-2**

1.85mm male, Stainless steel


**FCV-FG-A220-1**

1.85mm female, Stainless steel


**FC2-MG-A220-5**

2.4mm male, Stainless steel


**FC2-MRG-A220-1**

2.4mm male, Right angle, Stainless steel

**FC2-FG-A220-1**

2.4mm female, Stainless steel

**FC2-FL4G-A220-1**

2.4mm female, 4-hole flange mount, Stainless steel

**FCG-FB-A220-1**

SSMP female, Beryllium copper

**FCG-FRB-086-2**

SSMP female, Right angle, Beryllium copper


**FCK-MG-A220-4**

2.92mm male, Stainless steel


**FCK-MRG-A220-1**

2.92mm male, Right angle, Stainless steel

**FCK-FHG-A220-1**

2.92mm female, bulk head, Stainless steel

**FCK-FL2G-A220-1**

2.92mm female, 2-hole flange mount, Stainless steel

**FCK-FL4G-A220-1**

2.92mm female, 4-hole flange mount, Stainless steel

**FCP-MB-086-1**

SMP male, Gold plated Phosphor copper


**FCP-FB-086-3**

SMP female, Beryllium copper


**FCA-MG-086-2**

SSMA male, Stainless steel


**FC3-MG-A220-1**

3.5mm male, Stainless steel

**FC3-FG-A220-1**

3.5mm female, Stainless steel

**FCS-MG-A220-1**

SMA male, Stainless steel

**FCS-MRG-086-1**

SMA male, Right angle, Stainless steel

## Flexible RF Cables & Assemblies

**FCK-FB-A220-1**  
2.92mm female, Brass



**FCS-FB-086-4**  
SMA female, Brass

**FCN-MB-086-1**  
SMA female, Nickel plated brass

**FCS-FL4B-086-1**  
SMA female, 4-hole flange mount, Brass

**FC-8-MA-086-1**  
8-channel connector male, Black anodizing of aluminum



**FC-8-MK-086-2**  
8-channel connector male, Chemical Nickel



**FC-8-FA-086-1**  
8-channel connector female, Black anodizing of aluminum



**FC-8-FB-086-1**  
8-channel connector female, Gold plated brass

