

F-SMA Series

F707 - F708

RADIAL 
The next conneXion

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INTRODUCTION



F-SMA is one of the first generations of fiber optic connectors. Established as a standard in the industry, it is now used in many applications, such as industrial and medical, in which the connector can be adapted with a large range of MultiMode fibers.

They are designed for systems requiring reliable performances over short and medium ranges.

BENEFITS & FEATURES

- **Easy to use connector**

- Screw coupling nut
- Metal body with cylindrical alignment and accurate air gap

- **Flexible**

- Metal or ceramic optical ferrule allowing different fiber diameters
- Two series available: F-SMA 5 (straight barrel) and F-SMA 6 (step down barrel) to adapt to customer need
- Cable range: 0.9 mm, 2 mm and 3 mm
- Compliant with IEC 61754-22 and MIL-C-83522

APPLICATIONS

- **Industry**
- **Medical**
- **Instrumentation**
- **Military**



OPTICAL CHARACTERISTICS

	MultiMode Silica fiber size		MultiMode HCS type fiber size
	50/125 μm	100/140 μm	200/280 μm
Wavelength	850 nm - 1310 nm		
Mean Insertion Loss	1.5 dB	1.2 dB	1 dB
Standard deviation	0.5 dB		

Insertion Loss random: IEC 61300-3-34

Note: the optical performances also depend on the fiber or cable construction.

MECHANICAL CHARACTERISTICS

	Cable diameter 0.9 mm	Cable diameter 2 & 3 mm
Cable retention	7N	100N
Mechanical endurance	250 matings	
Recommended coupling torque	40 to 45 cmN (use torque wrench F780 020 000)	

ENVIRONMENTAL CHARACTERISTICS

Temperature range	- 55°C / + 85°C
Vibration	10 - 2000 Hz, 20 g

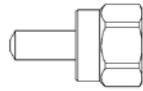
INTERNATIONAL STANDARD DOCUMENTS COMPLIANCE

- IEC 61754-22 Fiber optic connector interfaces (F-SMA connector family)
- IEC 61300 Fiber optic interconnecting devices and passive components - Basic test and measurement procedures

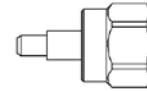
CONNECTORS



F-SMA connectors are available in 2 different ended shapes: F-SMA 5 and F-SMA 6:



F-SMA 5 Straight barrel (F707)



F-SMA 6 Step-down barrel (F708)

Each F-SMA 6 connector is delivered with two plastic alignment sleeves.

- HALF LENGTH alignment sleeve:** in order to precisely align a F-SMA 6 in a receptacle device.
Application: Slide the sleeve over the barrel of the F-SMA 6 connector up to its shoulder, before fitting the connector into the receptacle.
- FULL LENGTH alignment sleeve:** in order to optimize the alignment of two F-SMA 6 connectors in an F-SMA adapter.
Application: Slide the alignment sleeve over one of the F-SMA 6 connectors before inserting them in the adapter. Knowing that when unmated, the alignment sleeve will remain on the connector fitted at end 2

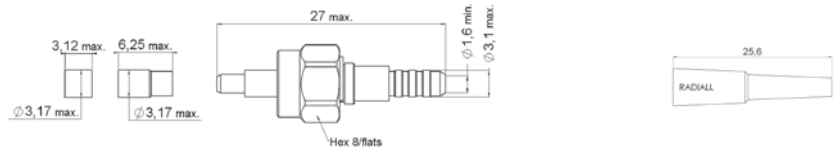


Figure 1

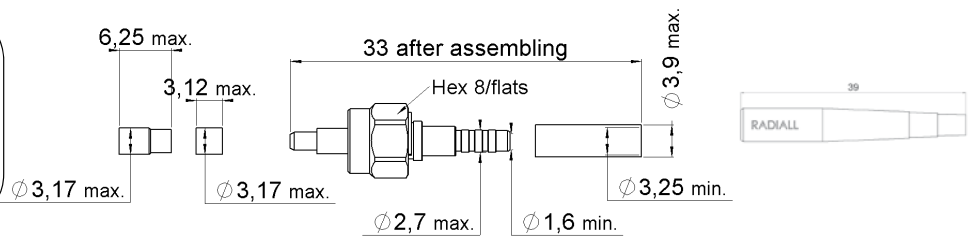


Figure 2

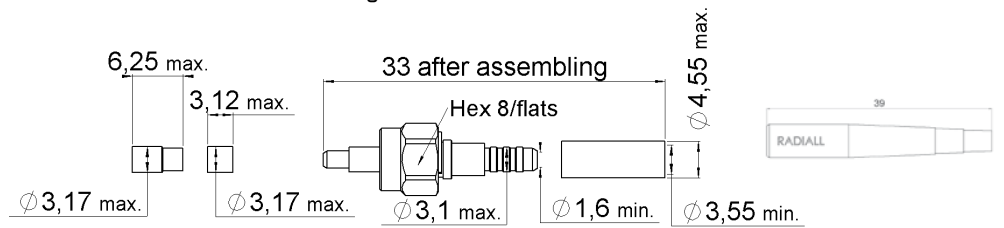

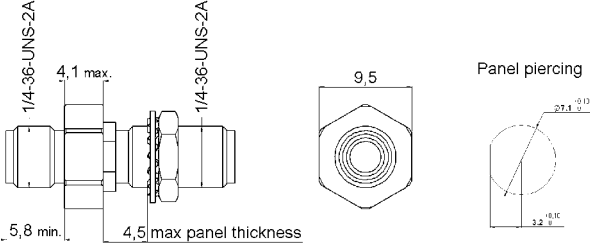

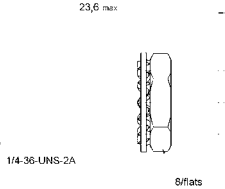


Figure 3

Note: F-SMA 5 only differs from these figurines on the ended shape.


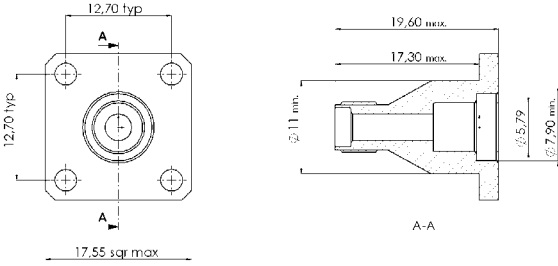

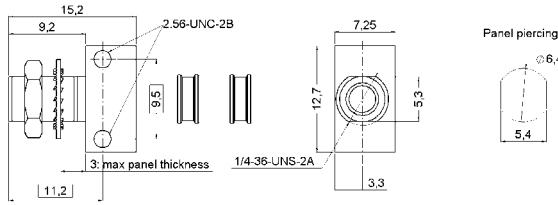

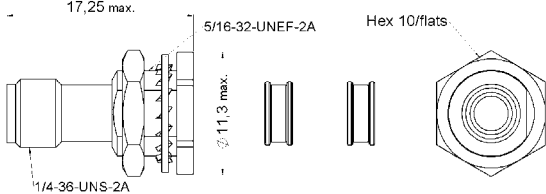
Cable dia. Tight or loose structure cable	Figure	End shape	MultiMode Fiber type					Packaging
			Silica fibers			HCS fibers	POF fibers	
			128 μm	140 μm	280 μm	200/230 μm	1000 μm	
0.9 mm	Fig 1	F-SMA 5	F707 024 000	F707 025 000	-	-	-	1
		F-SMA 6	F708 016 000	F708 017 000	-	-	-	
2 mm	Fig 2	F-SMA 5	F707 031 000	F707 032 000	-	F707 047 000	F707 040 000	
		F-SMA 6	F708 024 000	F708 025 000	F708 026 000	-	-	
3 mm	Fig 3	F-SMA 5	F707 027 000	F707 028 000	F707 029 000	F707 049 000	-	
		F-SMA 6	F708 019 000	F708 020 000	F708 021 000	-	-	

For other cable or fiber diameters, please consult the Radiall sales team.

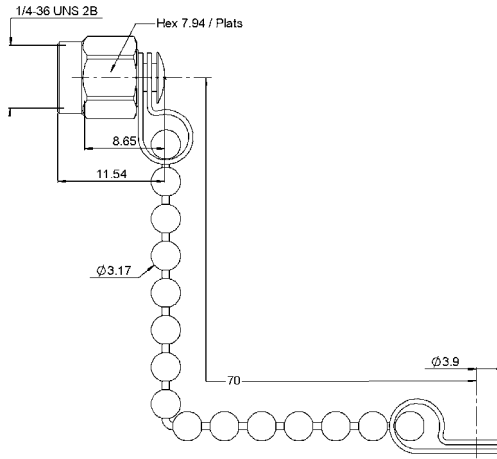
	Part number	Figure	Adapter type	Packaging
	<p>F708 720 000</p>		<p>Bulkhead feedthrough adapter</p>	<p>1</p>
	<p>F708 721 000</p>		<p>Straight adapter</p>	

RECEPTACLES

Receptacles have a metal body and are available in square flange or screw thread coupling. They are supplied with 2 centering rings.

	Part number	Figure	Receptacles types	Packaging
	<p>F708 200 000</p>		<p>Square flange</p>	
	<p>F708 400 000</p>		<p>Rectangular type, screw mount or bulkhead mount</p>	<p>1</p>
	<p>F708 402 000</p>		<p>Hexagonal type, bulkhead mount</p>	

CONNECTOR CAPS



Part number	Description	Packaging
R125 812 001	Metal cap with chain for adapter or receptacle	100
R125 812 001W		1



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