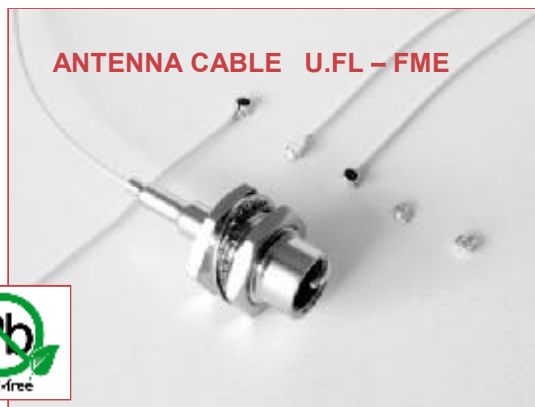


COAXIAL CABLE ASSEMBLIES – U.FL SERIES



FEATURES

- High Frequency Device
- Frequency available from 0 to 6 GHz (SMA) or 0 to 3 GHz (FME)
- SMT, Ultra-miniature coaxial connector U.FL for high density mounting (side device)
- RF connector with reliable Broadband Performance FME and SMA (side antenna)
- Low insertion loss
- Matched with ultra-thin coaxial cable (0,81 mm dia.)

APPLICATIONS

- Wireless communication equipment (GSM modules SIEMENS MC45, TC45, MC55, TC65, TC63, MC75)
- Mobile, portable and cordless phones
- GPS receivers and applications
- Wireless LAN
- Bluetooth
- Microwave radio equipment
- Measurement equipment
- Other radio application with demand on connection to antennas with FME or SMA

SPECIFICATIONS

Item	Rating and Characteristic	
	U.FL-FME	U.FL-SMA
Frequency	0 - 3 GHz	0 - 6 GHz
VSWR* (max.)	1.2 at 0.9 GHz 1.8 at 1.9 GHz	1.2 at 0.9 GHz 1.6 at 1.9 GHz
Nominal Impedance	50 Ω	50 Ω
Temperature Range	-40°C to +90°C	-40°C to +90°C
Voltage	250 Vrms	250 Vrms
Resist.* – Out. contact:	130 mΩ	129 mΩ.
Center contact:	23 mΩ	21 mΩ.
Withstand Voltage	300 (AC) rms	300 (AC) rms
Insulation Resistance	500 MΩ min.	500 MΩ min.
Attenuation*: (Insertion Loss)	0.6dB at 0.9GHz 1.5dB at 1.9GHz	0.5dB at 0.9GHz 0.8dB at 1.9GHz
Operation Humidity	90% max.	90% max.

PART NUMBERING - ANTENNA CABLE

Part Number	Description
GSM UFL-FME STANDARD	U.FL(f)-FME STANDARD(m),200 mm
GSM UFL-FME MASSIVE	U.FL(f)-FME MASSIVE(m),200 mm
GSM UFL-FME MASS.SUCO	U.FL(f)-FME MASS.SUCO,200 mm
GSM UFL-SMA CABLE	U.FL(f)-SMA(f),200 mm
GSM UFL PCB CON	U.FL (m) connector, PCB mounting
GSM UFL-MCX Bulkhead	U.FL(f)-MCX Bulkhead,200 mm

* - length of measured samples - 10cm

MATERIALS

FME connector (m = male)

Part Name	Material
Body	Brass, Nickel/Gold plated Brass SUCO*/Gold plated
Contact	Brass, Gold plated
Lock Washer	PH Bronze, Nickel plated
Nut	Brass, Nickel plated
Insulator	Teflon, White
Ferrule	Brass, Nickel plated

SMA connector (f = female)

Part Name	Material
Body	Brass, Gold plated
Contact	PH Bronze, Gold plated
Lock Washer	Brass, Gold plated
Nut	Brass, Gold plated
Insulator	Teflon
Ferrule	Brass, Gold plated
Gasket	Sillicon Rubber, Block

* SUCO plating - 3 layers white Bronze (anti-corrosion)

MATERIALS

U.FL connector (f, m)

Part Name	Material
Shell	PH Bronze, Silver plated
Male center contact	Brass, Gold plated
Female center contact	PH Bronze, Gold plated
Insulator - Plug	PBT, black
Insulator - Receptacle	LCP, beige

Cable

Part Name	Material
Insulation	PFA
Conductor construction	ultra fine Teflon, (Dia 0,8 mm), single shield Min. radius for exceptional bending: 5 mm Min. radius for repeated bending: 10 mm

MCX connector

Part Name	Material
Body	Brass, Gold plated
Contact	BeCu, Gold plated
Lock Washer	Steel, Gold plated
Nut	Brass, Gold plated
Insulator	Teflon, Nature
Ferrule	Brass, Gold plated

USAGE PRECATIONS

Connection and disconnection of connectors

To disconnect U.FL connectors, hook the tools onto the connector cover and pull off vertically in the direction of the connector-coupling axis. To remove the connector directly, hold the connector cover and pull off vertically in the direction of the connector-coupling axis. (Please exercise caution so as not to injure fingertips or nails.)

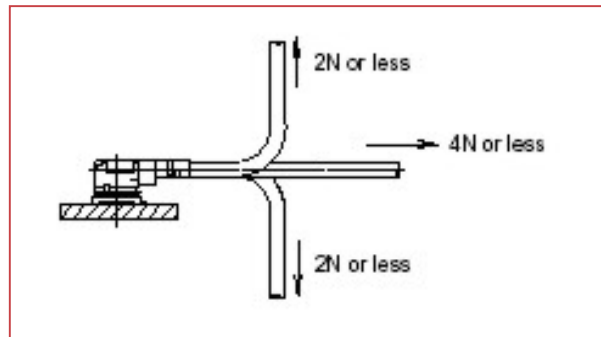
To couple the connectors, the coupling axes of both connectors are aligned and the connectors are inserted as perpendicularly as possible. Do not attempt to insert on an extreme angle.

Permissible load on the cable after connector coupling

After the connectors are coupled, do not apply a load to the cable in excess of the values indicated in the diagram below.

Precautions

Please note that excessive twisting in the action of insertion or removal will cause damage of the cable, connectors or coupling.



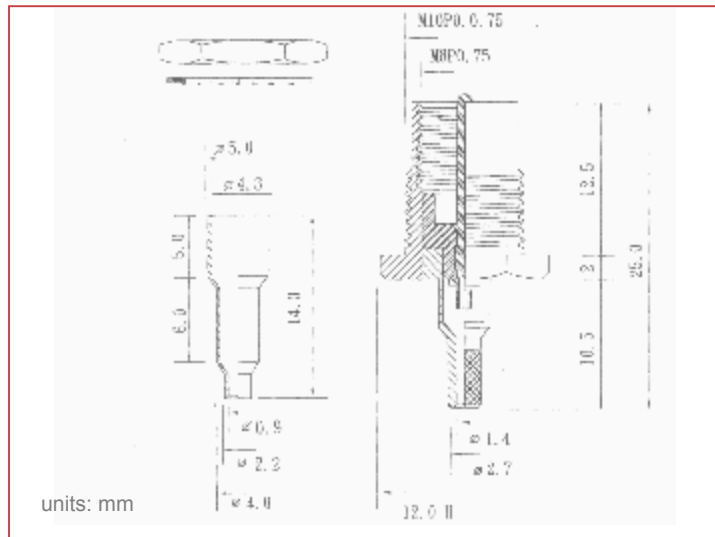
DIMENSIONS

FME connector (m)

FME connector (male) is miniature screw lock coaxial connector. The connector styles are available for flexible and conformable cables. Connector is designed for mobile radio and wireless communication area due its compact size and durability.

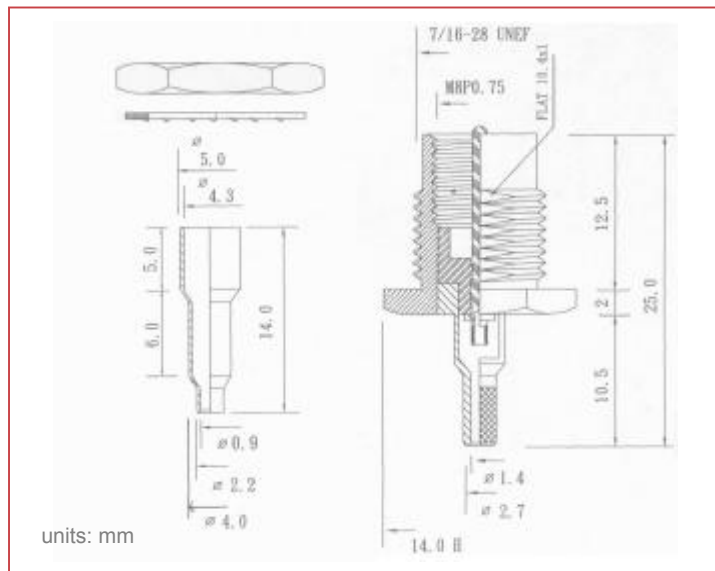
FME STANDARD (m)

FME STANDARD connector with hexagon - 12.0 H, outside screw threads – M10, body finish plating – Nickel/Gold.



FME MASSIVE (m), FME MASSIVE SUCO (m)

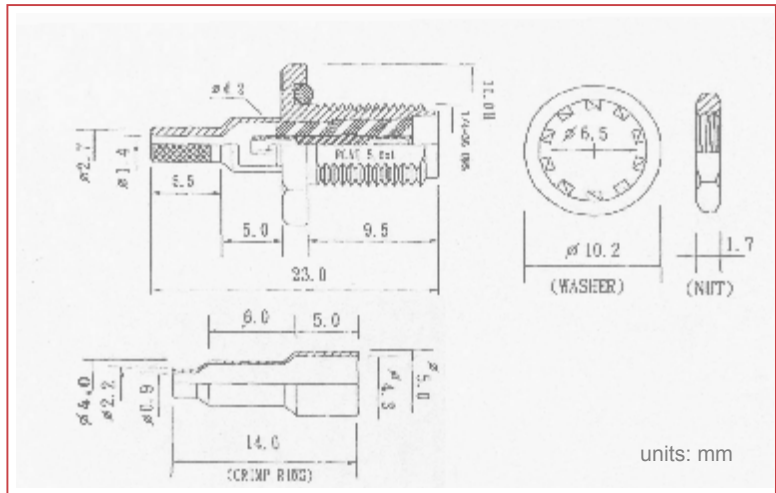
FME connector with hexagon - 14.0 H, outside screw threads – 7/16-28 UNEF, body finished plating – Nickel/Gold or SUCO*/Gold.



* SUCO plating - 3 layers of the white Bronze (anti-corrosion)

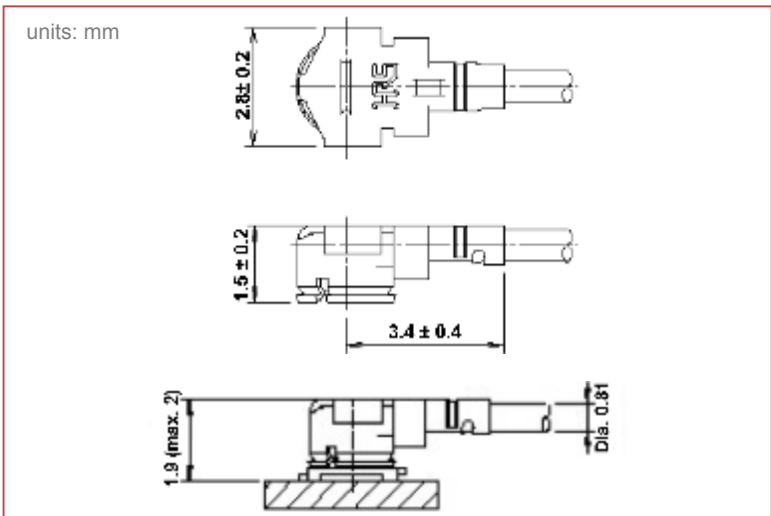
SMA connector (f)

SMA connector (female) is semi-precision, miniature, high frequency connector and offer reliable broadband performance. Connector satisfy high quality standard and is characterized by high reliability, high mechanical stability, especially low VSWR and durability.



U.FL connector (f,m)

SMT Ultra-Miniature coaxial connector (female, male) with high frequency performance from DC to 6 GHz. The connector is the world's lightest coaxial connector and its construction allows very easy



MCX connector

The MCX connector uses identical inner contact and insulator dimensions as the SMB, the outer diameter is 30% smaller than the SMB. This series provides designers with options where weight and physical space are limited. MCX provides broadband capability through 6GHz. Connector is bulkhead.

