

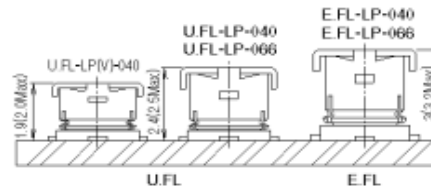
Ultra Small Surface Mount Coaxial Connectors - 1.9mm or 2.4mm Mated Height

U.FL Series



Up to 6GHz Transmission Speed

Mated height comparison (with E.FL series)



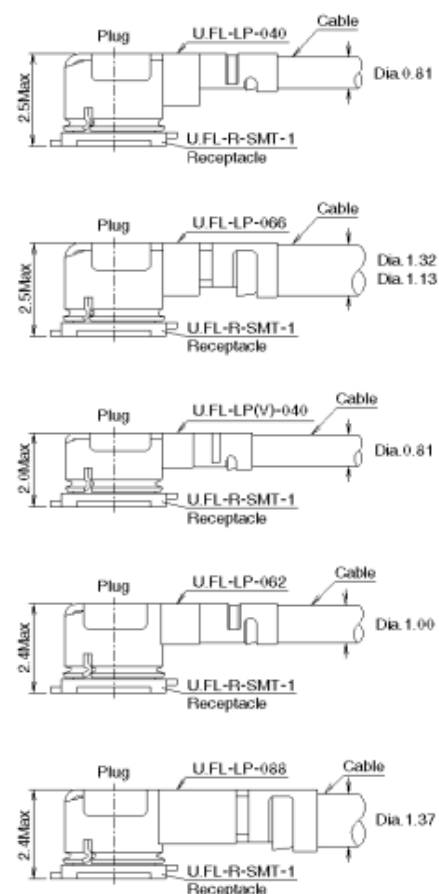
■Features

- Nominal mated height of 1.9 or 2.4mm (Max. 2.0 or 2.5mm)**
- Small mounting area**
The receptacle occupies an area of 7.7mm².
- Light weight**
Receptacle: 15.7mg
- Accepts high frequency transmission.**
To meet the frequency requirements of a wide variety of miniature devices, the connectors offer high frequency performance from DC to 6GHz, with a V.S.W.R. of 1.3 to 1.5 max.
- Automatic board placement**
Packaged on tape-and-reel the receptacles can be placed with vacuum nozzles of the automatic placement equipment.
- Plugs are terminated with ultra-fine coaxial (fluorinated resin insulated) cable**
Standard ultra-fine coaxial cable of 0.81mm diameter (single braid shielding) is used for the plug termination, assuring secure and stable connections.
- Simple connector mating / unmating**
Use of available extraction tool assures correct disconnection of the plug and receptacle.
- Verification of the fully mated condition**
Tactile click sensation confirms fully mated condition, assuring complete electrical and mechanical connection.

■Applications

Cellular phones, PHS, mobile phones, wireless communication devices, electronic measuring instruments, GPS, wireless LAN, Bluetooth and any application requiring high frequency transmission using small coaxial connectors.

●Space Factor of Mated Connector



■ Product Specifications

Ratings	Nominal characteristic impedance	50 ohms	Operating temperature range	-40°C to +90°C	Storage temperature range	-30°C to +70°C
	Frequency range	DC to 6GHz	Operating humidity	90%RH max.	Storage humidity	90%RH max.

Item	Specification	Conditions	
1. Contact resistance	Center : 20 m ohms max. Outer : 10 m ohms max.	10 mA max.	
2. Insulation resistance	500 M ohms min.	100 V DC	
3. Withstanding voltage	No flashover or insulation breakdown.	200 V AC / 1 minute	
4. V.S.W.R.*	Part No.	Up to 3GHz	3 to 6GHz
	U.FL-LP-040 dia.0.81mm Coaxial Cable Assembly	1.3 Max	1.35 Max
	U.FL-LP(V)-040 dia.0.81mm Coaxial Cable Assembly	1.3 Max	1.3 Max
	U.FL-LP-066 dia.1.13mm Coaxial Cable Assembly	1.3 Max	1.4 Max
	U.FL-LP-066 dia.1.32mm Coaxial Cable Assembly	1.3 Max	1.5 Max
	U.FL-LP-062 dia.1mm Coaxial Cable Assembly	1.3 Max	1.3 Max
	U.FL-LP-088 dia.1.37mm Coaxial Cable Assembly	1.3 Max	1.4 Max
5. Durability (mating / un-mating, with corresponding plug)	Contact resistance Center : 25 m ohms max. Outer : 15 m ohms max.	30 cycles	
6. Vibration	No electrical discontinuity of 1μs min.	Frequency: 10 to 100 Hz, single amplitude of 1.5mm, acceleration of 59m/s ² , for 5 cycles in the direction of each of the 3 axis.	
7. Shock	No damage, cracks or parts dislocation.	Acceleration of 735 m/s ² , 11ms duration, sine half-wave waveform, 3 cycles in each of 3 axes.	
8. Humidity (Steady state)	No damage, cracks or parts dislocation. Insulation resistance 10 M ohms min.(humidity high) Insulation resistance 500 M ohms min.(dry)	96 hours at temperature of 40°C and humidity of 95%.	
9. Temperature cycle	No damage, cracks or parts dislocation. Contact resistance: 25 m ohms max. (Center) 15 m ohms max. (Outer)	Temperature: -40°C→+5 to +35°C→+90°C→+5 to +35°C Time: 30min.→ 3min. →30min.→ 3min. 5 cycles	
10. Salt spray	No excessive corrosion	5% salt water solution, 48 hours	

*V.S.W.R. Measurement System

The above V.S.W.R. standard values were measured using the measurement connection shown below.



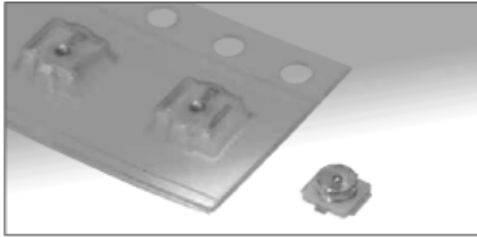
Note 1: Cable type connectors were measured with SMA conversion adapters attached to both ends of the harness product of a suitable 100cm cable.

Note 2: Board type connectors were mounted to a 50Ω glass epoxy board and measurements were conducted with SMA conversion adapters attached.

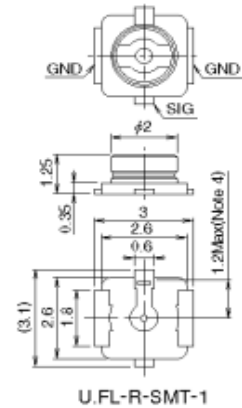
■ Material / Finishes

Part	Material		Finish	Remarks
Shell	Phosphor bronze		Silver plated	—————
Male center contact	Brass		Gold plated	—————
Female center contact	Phosphor bronze		Gold plated	—————
Insulator	Plug	PBT	Color: Black	UL94V-0
	Receptacle	LCP	Color: Beige	UL94V-0

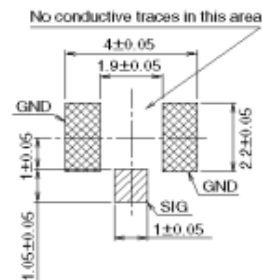
■ Receptacles



- Note 1: Receptacles of (01) specification are sold by the bag with 100 pieces per bag. Please order in pack units.
- Note 2: Receptacles of (10) specification are sold by the reel (which contains 2,500 pieces). Please order in reel units.
- Note 3: Receptacles of (40) specification are sold by the reel (Which contains 4,000 pieces)
- Note 4: This area may be covered by insulating material.



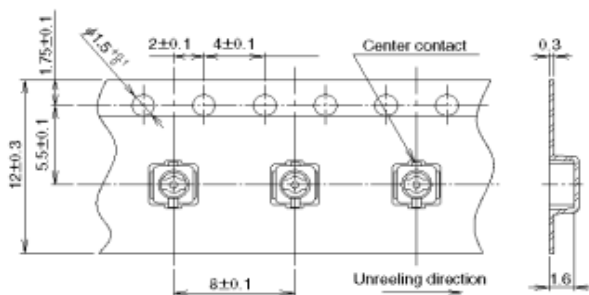
◆ Recommended PCB Mounting Pattern



Part No.	CL No.	Packaging	Weight / EA	RoHS
U.FL-R-SMT-1(01)	331-0472-2-01	Bag packaging (100 pieces/bag)	15.7/mg	YES
U.FL-R-SMT-1(10)	331-0472-2-10	Reel packaging (2,500 pieces/reel)		
U.FL-R-SMT-1(40)	331-0472-2-40	Reel packaging (4,000 pieces/reel)		

● Packaging Specifications

Embossed Carrier Tape Dimensions



Reel Dimensions

