# Ultra Small Surface Mount Coaxial Connectors - 1.9mm or 2.3mm, 2.4mm Mated Height

## U.FL Series

Up to 6GHz

Mated height comparison (with E.FL series)

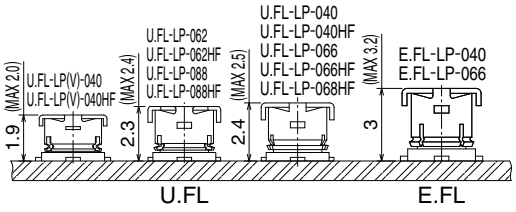



Fig.1

## ■Features

### 1. Nominal mated height of 1.9 or 2.3mm, 2.4mm (Max. 2.0 or 2.4mm, 2.5mm)(Fig.1)

### 2. Small mounting area

The receptacle occupies an area of 7.7mm$^2$.

### 3. Light weight

Receptacle: 15.7mg

### 4. Supports high frequency up to 6GHz

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.

### 5. Automatic board placement

Packaged on tape-and-reel the receptacles can be placed with vacuum nozzles of the automatic placement equipment.

### 6. 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.

### 7. Simple connector mating / unmating

Use of available extraction tool assures correct disconnection of the plug and receptacle.

### 8. Verification of the fully mated condition

Tactile click sensation confirms fully mated condition, assuring complete electrical and mechanical connection.

### 9. Halogen-free*(Receptacle,plug(HF type))

*As defined by IEC61249-2-21

Br-900 ppm maximum, Cl-900 ppm maximum,Cl+Br combined-1,500 ppm maximum

## ■Applications

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

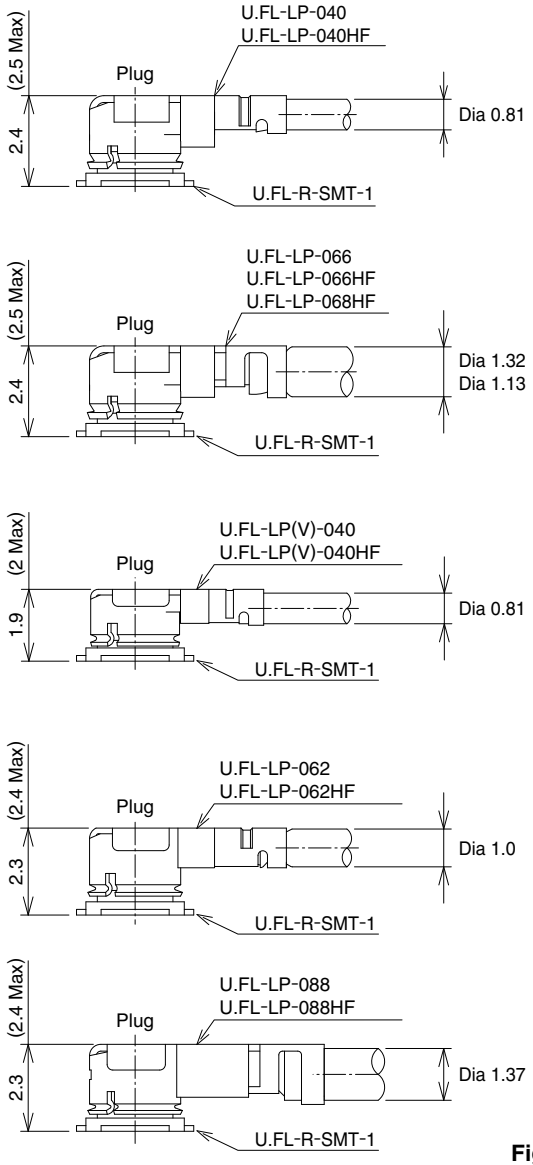


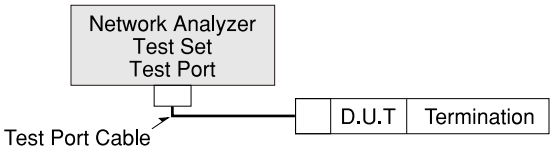

Fig.2

# ■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.<br>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-068✻ 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<br>Center : 25 m ohms max.<br>Outer : 15 m ohms max. | 30 cycles | |
| 6. Vibration | No electrical discontinuity of 1$\mu$s min.<br>No damage, cracks or parts dislocation. | 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 | | 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.<br>Insulation resistance 10 M ohms min.(humidity high)<br>Insulation resistance 500 M ohms min.(dry) | 96 hours at temperature of 40℃ and humidity of 95%. | |
| 9. Temperature cycle | No damage, cracks or parts dislocation.<br>Contact resistance: 25 m ohms max. (Center)<br>15 m ohms max. (Outer) | Temperature: -40˚C→+5 to +35˚C→+90˚C→+5 to +35˚C<br>Time: 30min. → 3min. → 30min. → 3min.<br>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

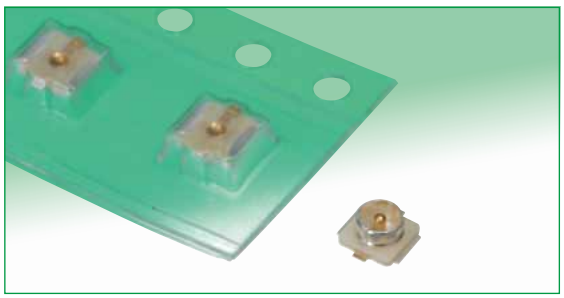
## ●Plug-right angle

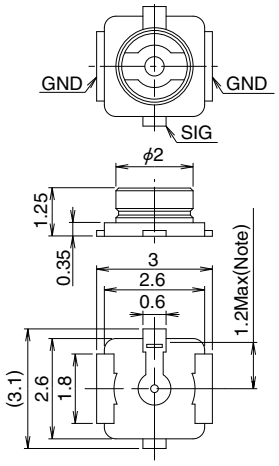
| Part | Material | Finish/Remarks |
|---|---|---|
| Shell | Phosphor bronze | Silver plated |
| Insulator | PBT, Color: Black | UL94V-0(040,066, LP(V)-040, 062, 088) |
| | PBT, Color: Gray | UL94HB(LP(V)-040HF) |
| | LCP, Color: Milky-white | UL94V-0(040HF,066HF, 068HF, 062HF, 088HF) |
| Female center contact | Phosphor bronze | Gold plated |

## ●Receptacle

| Part | Material | Finish/Remarks |
|---|---|---|
| Shell | Phosphor bronze | Silver plated |
| Insulator | LCP, Color: Milky-white | UL94V-0 |
| Male center contact | Brass | Gold plated |

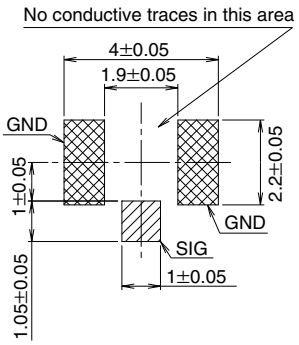
## ■Receptacles






U.FL-R-SMT-1

### ◆Recommended PCB Mounting Pattern

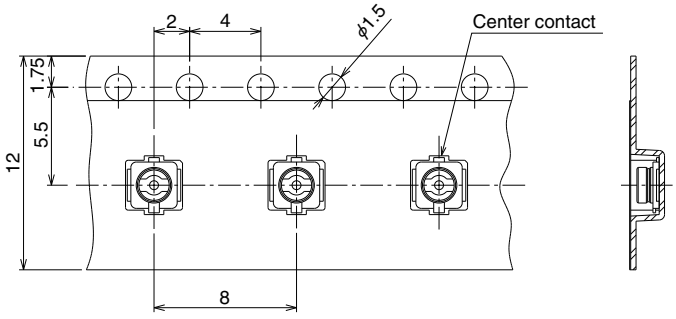



| Part No. | HRS No. | Packaging | Weight / EA | RoHS |
|---|---|---|---|---|
| U.FL-R-SMT-1(01) | 331-0472-2 01 | 100 pcs/pack | 15.7/mg | ○ |
| U.FL-R-SMT-1(60) | 331-0472-2 60 | 4,000 pcs/reel | | |
| U.FL-R-SMT-1(80) | 331-0472-2 80 | 10,000 pcs/reel | | |

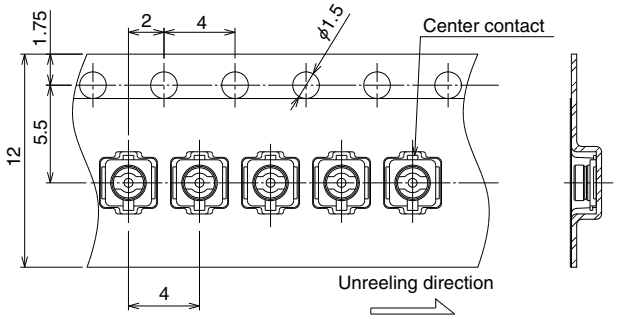
Note: This area may be covered by insulating material.

## ●Embossed Carrier Tape Dimensions(IEC 60286-3 compliant)

### Embossed Carrier Tape Dimensions

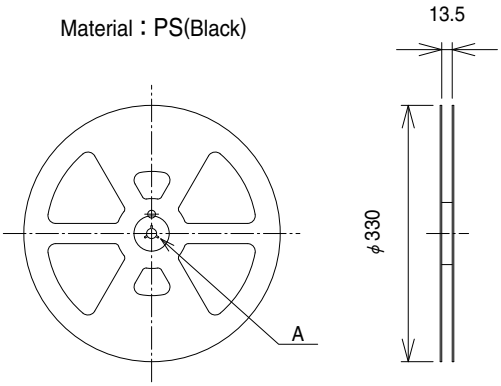



U.FL-R-SMT-1(60): 8mm pitch

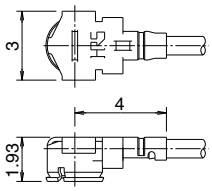
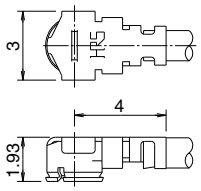
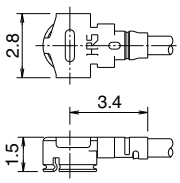
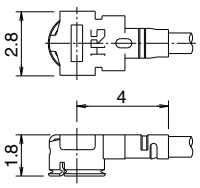
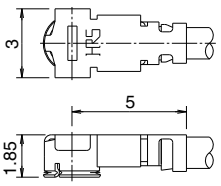



U.FL-R-SMT-1(80): 4mm pitch

### Reel Dimensions



## ■Cable Assembly (Plug)

| Part No. Size | U.FL-LP-040<br>U.FL-LP-040HF | U.FL-LP-066<br>U.FL-LP-066HF<br>U.FL-LP-068HF | U.FL-LP(V)-040<br>U.FL-LP(V)-040HF(06) | U.FL-LP-062(06)<br>U.FL-LP-062HF(06) | U.FL-LP-088(06)<br>U.FL-LP-088HF(06) |
|---|---|---|---|---|---|
| |  |  |  |  |  |
| Mated Height | 2.5mm Max.<br>(2.4mm Nom.) | 2.5mm Max.<br>(2.4mm Nom.) | 2.0mm Max.<br>(1.9mm Nom.) | 2.4mm Max.<br>(2.3mm Nom.) | 2.4mm Max.<br>(2.3mm Nom.) |
| Applicable cable | Dia. 0.81mm | Dia. 1.13mm and<br>Dia. 1.32mm | Dia. 0.81mm | Dia. 1mm | Dia. 1.37mm |
| Weight (mg) | 54 | 59 | 35 | 45.5 | 72 |
| Environmental compliant | The article excellent end HF other than halogen-free, it only as for RoHS compliant | | | | |

## ●Cable Guide

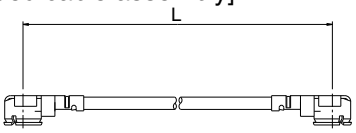
| Description | Cable Type | Cable Specification | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | Inner Conductor* | Dielectric Diameter | Outer Conductor* | Jacket Diameter | Flame Retardant Grade | Nominal attenuation | |
| | | | | | | | At 3GHz | At 6GHz |
| Dia.0.81mm Coaxial Cable | 04 | 7/0.05 SA (AWG#36) | Dia.0.4mm FEP | Single Shield TA | Dia.0.81mm FEP | VW-1 | 6.52dB/m | 9.52dB/m |
| Dia.1.13mm Coaxial Cable | 068 | 7/0.08 SA (AWG#32) | Dia.0.68mm FEP | Single Shield TA | Dia.1.13mm FEP | | 3.73dB/m | 5.44dB/m |
| Dia.1.32mm Coaxial Cable | 066 | 7/0.08 SA (AWG#32) | Dia.0.66mm FEP | Double Shield TA | Dia.1.32mm FEP | | 3.8dB/m | 5.6dB/m |
| Dia.1mm Coaxial Cable | 062 | 7/0.071 SA (AWG#33) | Dia.0.62mm FEP | Tape, single Shield TA | Dia.1mm FEP | | 3.1dB/m | 4.4dB/m |
| Dia.1.37mm Coaxial Cable | 088 | 7/0.102 SA (AWG#30) | Dia.0.88mm FEP | Single Shield TA | Dia.1.37mm FEP | | 2.8dB/m | 4.3dB/m |
| Dia.1.37mm Coaxial Cable | 088 | 7/0.102 SA (AWG#30) | Dia.0.88mm FEP/PTEE | Tape, Single Shield TA | Dia.1.37mm FEP | | 2.5dB/m | 3.4dB/m |

(data as provided by cable suppliers, for reference only)
✻ SA : Silver plated annealed copper wire, TA : Tin plated annealed copper wire

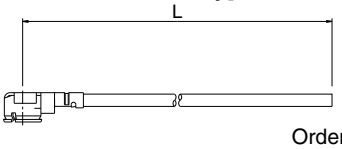
[Plugs can be ordered only as terminated cable assemblies.]

# How To Specify Cable Assembly

[Double-ended cable assembly]




[Single-ended cable assembly]




Ordering information

## ●Ordering information

Used plug: U.FL-LP(V)-040, U.FL-LP(V)-040HF(06)
U.FL-LP-040, U.FL-LP-040HF(Dia.0.81mm)

Double-Ended: U.FL - 2LP HF6 - 04N ⌈⌋ TV - A - L
Single-Ended: U.FL - LP HF6 - 04N ⌈⌋ TV - A - L
(❶ ❷ ❸ ❹ ❺ ❻ ❼)

| | |
|---|---|
| ❶ Series name | U.FL |
| ❷ Assembly type | LP: Single ended LPV: Plug(V) Single ended<br>2LP: Double ended 2LPV plug(V) Double ended |
| ❸ Environmental compliant | HF6: Halogen-free<br>6: RoHS compliant |
| ❹ Cable type | 04N: Dia.0.81mm Ultra-fine coaxial cable |
| ❺ Cable color | 1: White, 2: Black |
| ❻ Cable outer conductor | TV: Tin plated braided wire |
| ❼ Total length(mm) | Length(L) |

Used plug: U.FL-LP-062(06), U.FL-LP-062HF(06)(Dia.1mm)

Double-Ended: U.FL - 2LP HF6 - 062N ⌈⌋ D - A - L
Single-Ended: U.FL - LP HF6 - 062N ⌈⌋ D - A - L
(❶ ❷ ❸ ❹ ❺ ❻ ❼)

| | |
|---|---|
| ❶ Series name | U.FL |
| ❷ Assembly type | LP: Single ended<br>2LP: Double ended |
| ❸ Environmental compliant | HF6: Halogen-free<br>6: RoHS compliant |
| ❹ Cable type | 062N: Dia.1mm Ultra-fine coaxial cable |
| ❺ Cable color | 1: Gray, 2: Black, 3: White |
| ❻ Cable outer conductor | D: Copper tape+ Tin plated braided wire |
| ❼ Total length(mm) | Length(L) |

Used plug: U.FL-LP-066, U.FL-LP-068HF(Dia.1.13mm)

Double-Ended: U.FL - 2LP HF6 - 068N ⌈⌋ T - A - L
Single-Ended: U.FL - LP HF6 - 068N ⌈⌋ T - A - L
(❶ ❷ ❸ ❹ ❺ ❻ ❼)

| | |
|---|---|
| ❶ Series name | U.FL |
| ❷ Assembly type | LP: Single ended<br>2LP: Double ended |
| ❸ Environmental compliant | HF6: Halogen-free<br>6: RoHS compliant |
| ❹ Cable type | 068N: Dia.1.13mm Ultra-fine coaxial cable |
| ❺ Cable color | 1: Gray, 2: Black, 3: White |
| ❻ Cable outer conductor | T: Tin plated braided wire |
| ❼ Total length(mm) | Length(L) |

Used plug: U.FL-LP-088(06), U.FL-LP-088HF(06)(Dia.1.37mm)

Double-Ended: U.FL - 2LP HF6 - 088K ⌈⌋ T - A - L
Single-Ended: U.FL - LP HF6 - 088K ⌈⌋ T - A - L
(❶ ❷ ❸ ❹ ❺ ❻ ❼)

| | |
|---|---|
| ❶ Series name | U.FL |
| ❷ Assembly type | LP: Single ended<br>2LP: Double ended |
| ❸ Environmental compliant | HF6: Halogen-free<br>6: RoHS compliant |
| ❹ Cable type | 088K:<br>088N: Dia.1.37mm Ultra-fine coaxial cable |
| ❺ Cable color | 1: Gray, 2: Black, 3: White |
| ❻ Cable outer conductor | T: Tin plated braided wire<br>PD: Copper tape + Tin plated braided wire |
| ❼ Total length(mm) | Length(L) |

Used plug: U.FL-LP-066, U.FL-LP-066HF(Dia.1.32mm)

Double-Ended: U.FL - 2LP HF6 - 066N ⌈⌋ - A - L
Single-Ended: U.FL - LP HF6 - 066N ⌈⌋ - A - L
(❶ ❷ ❸ ❹ ❺ ❻)

| | |
|---|---|
| ❶ Series name | U.FL |
| ❷ Assembly type | LP: Single ended<br>2LP: Double ended |
| ❸ Environmental compliant | HF6: Halogen-free<br>6: RoHS compliant |
| ❹ Cable type | 066N: Dia.1.32mm Ultra-fine coaxial cable |
| ❺ Cable color | 1: Gray, 2: Black |
| ❻ Total length(mm) | Length(L) |

## ●Standard tolerances for (L)

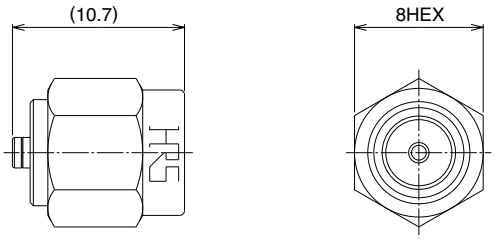
| (L)(mm) | Standard Tolera(mm) |
|---|---|
| *L=35 to 200 | ±4 |
| L=200 to 500 | ±8 |
| L=500 to 1000 | ±12 |
| L=Longer than 1000 | ±1.5% of (L) |

Note: Minimum available length(L) is 35mm

# ■Conversion Adapters

## ●SMA Conversion Adapter (Mating portion: U.FL side jack - SMA side plug)

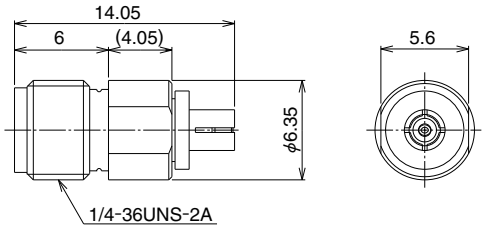
Note: The U.FL side mating portions has a lower lock retention force than the regular product, therefore, cannot be used for purposes other than performance measurements.




| Part No. | HRS No. | RoHS |
|---|---|---|
| HRMP-U.FLJ(40) | 311-0300-2 40 | ○ |

## ●SMA Conversion Adapter (Mating portion: U.FL side plug - SMA side jack)

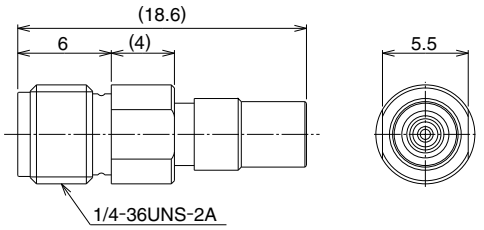
Note: The U.FL side mating portions has a lower lock retention force than the regular product, therefore, cannot be used for purposes other than performance measurements.




| Part No. | HRS No. | RoHS |
|---|---|---|
| HRMJ-U.FLP(40) | 311-0301-5 40 | ○ |

## ●SMA Conversion Adapter (Mating portion: U.FL side plug - SMA side jack)

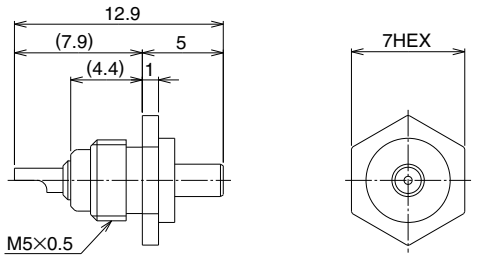
Note: This connector is used by compressing the mated portion of U.FL side onto the U.FL-R-SMT-1 portion.




| Part No. | HRS No. | RoHS |
|---|---|---|
| HRMJ-U.FLP-ST1(40) | 311-0385-5 40 | ○ |

# ■Receptacle to Inspection

This receptacle is used for inspecting the continuity, withstand voltage, and other aspects of the harness product.

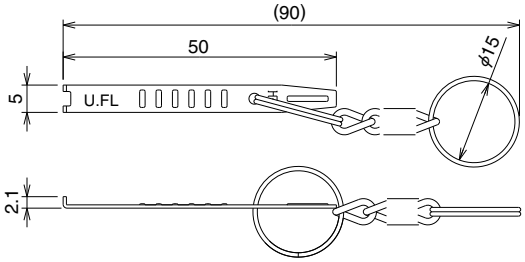



| Part No. | HRS No. | RoHS |
|---|---|---|
| U.FL-R-1 | 331-0466-0 | ○ |

# ◆Plug Extraction Tool

This tool is used for extraction from a mating condition.

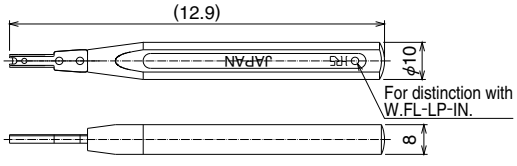
Note: Part No. U.FL-LP-N-2 for U.FL-LP-040/066/088.
Part No. U.FL-LP(V)-N-2 for U.FL-LP(V)-040/U.FL-LP-062.




| Part No. | HRS No. | RoHS |
|---|---|---|
| U.FL-LP-N-2 | 331-0494-5 | ○ |
| U.FL-LP(V)-N-2 | 331-0493-2 | |

# ◆Plug Insertion Tool

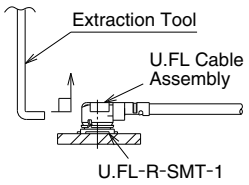
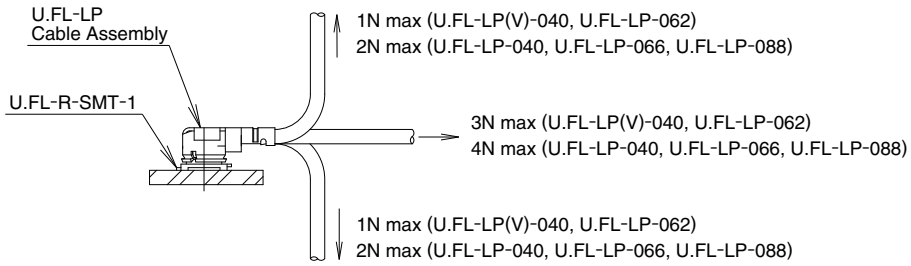
This tool is for mating U.FL series plug into receptacle.



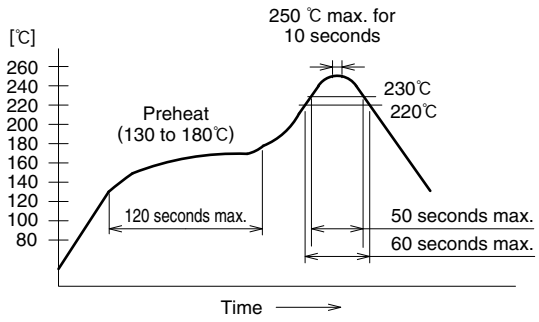

| Part No. | HRS No. | RoHS |
|---|---|---|
| U.FL-LP-IN | 331-0334-9 | ○ |

# Usage Precautions

## 1. Plugs

| | |
|---|---|
| (1) Mating / unmating | 1) To disconnect connectors, insert the end portion of U.FL-LP-N-2 and U.FL-LP(V)-N-2 under the connector flanges and pull off vertically, in the direction of the connector mating axis.<br>2) To mate the connectors, the mating axes of both connectors must be aligned and the connectors can be mated. The "click" will confirm fully mated connection.Do not attempt to insert on an extreme angle.<br>  |
| (2) Pull forces on the cable after connectors are mated. | After the connectors are mating, do not apply a load to the cable in excess of the values indicated in the diagram below.<br>  |
| (3) Precautions | Do NOT forcefully twist or deform wires. |

## 2. Receptacles

| | |
|---|---|
| (1) Recommended reflow temperature profile |  <br>① The temperature of the printed circuit board surface temperature at the points of contact with the terminals.<br>② Reflow soldering should be performed at a printed circuit surface temperature of 250°C max.<br>③ In individual applications the actual temperature may vary, depending on the solder paste type, volume / thickness and board size / thickness. Consuly your solder paste and equipment manufacturer for specific recommendations. |
| (2) Recommended manual soldering | Manual soldering: 350˚C for 5 seconds |
| (3) Recommended metal mask thickness | 0.1 to 0.12 mm |
| (4) Reflow cycles | 2 times |

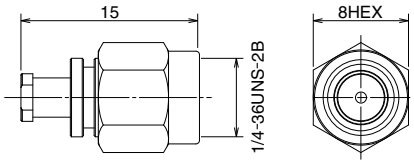
## 3. Operating environment and storage conditions

| | |
|---|---|
| (1) Operating environment | The connectors are not designed to operate in the following environments:<br>• Exposed to a excessive amounts of fine particles and dust<br>• Regions and places having a high density of sulfur dioxide, hydrogen sulfide, nitrogen dioxide or other corrosive gasses.<br>• Environments having large rapid variations in temperature. |
| (2) Storage conditions - Receptacle | Store in the Hirose Electric packaging.<br>Temperature: -10 to +40℃, Humidity: 85% max.<br>Use within 6 months of delivery.<br>Receptacles for which the storage period has elapsed must be tested for solderability to the PC board mounting surface. |

# ■SMA cable type

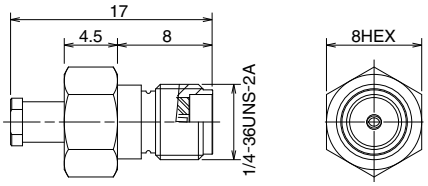
**SMA**

## ●Straight Plug



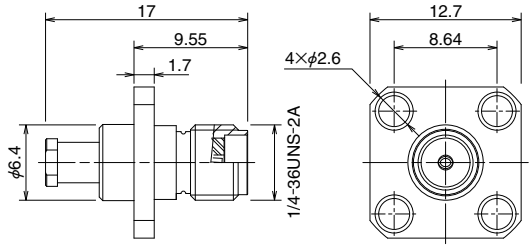

| Part No. | HRS No. | Applicable cable | RoHS |
|---|---|---|---|
| HRM-200-040PBN(40) | 323-0790-3 40 | Dia. 0.81 type | ○ |
| HRM-200-066PBN(40) | 323-0791-6 40 | Dia. 1.13, Dia.1.32 type | |
| HRM-200-088PBN(40) | 323-0800-5 40 | Dia. 1.37, Dia.1.48 type | |

## ●Straight Jack



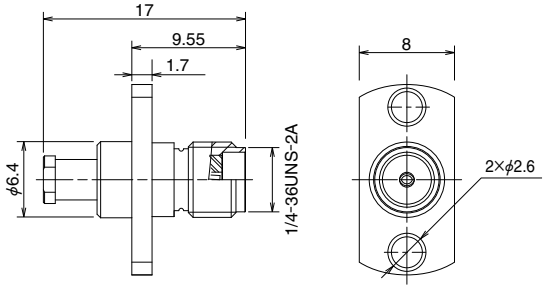

| Part No. | HRS No. | Applicable cable | RoHS |
|---|---|---|---|
| HRM-200-040JBN(40) | 323-0792-9 40 | Dia. 0.81 type | ○ |
| HRM-200-066JBN(40) | 323-0793-1 40 | Dia. 1.13, Dia.1.32 type | |
| HRM-200-088JBN(40) | 323-0801-8 40 | Dia. 1.37, Dia.1.48 type | |

## ●Panel mount Jack



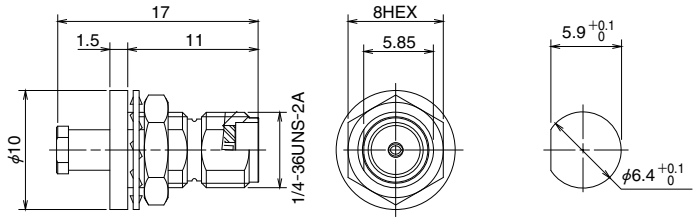

| Part No. | HRS No. | Applicable cable | RoHS |
|---|---|---|---|
| HRM-200-040PJ4BN(40) | 323-0795-7 40 | Dia. 0.81 type | ○ |
| HRM-200-066PJ4BN(40) | 323-0796-0 40 | Dia. 1.13, Dia.1.32 type | |
| HRM-200-088PJ4BN(40) | 323-0803-3 40 | Dia. 1.37, Dia.1.48 type | |

## ●Panel mount Jack




| Part No. | HRS No. | Applicable cable | RoHS |
|---|---|---|---|
| HRM-200-040PJ2BN(40) | 323-0794-4 40 | Dia. 0.81 type | ○ |
| HRM-200-066PJ2BN(40) | 323-0788-1 40 | Dia. 1.13, Dia.1.32 type | |
| HRM-200-088PJ2BN(40) | 323-0802-0 40 | Dia. 1.37, Dia.1.48 type | |

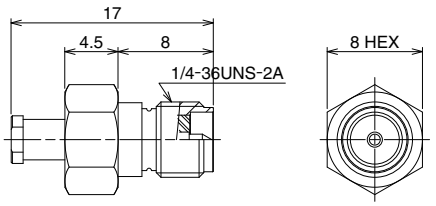
## ●Panel mount Jack (Bulkhead)




| Part No. | HRS No. | Applicable cable | RoHS |
|---|---|---|---|
| HRM-200-040BPJBN(40) | 323-0797-2 40 | Dia. 0.81 type | ○ |
| HRM-200-066BPJBN(40) | 323-0798-5 40 | Dia. 1.13, Dia.1.32 type | |
| HRM-200-088BPJBN(40) | 323-0804-6 40 | Dia. 1.37, Dia.1.48 type | |

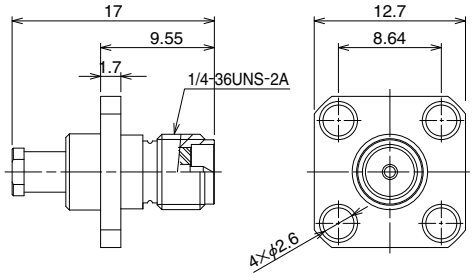
## Reverse polarity SMA

### ●Straight Jack



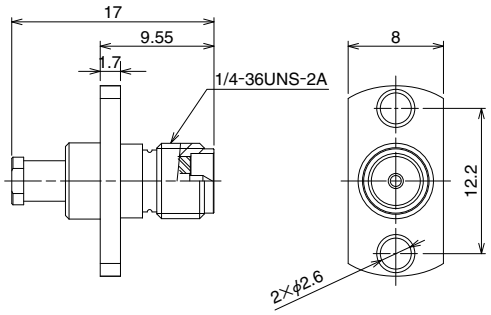

| Part No. | HRS No. | Applicable cable | RoHS |
|---|---|---|---|
| SMA(R)-200-040JBN | 323-0926-3 | Dia. 0.81 type | ○ |
| SMA(R)-200-066JBN | 323-0931-3 | Dia. 1.13, Dia.1.32 type | |
| SMA(R)-200-088JBN | 323-0904-0 | Dia. 1.37 type | |

### ●Panel mount Jack



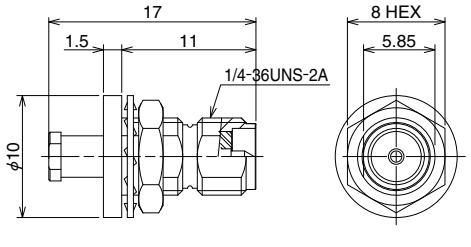

| Part No. | HRS No. | Applicable cable | RoHS |
|---|---|---|---|
| SMA(R)-200-040PJ4BN | 323-0928-9 | Dia. 0.81 type | ○ |
| SMA(R)-200-066PJ4BN | 323-0932-6 | Dia. 1.13, Dia.1.32 type | |
| SMA(R)-200-088PJ4BN | 323-0934-1 | Dia. 1.37 type | |

### ●Panel mount Jack

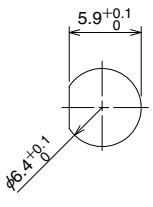



| Part No. | HRS No. | Applicable cable | RoHS |
|---|---|---|---|
| SMA(R)-200-040PJ2BN | 323-0929-1 | Dia. 0.81 type | ○ |
| SMA(R)-200-066PJ2BN | 323-0933-9 | Dia. 1.13, Dia.1.32 type | |
| SMA(R)-200-088PJ2BN | 323-0935-4 | Dia. 1.37 type | |

### ●Panel mount Jack (Bulkhead)

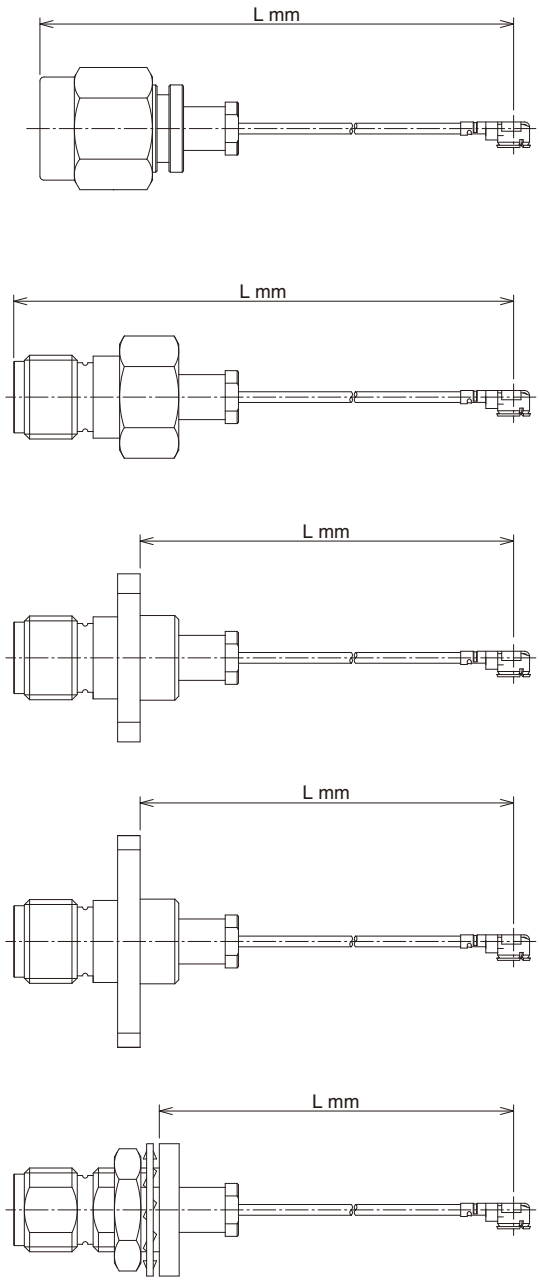



●Panel cut-out




| Part No. | HRS No. | Applicable cable | RoHS |
|---|---|---|---|
| SMA(R)-200-040BPJBN | 323-0927-6 | Dia. 0.81 type | ○ |
| SMA(R)-200-066BPJBN | 323-0902-5 | Dia. 1.13, Dia.1.32 type | |
| SMA(R)-200-088BPJBN | 323-0901-2 | Dia. 1.37 type | |

## ■How To Specify Cable Assembly




Note: Minimum available length(L) is 50mm

### ●Ordering information

**HRM P - U.FL - 04 N1 - A - L**

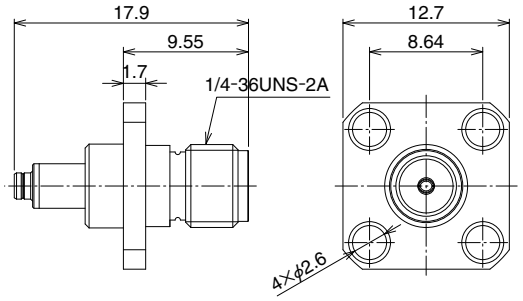
❶ ❷ ❸ ❹ ❺

| | | |
|---|---|---|
| ❶ Series name | HRM : SMA type<br>SMAR : Reverse polarity SMA | |
| ❷ Connector type | P : Plug<br>J : Jack<br>PJ : Panel mount Jack(Four screws)<br>PJ2 : Panel mount Jack(Two screws)<br>BPJ : Panel mount Jack(Bulkhead) | |
| ❸ Cable type | 04 : Dia. 0.81mm Coaxial cable<br>066 : Dia. 1.32mm Coaxial cable<br>068 : Dia. 1.13mm Coaxial cable<br>088 : Dia. 1.37mm Coaxial cable | |
| ❹ Cable color | 04 | 1: White, 2: Black |
| | 066<br>068<br>088 | 1: Gray, 2: Black |
| ❺ Total length(mm) | Length(L) | |

# ■SMA conversion adapter

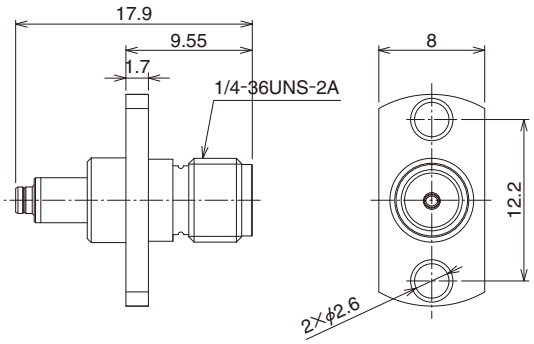
**SMA**

## ●Panel mount adapter



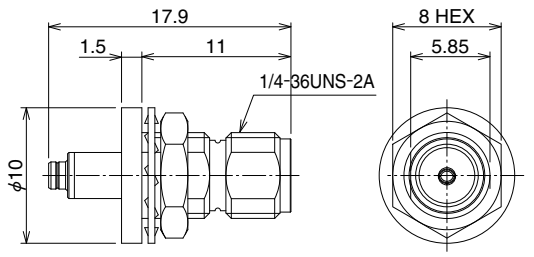

| Part No. | HRS No. | RoHS |
|---|---|---|
| HRMJ-U.FLJ-PA4 | 311-0465-2 | ○ |

## ●Panel mount adapter

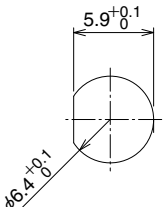



| Part No. | HRS No. | RoHS |
|---|---|---|
| HRMJ-U.FLJ-PA2 | 311-0467-8 | ○ |

## ●Panel mount adapter(Bulkhead)

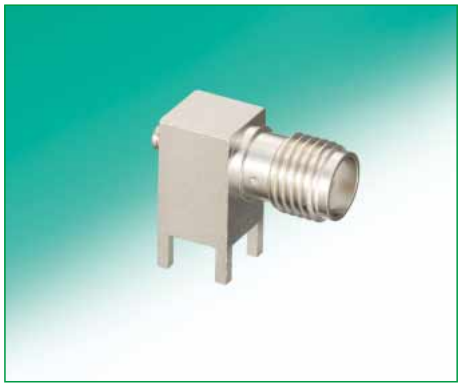


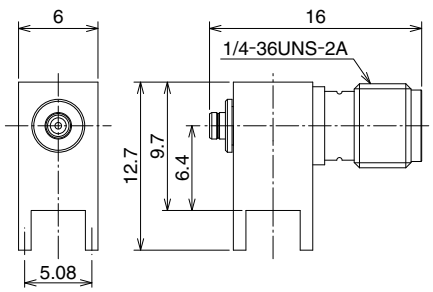

### ●Panel cut-out



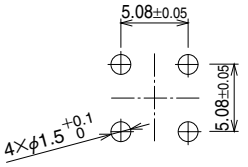

| Part No. | HRS No. | RoHS |
|---|---|---|
| HRMJ-U.FLJ-BPA-4 | 311-0463-7 | ○ |

## ●PCB mount adapter





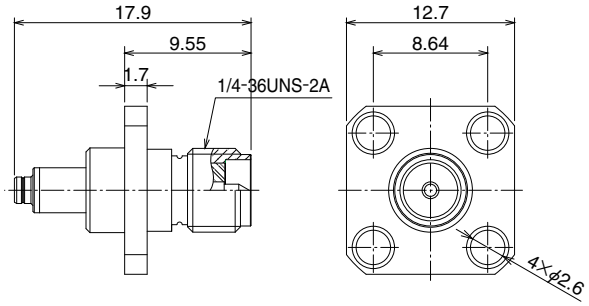

### ●Panel cut-out




| Part No. | HRS No. | Finish | RoHS |
|---|---|---|---|
| HRMJ-U.FLJ-PC | 311-0411-3 | Nickel plated | ○ |
| HRMJ-U.FLJ-PC(01) | 311-0411-3 01 | Gold plated | |

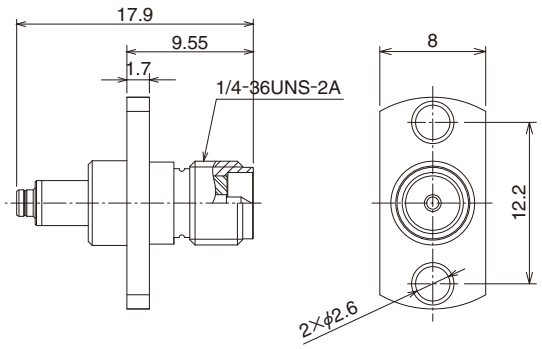
## Reverse polarity SMA

### ●Panel mount adapter



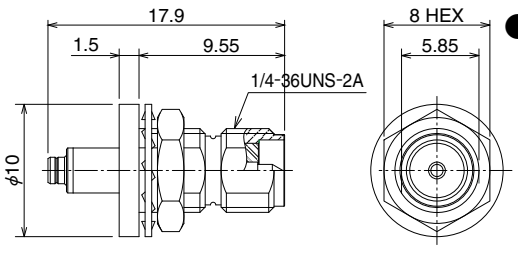

| Part No. | HRS No. | RoHS |
|---|---|---|
| SMA(R)J-U.FLJ-PA4 | 311-0466-5 | ○ |

### ●Panel mount adapter

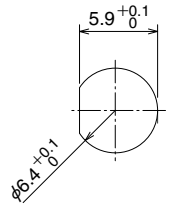



| Part No. | HRS No. | RoHS |
|---|---|---|
| SMA(R)J-U.FLJ-PA2 | 311-0468-0 | ○ |

### ●Panel mount adapter (Bulkhead)




●Mounting pattern




| Part No. | HRS No. | RoHS |
|---|---|---|
| SMA(R)J-U.FLJ-BPA-4 | 311-0464-0 | ○ |

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