

# Light Weight Micro SMT Coaxial Connector, 1.9mm to 2.4mm Mated Height

## U.FL Series



### ■Features

#### 1. Mated Height (1.9mm to 2.4mm NOM)

The maximum height from the board surface when the plug and Receptacle are mated is 2.0 to 2.0mm Max. depending on the plug for a low profile. (Refer to diagram on right)

#### 2. Receptacle

Small and light weight with a mass of 15.7mg and occupied mounting space of 7.7mm<sup>2</sup>. Compatible with board mounting. (Embossed packaging)

#### 3. Frequency

Plug U.FL(A) : Up to 18GHz

Plug U.FL : Up to 8GHz

Receptacle can be used with both U.FL(A) and U.FL.

#### 4. Plug compatible with ultra-fine coaxial (fluorinated resin insulated) cable

φ1.37, φ1.32, φ1.13, φ0.95, φ0.81

#### 5. Various Accessories

Plug insertion/extraction tools, adapter for inspection and internal wiring, and SMA, MMCX, and TNC connectors for U.FL back end connection are available.

#### 6. Tactile Mating

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

#### 7. Environmental Compatibility

##### ◆Halogen Free

Chlorine and bromine above the standard values are not used for receptacle and plug harnesses.

\*As defined by IEC61249-2-21

Br-900 ppm maximum, Cl-900 ppm maximum,

Cl+Br combined-1,500 ppm maximum

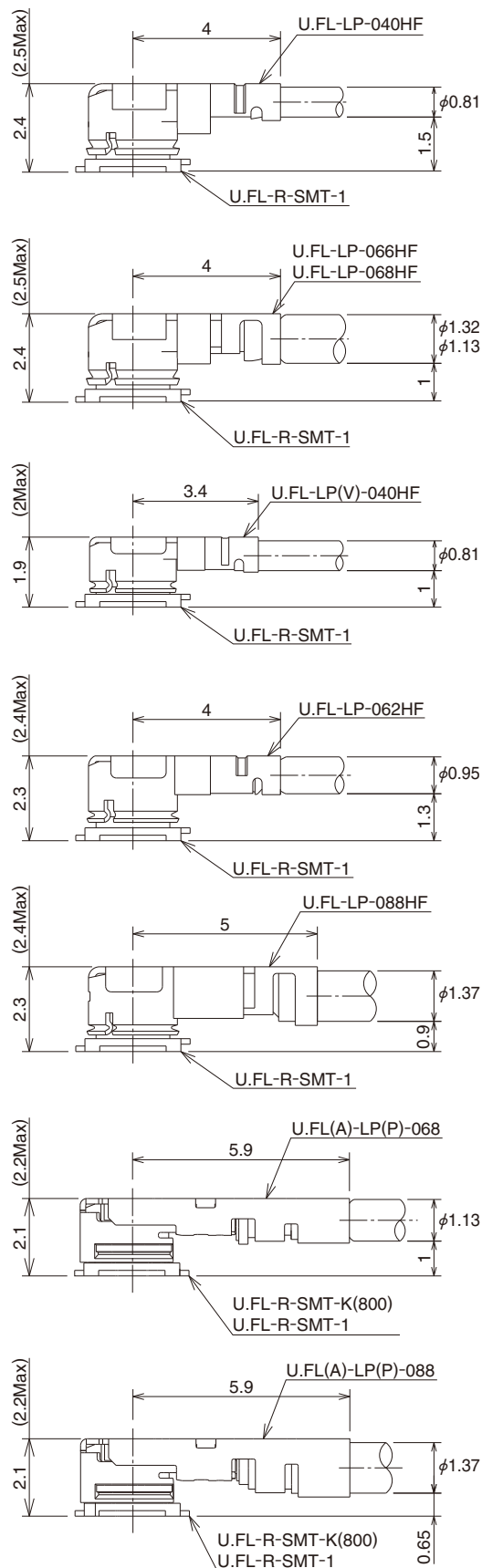
##### ◆ROHS2 Compatible

### ■Applications

Wireless LAN Devices (Wi-Fi 6), Bluetooth devices, Car navigation, drone, PDA, GPS, wireless transmission devices, electronic measuring devices, etc.

Plug U.FL(A) : Up to 18GHz  
Plug U.FL : Up to 8GHz

### ●Space Factor of Mated Connector

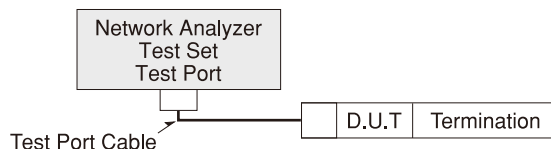


## Product Specifications

Ratings	Nominal characteristic impedance Frequency range	50Ω DC to 8GHz	Operating temperature range Operating humidity	-40°C to +105°C 90%RH max.	Storage temperature range Storage humidity	-30°C to +70°C 90%RH max.
Item		Specification		Conditions		
1. Contact resistance		Center : 20mΩ max. (50mΩ max.) Outer : 10mΩ max. (20mΩ max.) (U.FL(A))		10mA max.		
2. Insulation resistance		500MΩmin.		100V DC		
3. Withstanding voltage		No flashover or insulation breakdown.		200V AC / 1 minute		
4. V.S.W.R.*	Cable Type		DC~3GHz	3~6GHz	6~8GHz	
	U.FL-LP-040HF	φ0.81	1.3 Max	1.35 Max	1.4 Max	
	U.FL-LP(V)-040HF	φ0.81	1.3 Max			
	U.FL-LP-068HF	φ1.13	1.3 Max	1.4 Max	1.6 Max	
	U.FL-LP-066HF	φ1.32	1.3 Max	1.5 Max	1.7 Max	
	U.FL-LP-062HF	φ0.95	1.3 Max		1.4 Max	
	U.FL-LP-088HF	φ1.37	1.3 Max	1.4 Max	1.6 Max	
	U.FL(A)-LP(P)-068	φ1.13	1.3 Max	1.4 Max	6-9GHz : 1.5 Max 9-12GHz : 1.6 Max 12-15GHz : 1.7 Max 15-18GHz : 2.0 Max	
	U.FL(A)-LP(P)-088	φ1.37				
5. Female Contact Retention Force		0.15N Min./0.1N Min. (062 Plug, U.FL(A))		Measured with φ0.475 pin gauge		
6. Durability (mating / un-mating, with corresponding plug)		Contact resistance Initial Value+5mΩ		30 cycles		
7. Vibration		No electrical discontinuity of 1μs min. No damage, cracks or parts dislocation.		Frequency : 10 to 100Hz, single amplitude of 1.5mm, acceleration of 59m/s <sup>2</sup> , for 5 cycles in the direction of each of the 3 axis.		
8. Shock				Acceleration of 735m/s <sup>2</sup> , 11ms duration, sine half-wave waveform, 3 cycles in each of 3 axes.		
9. Humidity (Steady state)		Insulation Resistance 10MΩ min. (High Temperature) 500MΩ min. (When Dry)		96 hours at temperature of 40°C and humidity of 95%.		
10. Temperature cycle		No damage, cracks or parts dislocation. Contact resistance : 25mΩ max. (Center) 15mΩ max. (Outer)		Temperature : -40°C→+5 to +35°C→+105°C→+5 to +35°C Time : 30min. → 3min. → 30min. → 3min. 5 cycles		
11. Salt spray		V.S.W.R. Satisfies initial value		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 / Finish

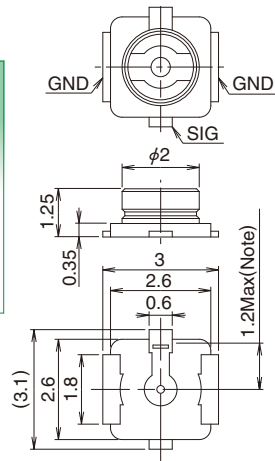
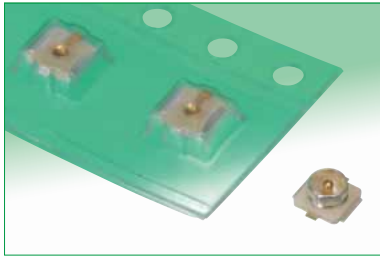
### ●Plug-right angle

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

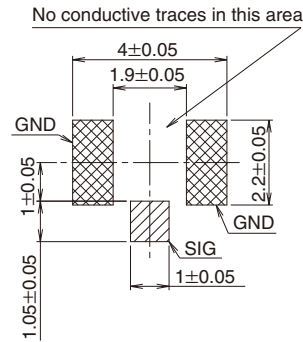
### ●Receptacle

Part	Material	Finish/Remarks
Shell	Phosphor bronze	Silver plated (U.FL-R-SMT-1) / Gold Plated (U.FL-R-SMT-K)
Insulator	LCP, Color : Milky-white	UL94V-0 (U.FL-R-SMT-1)
	LCP (Black)	UL94V-0 (U.FL-R-SMT-K)
Male center contact	Brass	Gold plated

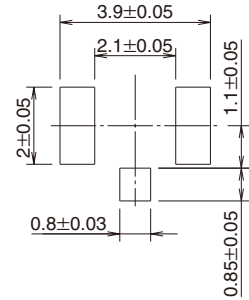
## Receptacle



## Recommended PCB Mounting Pattern



## Recommended Metal Mask Dimensions



Mask Thickness : 0.1mm/0.12mm

### Shell : Silver plated

U.FL-R-SMT-1

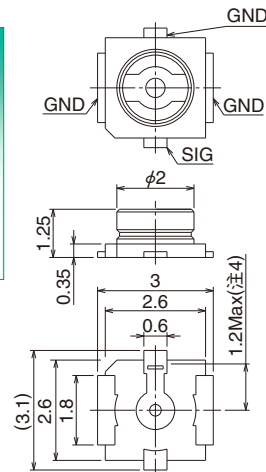
Part No.	HRS No.	Packaging	Weight / EA
U.FL-R-SMT-1(01)	331-0472-2 01	100 pcs/pack	15.7/mg
U.FL-R-SMT-1(60)	331-0472-2 60	4,000 pcs/reel	
U.FL-R-SMT-1(80)	331-0472-2 80	10,000 pcs/reel	

(Note 1) The sales unit of the (01) specification receptacle is one pack (100 units per pack). Please order based on the number of packs.

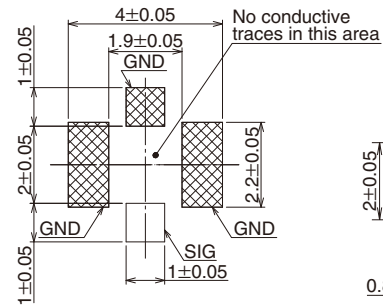
(Note 2) The sales unit of the (60) specification receptacle is 1 reel (4,000 pcs per reel) so please order based on the number of reels.

(Note 3) The sales unit of the (80) specification receptacle is 1 reel (10,000 pcs per reel), so please order based on number of reels.

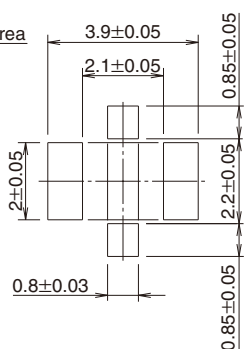
(Note 4) Tolerance value of mold resin applied to center contact.



## Recommended PCB Mounting Pattern



## Recommended Metal Mask Dimensions



Mask Thickness : 0.1mm/0.12mm

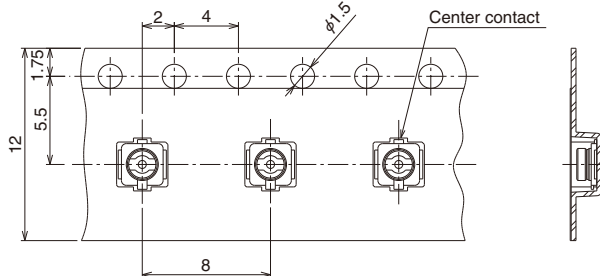
### Shell : Gold plated

U.FL-R-SMT-K

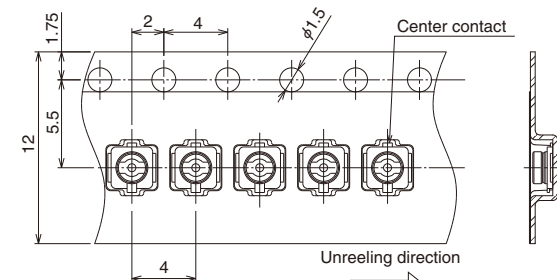
Part No.	HRS No.	Packaging	Mass
U.FL-R-SMT-K(800)	480-0761-0 00	10,000 pcs per reel	15.7/pc

(Note 5) The sales unit of the receptacle is 1 reel (10,000 pcs per reel), so please order based on the number of reels.

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

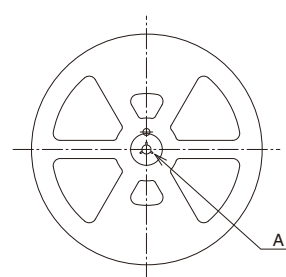


U.FL-R-SMT-1(60) : 8mm pitch

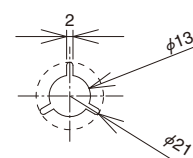


U.FL-R-SMT-1(80) / U.FL-R-SMT-K(800) : 4mm pitch

## ◆ Reel Dimensions

Material : PS(Black) U.FL-R-SMT-1  
PS(White) U.FL-R-SMT-K


A(SCALE FREE)



## ■Plug (Center Solder Type)



### ◆U.FL Plug

- The center contact is gold plated and the outer contact is silver plated.

	U.FL-LP-040HF	U.FL-LP-066HF U.FL-LP-068HF	U.FL-LP(V)-040HF	U.FL-LP-062HF	U.FL-LP-088HF
Part No. Size					
Mated Height	2.5mm Max. (2.4mm Nom.)	2.5mm Max. (2.4mm Nom.)	2.0mm Max. (1.9mm Nom.)	2.4mm Max. (2.3mm Nom.)	2.4mm Max. (2.3mm Nom.)
Applicable cable	Dia. 0.81mm	Dia. 1.13mm and Dia. 1.32mm	Dia. 0.81mm	Dia. 0.95mm	Dia. 1.37mm
Weight (mg)	54	59	35	45.5	72

## ●Cable Guide

Description	Cable Type	Cable Specification							
		Inner Conductor*	Dielectric Diameter	Outer Conductor*	Jacket	Flame Retardant Grade	Nominal attenuation (dB/m)		
							At 3GHz	At 6GHz	At 8GHz
Dia.0.81mm Coaxial Cable	04	7/0.05 SA (AWG#36)	Dia.0.4mm FEP	Single Shield TA	FEP	VW-1	5.4	8.0	10.2
Dia.1.13mm Coaxial Cable	068	7/0.08 SA (AWG#32)	Dia.0.68mm FEP	Single Shield TA			3.73	5.44	6.5
Dia.1.32mm Coaxial Cable	066	7/0.08 SA (AWG#32)	Dia.0.66mm FEP	Double Shield TA			3.8	5.6	7.1
Dia.0.95mm Coaxial Cable	062	7/0.071 SA (AWG#33)	Dia.0.62mm FEP	Tape, single Shield TA			3.1	4.4	5.3
Dia.1.37mm Coaxial Cable	088	7/0.102 SA (AWG#30)	Dia.0.88mm FEP	Single Shield TA			2.8	4.3	5.0
Dia.1.37mm Coaxial Cable (Low Loss)	088	7/0.102 SA (AWG#30)	Dia.0.88mm FEP/PTFE	Tape, Single Shield TA			2.5	3.4	3.8

(Attenuation is a reference value.)

\* SA : Silver plated annealed copper wire, TA : Tin plated annealed copper wire

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

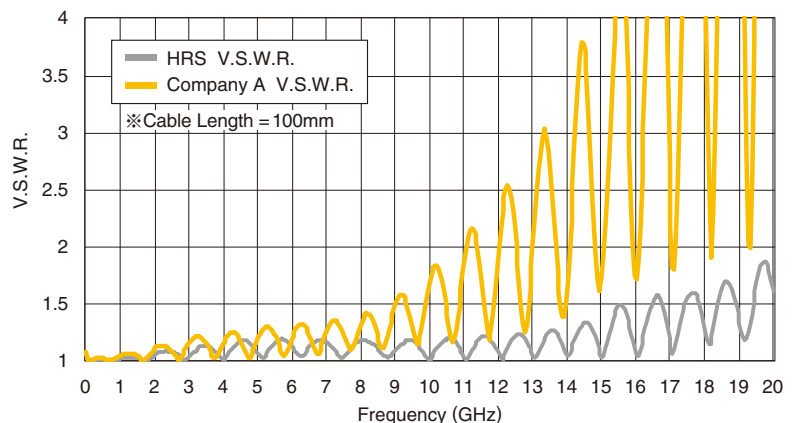
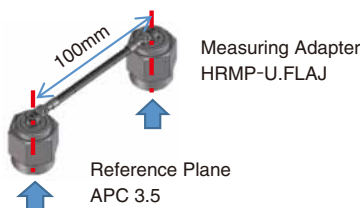
## ■ Plug (No Solder Type)



### ◆ U.FL(A) Plug

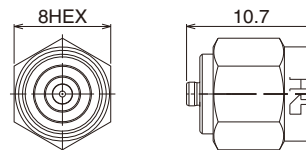
- Harness product guarantees frequency up to 18GHz and impedance matching.
- The inner and outer contact portion are gold plated (the main body is nickel plated)
- The receptacle can be mated with U.FL-R-SMT-1 (shell : silver plated) and U.FL-R-SMT-K (shell : gold plated).
- The SMA inspection adapter and extraction tool are only for the U.FL(A) Plug.
- Controls variation and improves extraction force by 50% compared to conventional products and competing products (Approx. 30N). It is difficult to remove the connector even when bending the cable.

Part No. Size	U.FL(A)-LP(P)-068	U.FL(A)-LP(P)-088
Mated Height	2.2mm Max. (2.1mm Nom.)	
Applicable cable	φ1.13	φ1.37
Weight (mg)	56	58



## ■ U.FL(A) Inspection SMA Conversion Adapter

(Mated Portion: U.FLA Jack- SMA Plug)

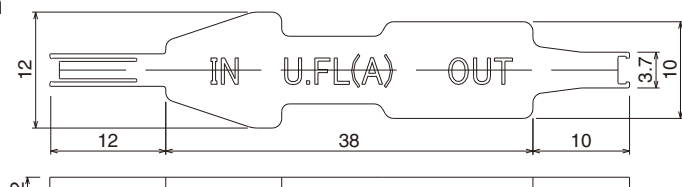


Part No.	HRS No.
HRMP-U.FLAJ	311-2400-0

(Note) Since the U.FL side mated portion has a weaker lock than standard products, it cannot be used for purposes other than performance measurement.

## ■ U.FL(A) Insertion/Extraction Tool

For removing from the mated condition



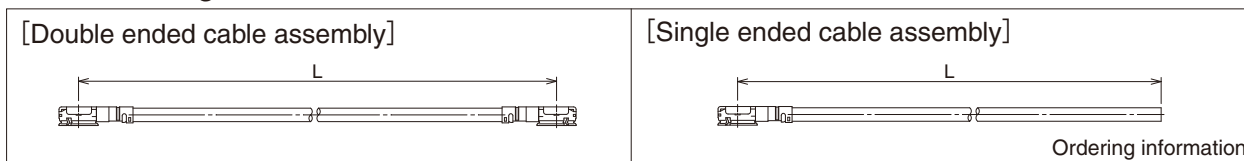
Part No.	HRS No.
U.FL(A)-LP-IN.OUT	331-2401-0



## The Procedure for ordering patch cord

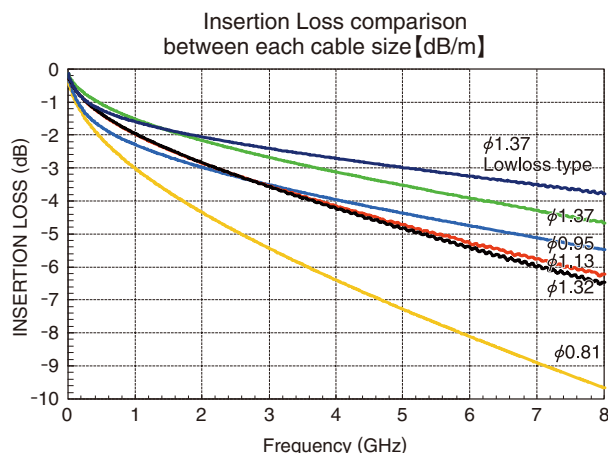
Please select the specifications in 3 steps. No need product name for ordering patch cords.

### STEP 1 : Single end or both ends



### STEP 2 : Cable and mating height

No.	Jacket diameter	Cable color	Mating height (Max)	Plug
1	φ1.37			
2	φ1.37 Low Loss	Gray / Black	2.3mm (2.4mm)	U.FL-LP-088HF
3	φ1.37	Gray / Black	2.1mm (2.2mm)	U.FL(A)-LP(P)-088
4	φ1.32	Gray / Black	2.4mm (2.5mm)	U.FL-LP-066HF
5	φ1.13	Gray / Black	2.4mm (2.5mm)	U.FL-LP-068HF
6	φ1.13	Gray / Black	2.1mm (2.2mm)	U.FL(A)-LP(P)-068
7	φ0.95	Gray / Black	2.3mm (2.4mm)	U.FL-LP-062HF
8	φ0.81	White / Black	2.4mm (2.5mm)	U.FL-LP-040HF
9	φ0.81	White / Black	2.0mm (1.9mm)	U.FL-LP(V)-040HF



### STEP 3 : Cable length (mm)

#### ●Standard tolerances for (L)

(L)(mm)	Standard tolera(mm)
*L=35 to 200	±4
L=201 to 500	±8
L=501 to 1000	±12
L=Longer than 1000	±1.5% of (L)

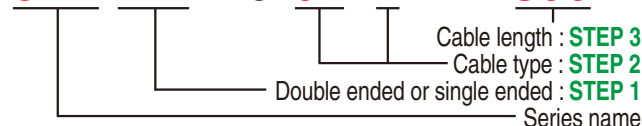
Note : Minimum available length(L) is 35mm. (U.FL(A) is from 80 to 1200mm)

## Patch cord name example

Characters that are not red are for Hirose internal identification.

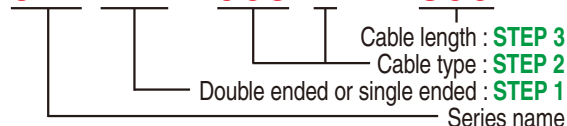
#### ●Plug (Center Solder Type)

**U.FL-2LPHF6-04N1TV-A-300**



#### ●Plug (No Solder Type)

**UFL-2LPA-068Y2T-A-300**



### STEP 1 Example Notation

[Double ended]

**U.FL-2LPHF6-04N1TV-A-300**

[Single ended]

**U.FL-LPHF6-04N1TV-A-300**

### STEP 2 Example Notation

#### 1 Cable-mating height

[Dia. 1.37 cable (088 cable)]

**088** is listed in the third block representing the cable type.

**U.FL-2LPHF6-088N1T-A-300** (Plug : U.FL)

**UFL-2LPA-088Y1T-A-300** (Plug : U.FL(A))

[Dia. 1.37 Cable (088) Low Loss]

Block 3 that shows the cable times says **088**.

**UFL-2LPHF6-088N1PD-A-300** (Plug : U.FL)

[Dia. 1.32 cable (066 cable)]

**066** is listed in the third block representing the cable type.

**U.FL-2LPHF6-066N1-A-300** (Plug : U.FL)

[Dia. 1.13 cable (068 cable)]

**068** is listed in the third block representing the cable type.

**U.FL-2LPHF6-068N1T-A-300** (Plug : U.FL)

**UFL-2LPA-068Y1T-A-300** (Plug : U.FL(A))

[Dia. 0.95 cable (062 cable)]

**062** is listed in the third block representing the cable type.

**U.FL-2LPHF6-062N1D-A-300** (Plug : U.FL)

[Dia. 0.81 cable (040 cable)]

**04** is listed in the third block representing the cable type.

When the height is 1.9mm, **V** enters after LP.

Dot does not needed for U.FL series name.

**U.FL-2LPHF6-04N1TV-A-300** : Mating height 2.4mm

**UFL-2LPVHF6-04N1TV-A-300** : Mating height 1.9mm

### STEP 3 Example Notation

Cable length is written in millimeters at the end.

EX : 300mm

**U.FL-2LPHF6-088N1T-A-300**

#### 2 Cable color

~Except Dia. 0.81 cable~

[Gray]

**1** is listed in the third block representing the cable type.

**U.FL-2LPHF6-062N1D-A-300** (Plug : U.FL)

[Black]

**2** is listed in the third block representing the cable type.

**U.FL-2LPHF6-062N2D-A-300** (Plug : U.FL)

~Dia. 0.81 cable~

[White]

**1** is listed in the third block representing the cable type.

**U.FL-2LPHF6-04N1TV-A-300** (Plug : U.FL)

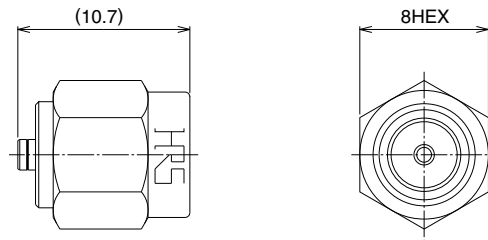
[Black]

**2** is listed in the third block representing the cable type.

**U.FL-2LPHF6-04N2TV-A-300** (Plug : U.FL)

## ■Conversion Adapter

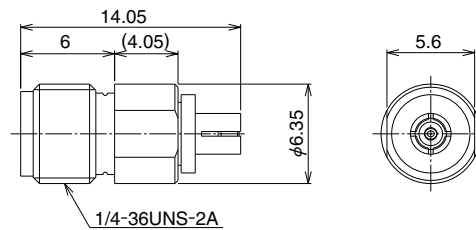
### ●SMA Conversion Adapter (Mated Portion : UFL Jack - SMA Plug)



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

(Note) Since the U.FL side mating portion has a weaker lock than standard products, it cannot be used for purposes other than performance measurement.

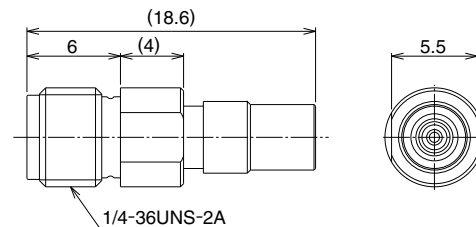
### ●SMA Conversion Adapter (Mated Portion : U.FL Plug - SMA Jack)



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

(Note) Since the U.FL side mating portion has a weaker lock than standard products, it cannot be used for purposes other than performance measurement.

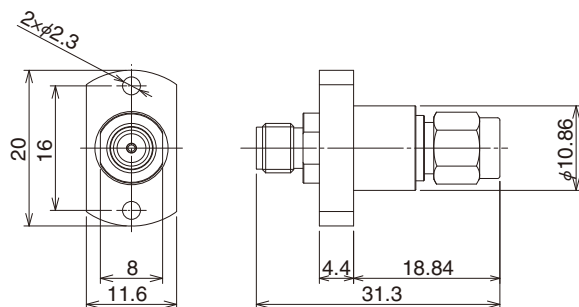
### ●SMA Conversion Adapter (Mated Portion : U.FL Plug - SMA Jack)



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

This connector is used by pressing the mating portion of the U.FL side with the mating portion of U.FL-R-SMT.

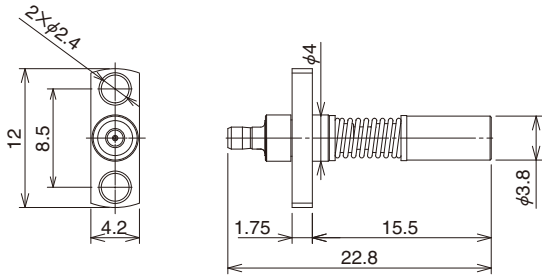
### ●SMA Conversion Adapter (Mated Portion: SMA Jack (Measuring Device Connection Side) -SMA Plug)



Part No.	HRS No.
HRM-PA-PJ(F)-1(40)	323-0805-9 40

(Note) HRMJ-U.FLP-ST1 absorbs misalignment when mated with the plug (coupling side) and connecting the jack with the measuring device.  
(Refer to next page)

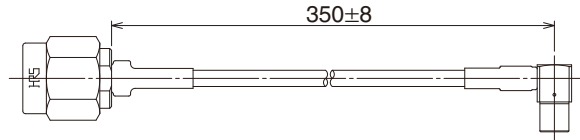
●Probe for Inspect of Multiple Narrow Pitch Receptacles (Mated Portion : U.FL Plug (No lock) - ML51 Jack)



Part No.	HRS No.
U.FLP-ML51.J-PA(F)-ST	311-0446-8

(Note) Hirose's ML51 is used for the measuring device interface. It is ideal for simultaneous inspection of multiple narrow pitch mounted receptacles.

●Harness for Narrow Pitch Probe Connection (Mated Portion : SMA Plug (Measuring Device Connection Side) - ML55 Plug

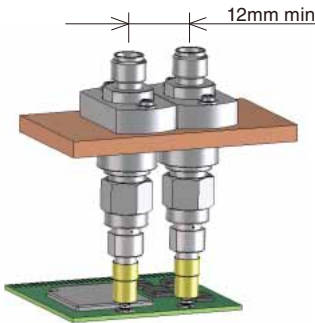


Part No.	HRS No.
HRMP-ML51LP-DTR178-350RS	321-4926-2 01

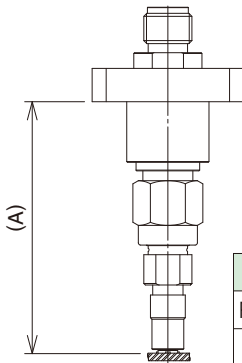
(Note) Used to connect U.FLP-ML51J-PA(F)-ST and the measuring device. It is recommended to provide slack to the cable length so that it can absorb misalignment smoothly.

■Inspection Probe

●HRMJ-U.FLP-ST1 and HRM-PA-PJ(F)1 Combination and Usage

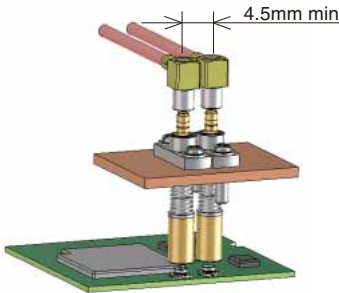


Shortest Pitch for Adjacency

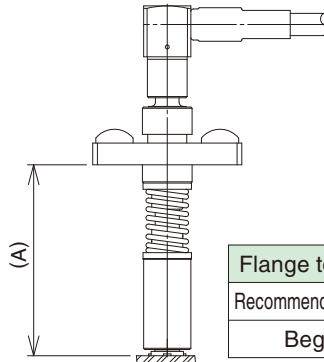


Flange to Board Surface	(A)
Recommendation for Measurement	32.5±0.2
Starting Load	33.2

●U.FLP-ML51.J-PA(F)-ST and HRMP-ML51LP-DTR178-350RS Combination and Usage



Shortest Pitch for Adjacency



Flange to Board Surface	(A)
Recommendation for Measurement	15.1±0.2
Beginning Load	16

\*For the inspection probe do not tilt the tip contact from the tensile load of the connecting cable.

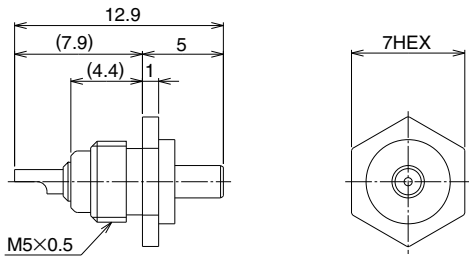


■Inspection Receptacle

Receptacle for inspecting the conduction and withstanding voltage of harness products.



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



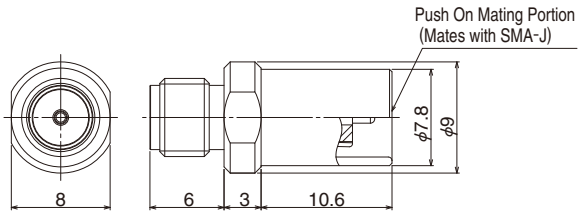
(Note 1) Product cannot be used for purposes other than conduction or withstanding voltage inspection because there is no lock on the mating portion.

■Inspection Assistance Device

●SMA Mating Push On Conversion Adapter



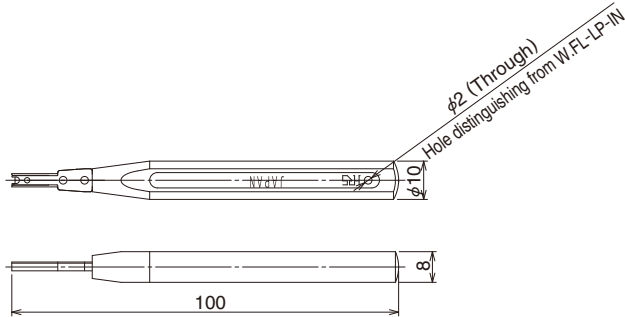
Part No.	HRS No.
HRMP(PO)-HRMJ	323-0741-8



Converts SMA plug mating portion to push on type, reducing the number of steps required for repeated SMA mating.

■Insertion Tool

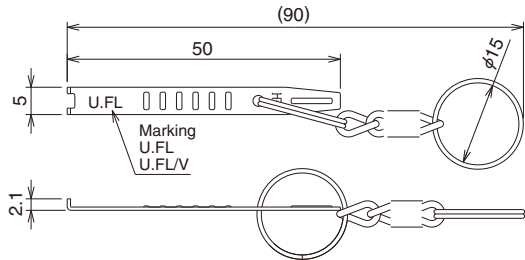
Tool for plug insertion.



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

◆Extraction Tool

Tool for unmating.

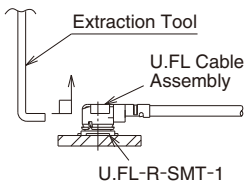
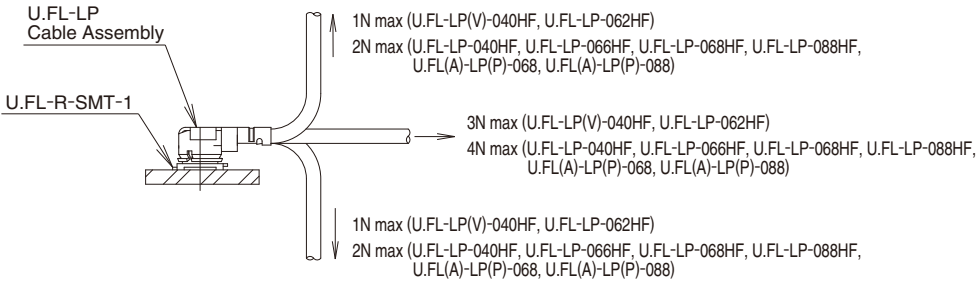


Part No.	HRS No.	Applicable Plug
U.FL-LP-N-2	331-0494-5	U.FL-LP-040HF, 066HF, 088HF, 068HF
U.FL-LP(V)-N-2	331-0493-2	U.FL-LP-062HF, U.FL-LP(V)-040HF

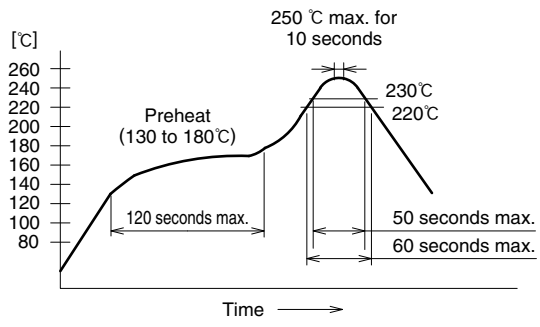
(Note) U.FL-LP-N is also used with E.FL Series.

## ◆ Usage Precautions

### 1. Plugs

(1) Mating / unmating	<p>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. However for U.FL(A) (Solderless connection type, use U.FL(A)-LP-IN.OUT and pull out vertically. When removing the connector directly, hold the connector lid and pull out vertically in relation to the connector mating axis. (Be careful not to damage the connector with fingers or nails.)</p> <p>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.</p> 
(2) Pull forces on the cable after connectors are mated.	<p>After the connectors are mating, do not apply a load to the cable in excess of the values indicated in the diagram below.</p> 
(3) Precautions	Do NOT forcefully twist or deform wires.

### 2. Receptacles

(1) Recommended reflow temperature profile	 <ol style="list-style-type: none"> <li>① The temperature of the printed circuit board surface temperature at the points of contact with the terminals.</li> <li>② Reflow soldering should be performed at a printed circuit surface temperature of 250°C max.</li> <li>③ In individual applications the actual temperature may vary, depending on the solder paste type, volume / thickness and board size / thickness. Consult your solder paste and equipment manufacturer for specific recommendations.</li> </ol>
(2) Recommended manual soldering	Manual soldering : 350°C for 5 seconds
(3) Recommended metal mask thickness	0.1 to 0.12mm
(4) Reflow cycles	2 times

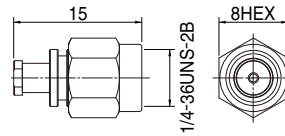
### 3. Operating environment and storage conditions

(1) Operating environment	<p>The connectors are not designed to operate in the following environments :</p> <ul style="list-style-type: none"> <li>• Exposed to a excessive amounts of fine particles and dust</li> <li>• Regions and places having a high density of sulfur dioxide, hydrogen sulfide, nitrogen dioxide or other corrosive gasses.</li> <li>• Environments having large rapid variations in temperature.</li> </ul>
(2) Storage conditions - Receptacle	<p>Store in the Hirose Electric packaging.</p> <p>Temperature : -10 to +40°C, Humidity : 85% max.</p> <p>Use within 6 months of delivery.</p> <p>Receptacles for which the storage period has elapsed must be tested for solderability to the PC board mounting surface.</p>
(3) Silver Plating Discoloration	Discoloration occurs only on the plating surface. Since the contact portion is wiped, there is no effect on the electrical contact.

## Standard Connectors that Connect with U.FL

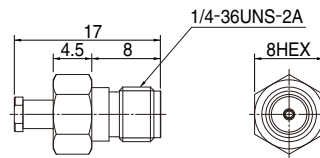
### SMA Cable Type

#### ●Straight Plug



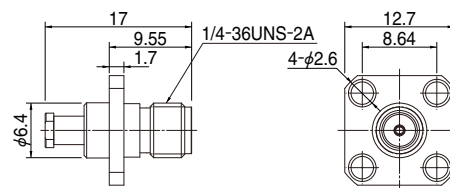
Part No.	HRS No.	Applicable cable	Notes
HRM-200-040PBN(40)	323-0790-3 40	Dia. 0.81 type	SMA (Male Contact)
HRM-200-066PBN(40)	323-0791-6 40	Dia. 1.13, Dia.1.32 type	
HRM-200-088PBN(40)	323-0800-5 40	Dia. 1.37 type	

#### ●Straight Jack



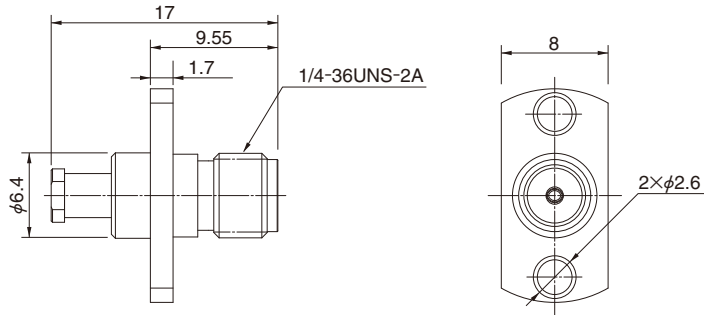
Part No.	HRS No.	Applicable cable	Notes
HRM-200-040JBN(40)	323-0792-9 40	Dia. 0.81 type	SMA (Female Contact)
HRM-200-066JBN(40)	323-0793-1 40	Dia. 1.13, Dia.1.32 type	
HRM-200-088JBN(40)	323-0801-8 40	Dia. 1.37 type	

#### ●Panel mount Jack (Four Screws)



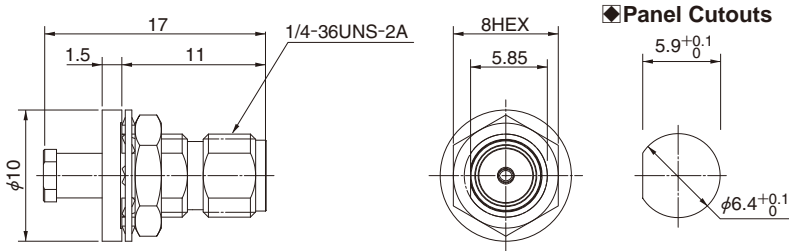
Part No.	HRS No.	Applicable cable	Notes
HRM-200-040PJ4BN(40)	323-0795-7 40	Dia. 0.81 type	SMA (Female Contact)
HRM-200-066PJ4BN(40)	323-0796-0 40	Dia. 1.13, Dia.1.32 type	
HRM-200-088PJ4BN(40)	323-0803-3 40	Dia. 1.37 type	

●Panel mount Jack (Two Screws)



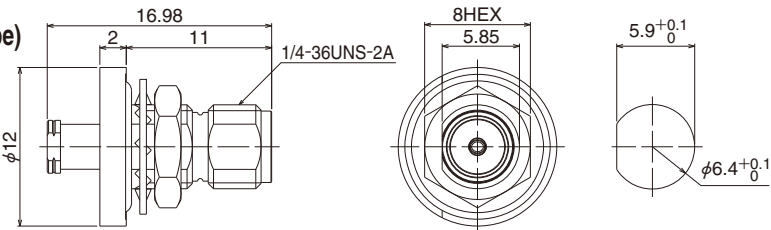
Part No.	HRS No.	Applicable cable	Notes
HRM-200-040PJ2BN (40)	323-0794-4 40	Dia. 0.81 type	SMA (Female Contact)
HRM-200-066PJ2BN (40)	323-0788-1 40	Dia. 1.13, Dia.1.32 type	
HRM-200-088PJ2BN (40)	323-0802-0 40	Dia. 1.37 type	

●Panel mount Jack (Bulkhead)



Part No.	HRS No.	Applicable cable	Notes
HRM-200-040BPJBN (40)	323-0797-2 40	Dia. 0.81 type	SMA (Female Contact)
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 type	

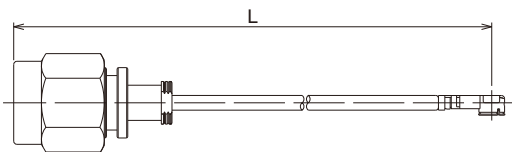
●Panel mount Jack  
(Bulkhead, Waterproof Mounting Surface Type)



Part No.	HRS No.	Applicable cable	Notes
HRM-200-040WBPJBN	323-0945-8	Dia. 0.81 type	SMA (Female Contact)
HRM-200-066WBPJBN	323-0946-0	Dia. 1.13, Dia.1.32 type	
HRM-200-088WBPJBN	323-0920-7	Dia. 1.37 type	

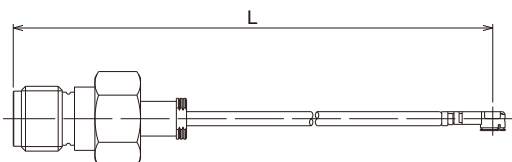
## ■SMA-U.FL Cable Assembly Representative Product

### ●SMA Straight Plug-U.FL Plug



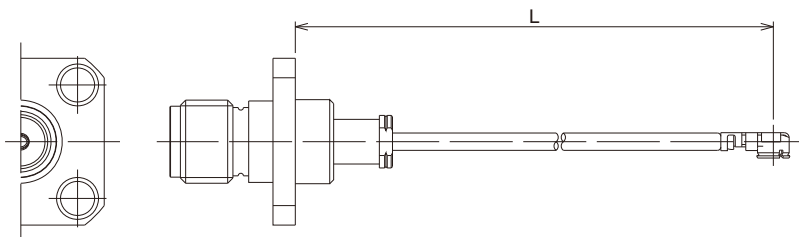
Part No.	HRS No.	Cable (Color)	L mm	Notes
HRMP-UFLHF6-04N2TV-A200RS	321-0753-0-04	φ0.81 (Black)	200±4	SMA (Female Contact)
HRMP-UFLHF6-068N2T-A200RS	321-0854-0-02	φ1.13 (Black)		
HRMP-UFLHF6-066N2-A200RS	321-0862-0-05	φ1.32 (Black)		
HRMP-UFLHF6-088N2T-A200RS	321-0755-0-07	φ1.37 (Black)		

### ●SMA Straight Jack-U.FL Plug



Part No.	HRS No.	Cable (Color)	L mm	Notes
HRMJ-UFLHF6-04N2TV-A200RS	321-0881-0-02	φ0.81 (Black)	200±4	SMA (Male Contact)
HRMJ-UFLHF6-068N2T-A200RS	321-0869-0-03	φ1.13 (Black)		
HRMJ-UFLHF6-066N2-A200RS	321-0868-0-02	φ1.32 (Black)		
HRMJ-UFLHF6-088N2T-A200RS	321-0904-0-04	φ1.37 (Black)		

### ●SMA Panel Mount Jack (Four Screws)-U.FL Plug

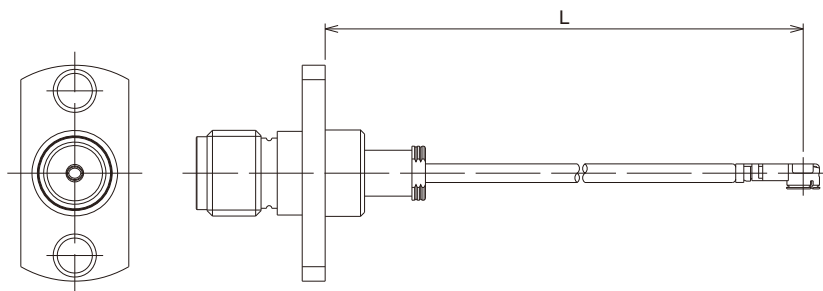


Part No.	HRS No.	Cable (Color)	L mm	Notes
HPJ-UFLHF6-04N2TV-A200RS	321-0965-0-02	φ0.81 (Black)	200±4	SMA (Female Contact)
HPJ-UFLHF6-068N2T-A200RS	321-3660-0-02	φ1.13 (Black)		
HPJ-UFLHF6-066N2-A200RS	321-0905-0-01	φ1.32 (Black)		
HPJ-UFLHF6-088N2T-A200RS	321-0911-0-03	φ1.37 (Black)		

◆For cable lengths, cable colors and connector combinations other than those listed above, please contact a Hirose representative.

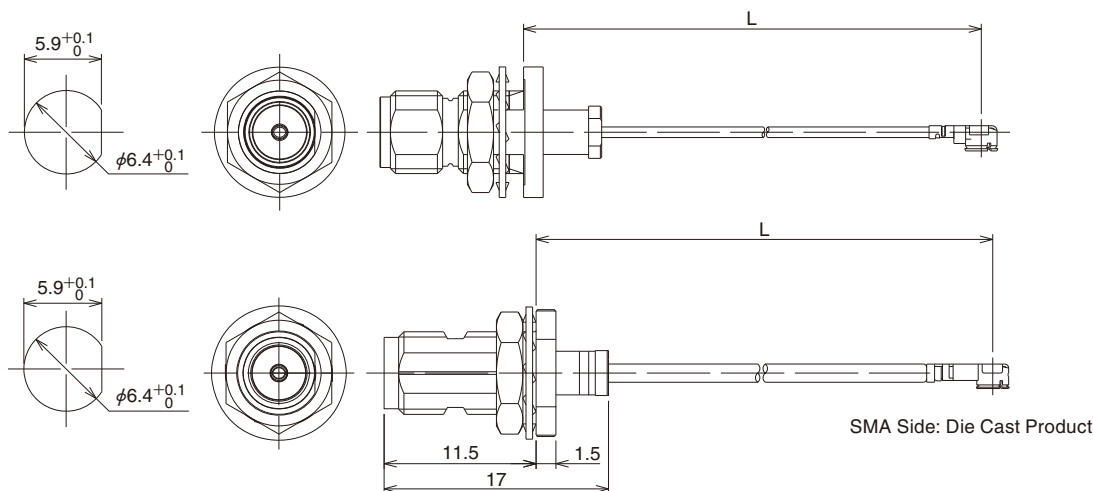


## ● SMA Panel Mount Jack (Two Screws)-U.FL Plug



Part No.	HRS No.	Cable (Color)	L mm	Notes
HPJ2-UFLHF6-04N2TV-A200RS	321-0969-0-03	φ0.81 (Black)	200±4	SMA (Female Contact)
HPJ2-UFLHF6-068N2T-A200RS	321-1083-0-03	φ1.13 (Black)		
HPJ2-UFLHF6-066N2-A200RS	321-1084-0-03	φ1.32 (Black)		
HPJ2-UFLHF6-088N2T-A200RS	321-0812-0-04	φ1.37 (Black)		

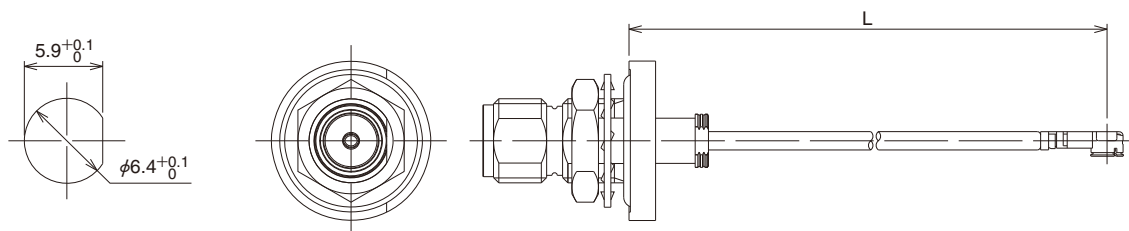
## ● SMA Panel Mount Jack (Bulkhead)-U.FL Plug



Part No.	HRS No.	Cable (Color)	L mm	Notes
HBPJ-UFLHF6-04N2TV-A200RS	321-0964-0-02	φ0.81 (Black)	200±4	SMA (Female Contact)
HBPJD-UHF6-068N2T-A200 (Note)	321-5463-0-02	φ1.13 (Black)		
HBPJD-UHF6-066N2-A200 (Note)	321-5464-0-02	φ1.32 (Black)		
HBPJD-UHF6-088N2T-A200 (Note)	321-5600-0-02	φ1.37 (Black)		

(Note) Die Cast Body on SMA Side (Different product than those listed on the SMA Cable Type Page)

## ● SMA Panel Mount Jack (Bulkhead, Waterproof Mounting Surface)-U.FL Plug



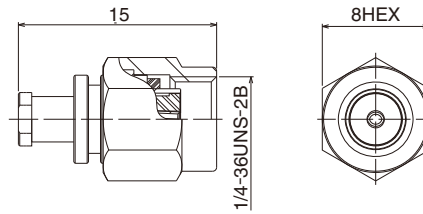
Part No.	HRS No.	Cable (Color)	L mm	Notes
HWBPJ-UHF6-068N2T-A-200	321-1235-0-03	φ1.13 (Black)	200±4	SMA (Female Contact)
HWBPJ-UFLHF6-088N2T-A200	321-0760-0-04	φ1.37 (Black)		

◆ For cable lengths, cable colors and connector combinations other than those listed above, please contact a Hirose representative.

## Standard Connectors that Connect with U.FL

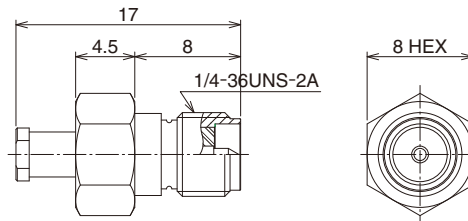
**SMA/R Cable Type** /R : Reverse Polarity SMA Connector

### ●Straight Plug



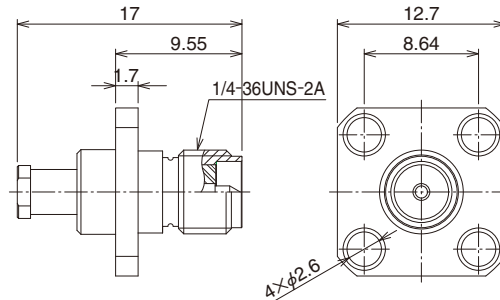
Part No.	HRS No.	Applicable cable	Notes
SMA(R)-200-040PBN	323-0925-0	Dia. 0.81 type	SMA Reverse (Female Contact)
SMA(R)-200-066PBN	323-0930-0	Dia. 1.13, Dia.1.32 type	
SMA(R)-200-088PBN	323-0905-3	Dia. 1.37 type	

### ●Straight Jack



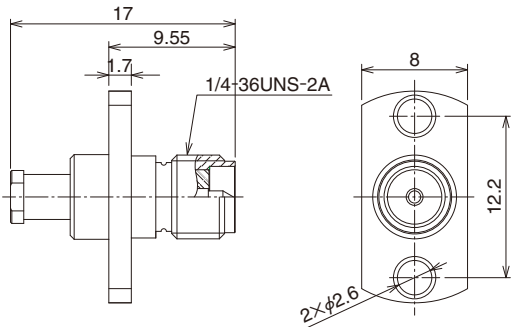
Part No.	HRS No.	Applicable cable	Notes
SMA(R)-200-040JBN	323-0926-3	Dia. 0.81 type	SMA Reverse (Male Contact)
SMA(R)-200-066JBN	323-0931-3	Dia. 1.13, Dia.1.32 type	
SMA(R)-200-088JBN	323-0904-0	Dia. 1.37 type	

### ●Panel Mount Jack (Four Screws)



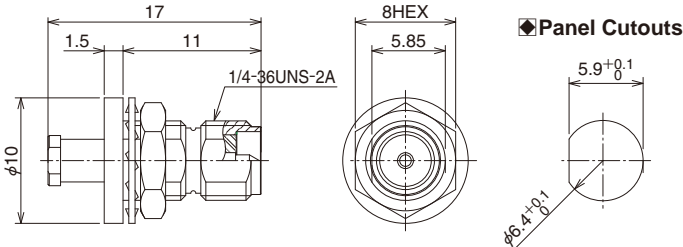
Part No.	HRS No.	Applicable cable	Notes
SMA(R)-200-040PJ4BN	323-0928-9	Dia. 0.81 type	SMA Reverse (Male Contact)
SMA(R)-200-066PJ4BN	323-0932-6	Dia. 1.13, Dia.1.32 type	
SMA(R)-200-088PJ4BN	323-0934-1	Dia. 1.37 type	

●Panel Mount Jack (Two Screws)



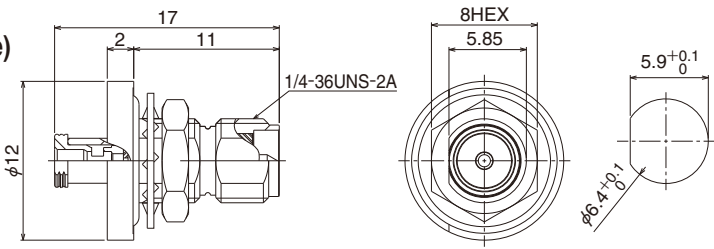
Part No.	HRS No.	Applicable cable	Notes
SMA(R)-200-040PJ2BN	323-0929-1	Dia. 0.81 type	SMA Reverse (Male Contact)
SMA(R)-200-066PJ2BN	323-0933-9	Dia. 1.13, Dia.1.32 type	
SMA(R)-200-088PJ2BN	323-0935-4	Dia. 1.37 type	

●Panel Mount Jack (Bulkhead)



Part No.	HRS No.	Applicable cable	Notes
SMA(R)-200-040BPJBN	323-0927-6	Dia. 0.81 type	SMA Reverse (Male Contact)
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	

●Panel Mount Jack  
(Bulkhead, Waterproof Mounting Surface Type)

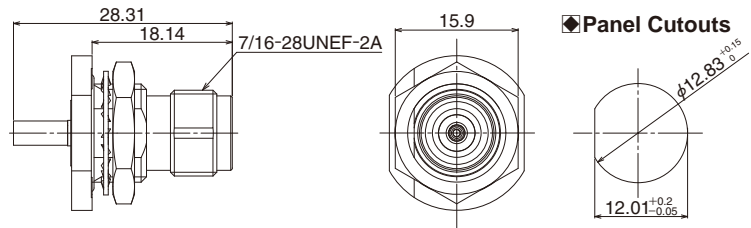


Part No.	HRS No.	Applicable cable	Notes
SMA(R)-200-040WBPJBN	323-0947-3	Dia. 0.81 type	SMA Reverse (Male Contact)
SMA(R)-200-066WBPJBN	323-0948-6	Dia. 1.13, Dia.1.32 type	
SMA(R)-200-088WBPJBN	323-0949-9	Dia. 1.37 type	

## Standard Connectors that Connect with U.FL

### TNC Cable Type

#### ● Panel Jack (Bulkhead, Waterproof Panel Mounting Surface Type)

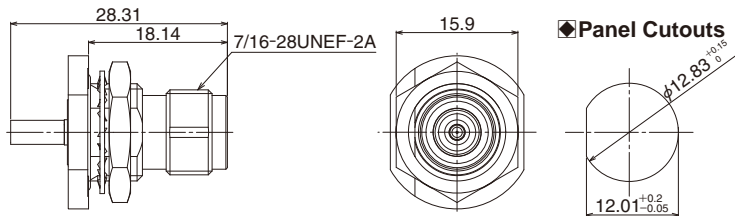


Part No.	HRS No.	Applicable cable
TNC-WBPJ-088-1	313-0004-0	$\phi 1.37$ cable

\*Please order the product after designating the harness specifications including product length, etc.

### TNC/R Cable Type /R : Reverse Polarity SMA Connector

#### ● Panel Jack (Bulkhead, Waterproof Panel Mounting Surface Type)

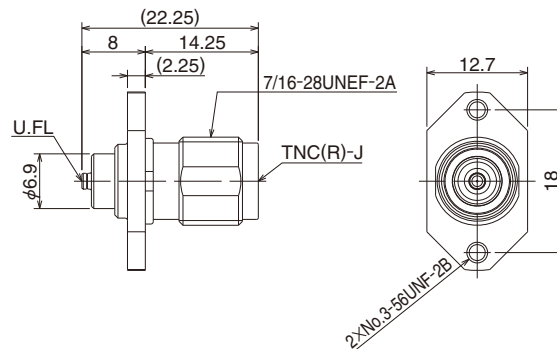


Part No.	HRS No.	Applicable cable
TNC(R)-WBPJ-088	313-0003-0	$\phi 1.37$ cable

\*Please order the product after designating the harness specifications including product length, etc.

### TNC/R Conversion Adapter /R : Reverse Polarity SMA Connector

#### ● Panel Mount Adapter (Two Screws)

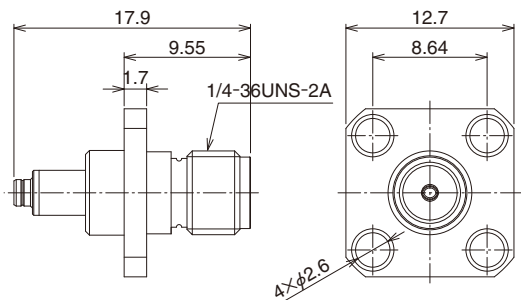


Part No.	HRS No.	Notes
TNC(R)J-U.FLJ-PA-2	311-0416-7	TNC Reverse (Male Contact)

SMA Conversion Adapter

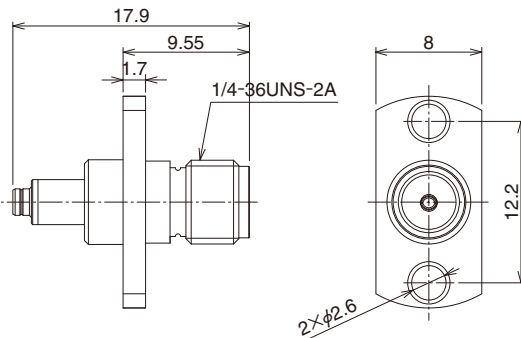
Note : Please avoid mating with the U.FL(A) plug.

●Panel Mount Adapter (Four Screws)



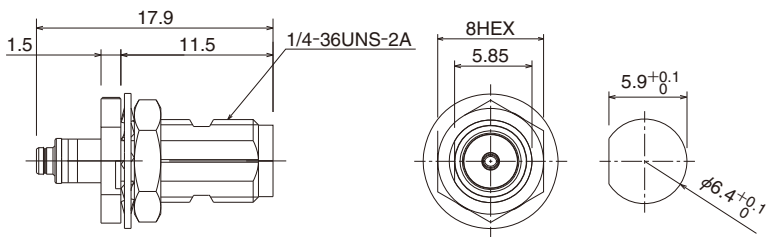
Part No.	HRS No.	Notes
HRMJ-U.FLJ-PA4	311-0465-2	SMA (Female Contact)

●Panel Mount Adapter (Two Screws)



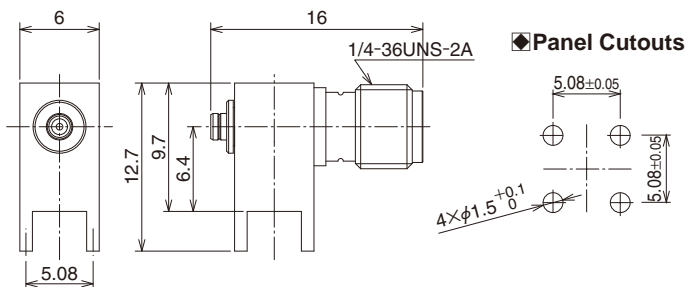
Part No.	HRS No.	Notes
HRMJ-U.FLJ-PA2	311-0467-8	SMA (Female Contact)

●Panel Mount Adapter (Bulkhead)



Part No.	HRS No.	Notes
HRMJ-U.FLJ-BPAD-5	311-1004-0	SMA (Female Contact) Body : Die Cast Type

●PCB Mount Adapter



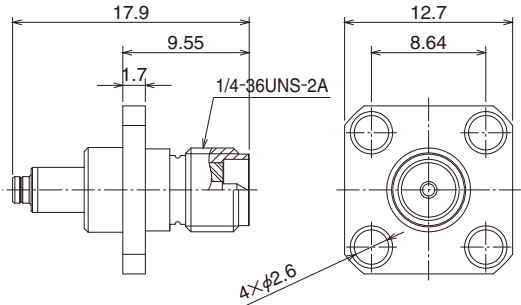
Part No.	HRS No.	Notes
HRMJ-U.FLJ-PC	311-0411-3	Nickel Exterior



**SMA/R Conversion Adapter    R : Reverse Polarity SMA Connector**

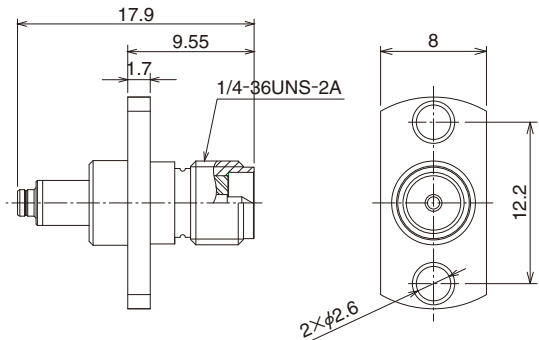
Note : Please avoid mating with the U.FL(A) plug.

● **Panel Mount Adapter (Four Screws)**



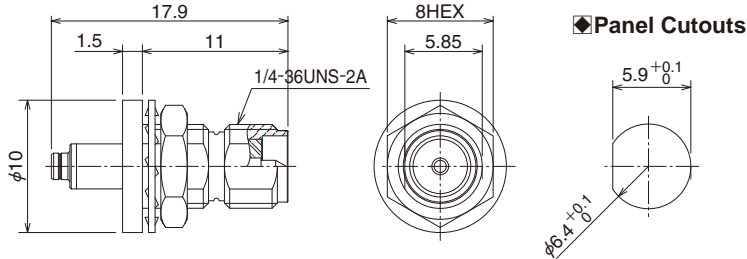
Part No.	HRS No.	Notes
SMA(R)J-U.FLJ-PA4	311-0466-5	Reverse Polarity SMA (Male Contact)

● **Panel Mount Adapter (Two Screws)**



Part No.	HRS No.	Notes
SMA(R)J-U.FLJ-PA2	311-0468-0	Reverse Polarity SMA (Male Contact)

● **Panel Mount Adapter (Bulkhead)**



Part No.	HRS No.	Notes
SMA(R)J-U.FLJ-BPA-4	311-0464-0	Reverse Polarity SMA (Male Contact)

This image shows a full page of a worksheet designed for handwriting practice. It consists of multiple rows of horizontal dashed lines spaced evenly across the page, providing a guide for letter height and placement. The background is plain white, and there are no other markings or text present.

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