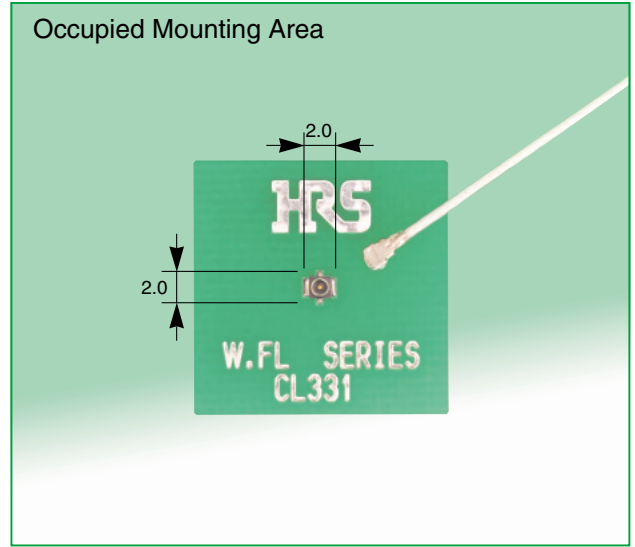
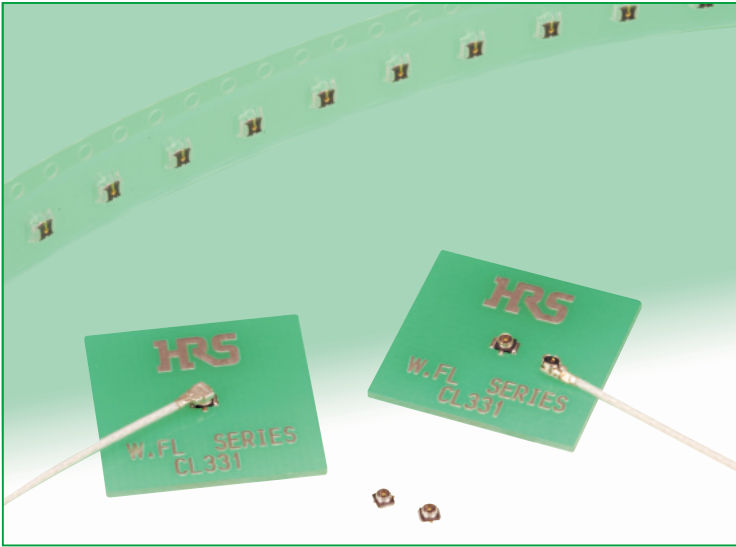


# Ultra Small Surface Mount Coaxial Connectors – 1.4mm Mated Height

W.FL Series – Further downsizing of FL series in response to the market needs.



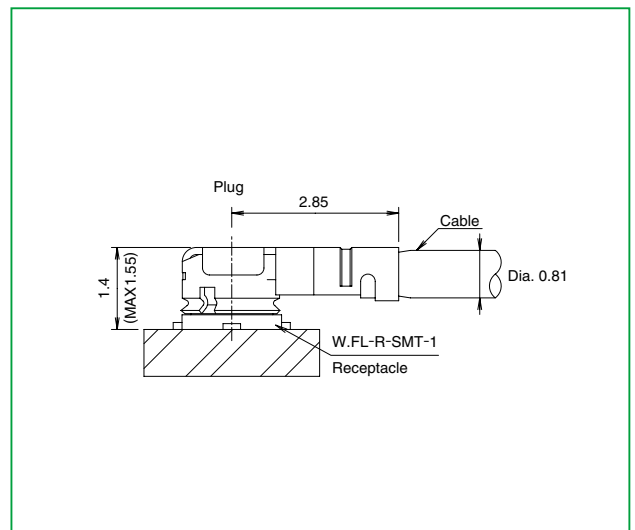
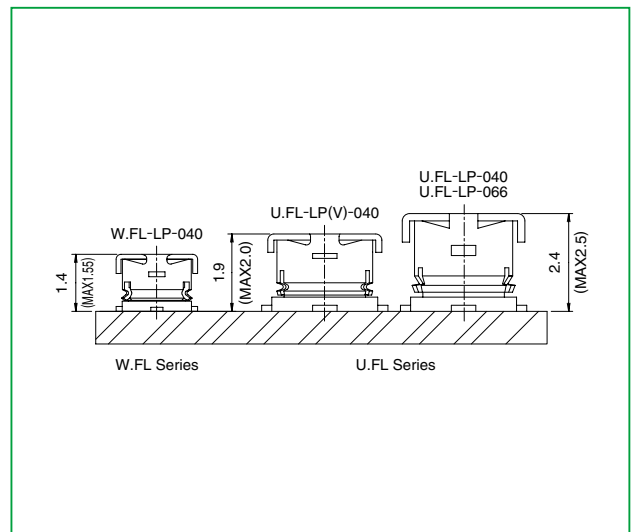
## Features

1. Mounting area of only 3.4mm<sup>2</sup>
2. The board mounted receptacle weights only 5.6 mg
3. Accepts high frequency transmission of DC to 6GHz
4. Receptacle supplied on tape-and-reel for placement on the board with automatic equipment
5. Plugs are terminated with ultra-fine Teflon® insulated coaxial cables
6. Un-mating with a simple tool

## Applications

Mobile phones, Wireless LAN, Bluetooth protocol devices, PDA, GPS, electronic measuring instruments and any application requiring high frequency transmission over coaxial line, where space is limited.

## Mated Height Comparison(With U.FL series)



\* Teflon is a registered trademark of DuPont.

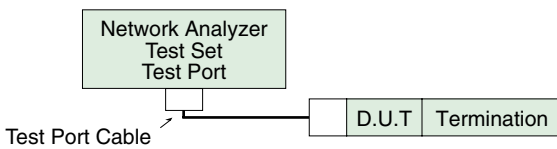
## Product Specifications

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

## Materials and Finishes

Item	Specification
1. Contact resistance	Center: 20m ohms max. Outside: 10m ohms max.
2. Insulation resistance	500M ohms min., 100V DC
3. Withstanding voltage	200V AC / 1 minute
4. V.S.W.R.(Note)	1.3 max. (Up to 3GHz)
	1.35 max. (3 to 6GHz)

Note:V.S.W.R. Measurement System  
 Measured as shown on the block diagram below.  
 Test connection and measurement setup.



Note1:Cable type connector measurements.

With SMA conversion adapters mated with W.FL plug at each end of the 100cm long ultra-fine coaxial cable.

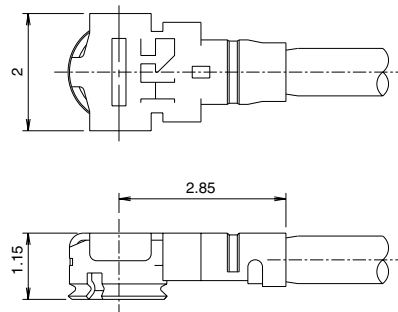
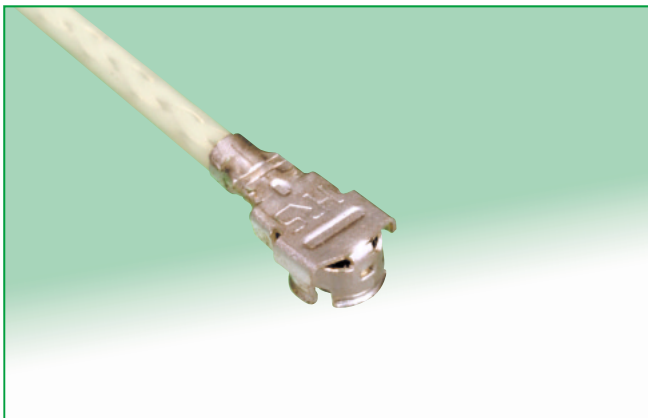
Note2:Board type connector measurements.

Mounted on a 50 ohms glass epoxy board. Measurements were conducted with SMA conversion adapters attached.

## Material/Finishes

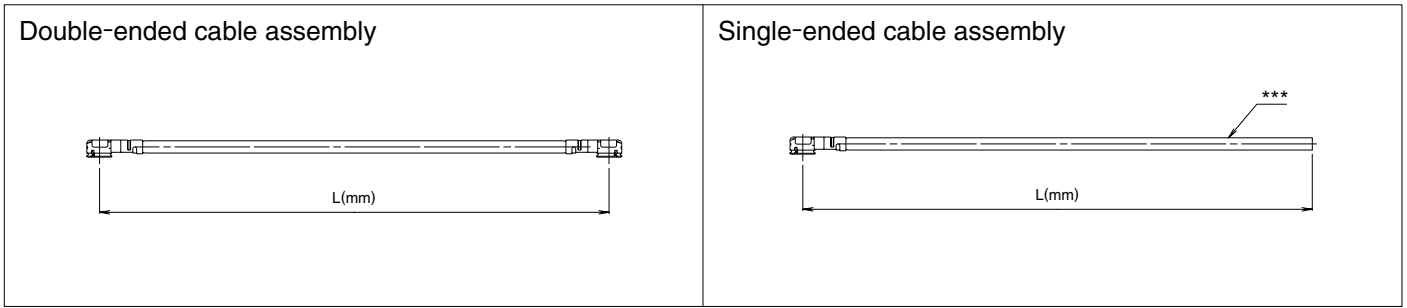
Part	Component	Material	Finish/Remarks
Plug	Shell	Phosphor bronze	Silver plated
	Insulator	PBT	Black, UL94V-0
	Socket center contact	Phosphor bronze	Gold plated
Receptacle	Shell	Phosphor bronze	Silver plated
	Insulator	LCP	Black, UL94V-0
	Pin center contact	Brass	Gold plated

## Plug



**Plugs can be ordered only terminated to the cable.**

## How to Specify Cable Assembly



### Ordering Information

**W.FL - 2LP - 04N [ ] - A - (L)**

①                      ②                      ③                      ④                      ⑤

① Series name	W.FL
② Assembly type	LP : Single ended 2LP: Double ended
③ Cable type	04N: 0.81mm dia. ultra-fine coaxial cable
④ Cable color	1: White, 2: Black
⑤ Total length (mm)	Length (L)

### Standard tolerances for (L)\*\*

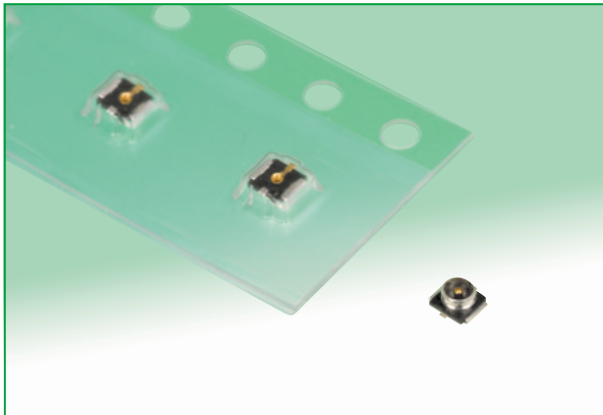
(L)(mm)	Standard Tolerance (mm)
*L=35 to 200	±4
L=200 to 500	±8
L=500 to 1000	±12
L=1000 →	±1.5% of (L)

\*Minimum available length (L) is 35mm

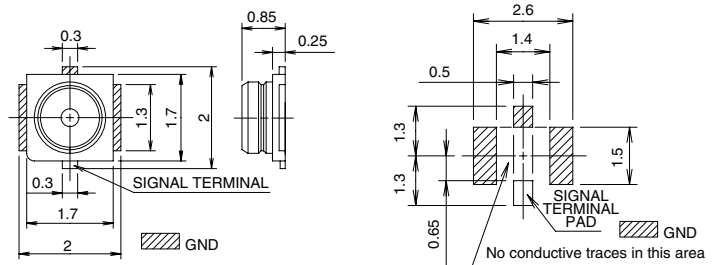
\*\*Contact nearest HRS representative if different tolerances are required.

\*\*\*Contact Nearest HRS representative if one end requires preparation.

## Receptacle



### Recommended PCB Mounting Pattern

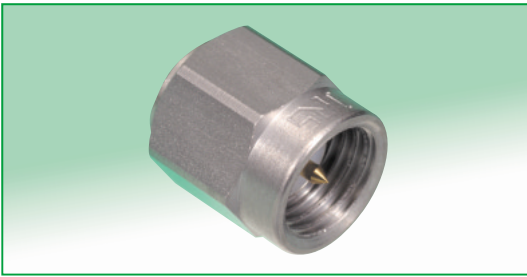


Recommended screen thickness: 0.1mm to 0.12mm

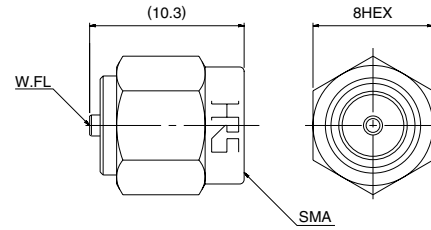
Part Number	CL No.	Packaging	Weight / EA
W.FL-R-SMT-1(10)	331-0482-6-10	Reel packaging (2000 pieces/reel)	5.6 mg

## ■ Conversion Adapters

### ● SMA Conversion Adapter (W.FL side jack – SMA side plug)



Note:Used for performance measurements only.  
 The W.FL mating side has lower retention force than the regular product when mated to the corresponding part.

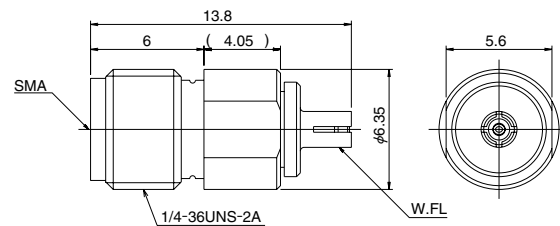


Part No.	CL No.
HRMP-W.FLJ	311-0367-3

### ● SMA Conversion Adapter (W.FL side plug – SMA side jack)



Note:Used for performance measurements only.  
 The W.FL mating side has lower retention force than the regular product when mated to the corresponding part.

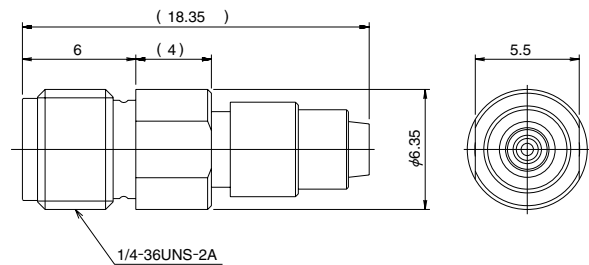


Part No.	CL No.
HRMJ-W.FLP	311-0368-6

### ● SMA Conversion Adapter



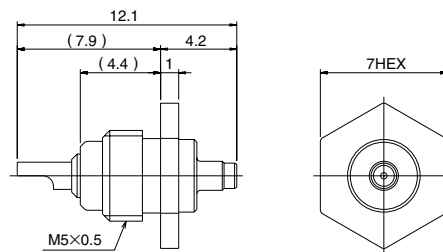
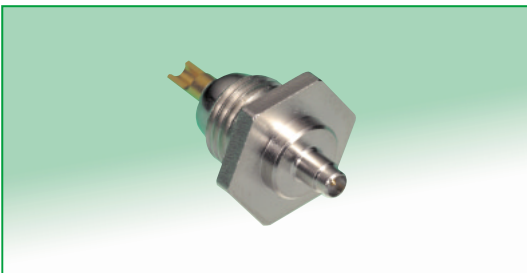
Note:When mating with corresponding part (W.FL-R-SMT-1) it must be pressed down and held to make complete connection.



Part No.	CL No.
HRMJ-W.FLP-ST1	311-0386-8

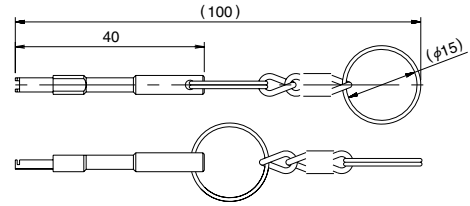
## ■ Receptacle Inspection Adapter

### ● Used for inspecting the performance parameters of the cable assembly.



Part No.	CL No.
W.FL-R-1	331-0483-9

## ■ Plug Extraction Tool-Used for Un-mating of the plug

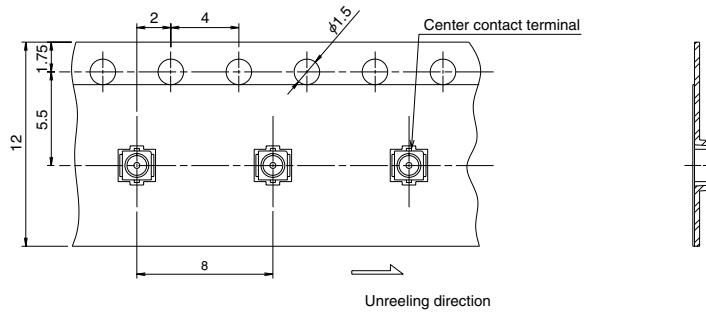


Part No.	CL No.
W.FL-LP-N	331-0492-0

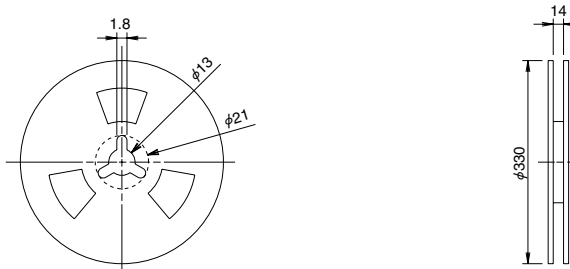
## ◆ Packaging Specifications- Receptacle

W.FL-R-SMT-1(10)

### Embossed Carrier Tape Dimensions

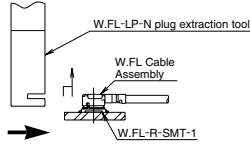
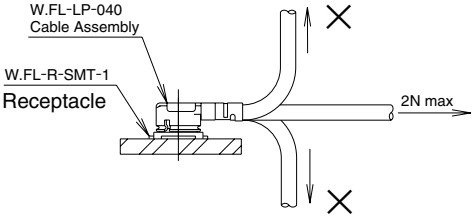


### Reel Dimensions

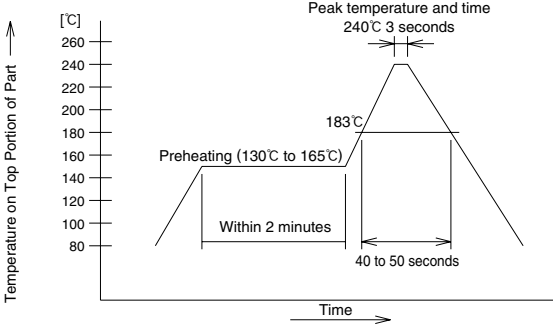


## Usage Precautions

### 1. Plugs

<p>(1) Mating/ un-mating</p>	<p>1) Mating. Both parts must be aligned on the axis to mate correct. Press down firmly. A tactile “click” will confirm fully mated condition.</p> <p>2) Un-mating. Fully insert the tool under the plug’s flanges as shown. Apply even force upward until the plug is free.</p> 
<p>(2) Cable handling</p>	<p>Do not twist, apply excessive forces or sharp bends to the cable.</p> 
<p>(3) Precautions</p>	<p>Do NOT forcefully twist or deform wires.</p>

### 2. Receptacles

<p>(1) Recommended soldering temperature profile</p>	 <p>1) The temperature profile indicates the board surface temperature at the point of contacts with the connector terminals.</p> <p>2) The temperature may vary, depending on the board size, the solder paste type and thickness.</p>
<p>(2) Recommended screen thickness</p>	<p>0.1 to 0.12 mm</p>



## HIROSE ELECTRIC CO.,LTD.

5-23,OSAKI 5-CHOME,SHINAGAWA-KU,TOKYO 141-8587,JAPAN  
 PHONE: 81-3-3491-9741, FAX: 81-3-3493-2933  
<http://www.hirose.com>  
<http://www.hirose-connectors.com>

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [RF Cable Assemblies](#) category:*

*Click to view products by [Hirose](#) manufacturer:*

Other Similar products are found below :

[73-6352-10](#) [73-6353-3](#) [73-6364-6](#) [R285001001](#) [R288940004](#) [R288940005](#) [145111-05-12.00](#) [1661-C-24](#) [1801171170914KE](#) [24P104C24J1-012](#) [24P104C24P1-006](#) [24P104C24P1-018](#) [24P204C24J1-003](#) [172-2150-EX](#) [1800920920914PJ](#) [FCB-3030-ALT](#) [21117-046](#) [21117-050](#) [PCX-24-50](#) [24P103C24P2-003](#) [25P203C25P2-003](#) [PTWY-24-78](#) [R284008001](#) [R285001021](#) [R285426000](#) [R288940003](#) [R288940008](#) [RF179-74BJ3-77RP1-0305](#) [4814-BB-24](#) [5260-72](#) [JT2N1-CL1-1F](#) [DLP-COAX1](#) [4814-K-48](#) [115101-09-06.00](#) [CCNTN2-MM-LL335-26](#) [73-6351-25](#) [73-6352-3](#) [73-6353-25](#) [1800920920610PJ](#) [GD0BQ0BQ024.0](#) [1-3636-600-5210](#) [TL8A-11SMA-11SMA-01500-51](#) [R284C0351060](#) [R288940009](#) [R284C0351028](#) [R288940002](#) [9702-1SL-1](#) [PT82NSMA](#) [73-6353-10](#) [R285020301W](#)