

0.35mm Pitch Full Shield Board-to-board (FPC) Connector

CONNECTOR

# WP16RS Series

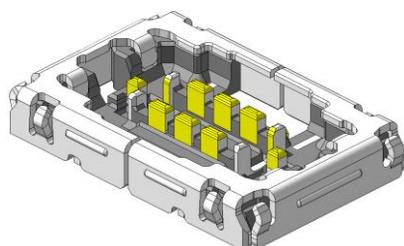
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Mar.2025

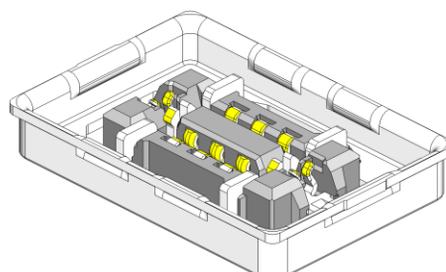
RoHS Compliant



## Wave-stack™



Plug



Receptacle

With the spread of 5G (5th generation mobile communication system), data communication of mobile devices such as smartphones is accelerating, and in order to cope with increasing traffic, the utilization of millimeter wave band that can secure a wide bandwidth is progressing in each country.

Millimeter-wave compatible smartphones are equipped with a millimeter-wave antenna module called AiP, which is mainly used with AiP.

An RF connector, which is a high-frequency compatible connector, is required for signal transmission between boards.

This product is a full shield type that covers the entire circumference with a shell as an EMI countermeasure, and is a connector that realizes good characteristics in the millimeter wave band by possessing a high frequency dedicated terminal (RF terminal) with a new structure.

Furthermore, the signal terminal has a structure that supports a large current (1A / contact), and in addition, by adopting a unique trumpet type deep drawing shell and installing armor (metal guide) inside the connector, makes the low profile board-to-board (FPC) connector easy to align and robust.

AiP: Antenna in Package

Wave-stack™: Full-shield type board-to-board (FPC) connector is called “Wave-stack™” and branded it.

### Applications

Mobile phones, smartphones, wearable devices, tablet PCs, notebook PCs, and other small portable devices

Features

- Full shield structure : High shield performance due to the full shield structure that covers the entire transmission line including the terminal part with a shell.
- High frequency signal support : In anticipation of further high frequency, new high frequency dedicated for RF terminal developed terminal
- Power supply support : Adopts a new structure that supports signal terminal 1A / contact even with a narrow pitch
- Robustness and alignment : Adopted a trumpet type deep drawing shell, armor (metal guide) inside the connector ensuring high robustness and alignment by installing

## General Specifications

Number of Contacts	2 positions (RF(IF)), 6 positions (Signal)
Pitch	0.35mm, 2 rows (Signal)
Stacking Height	0.6mm
Contact Resistance	RF(IF) Terminal: 50mΩ max. (initial) Signal Terminal: 50mΩ max. (initial)
Dielectric Withstanding Voltage	AC250Vr.m.s. (per minute)
Insulation Resistance	100MΩ min. (initial)
Durability	30 mating cycles
Operating Temperature Range	-40 deg. C to +85 deg.
Rated Current	RF(IF) Terminal: AC, DC 0.3A per pos. Signal Terminal: AC, DC 1.0A per pos.
Rated Voltage	AC, DC 50 V
VSWR	$\leq 1.2$ , ~ 6GHz $\leq 1.5$ , ~ 20GHz

## Materials and Finishes

Components	Materials	Finishes
Signal Contact	Copper alloy	Au plating (contact area) Au plating (mounting area)
RF(IF) Contact	Copper alloy	Au plating (contact area) Au plating (mounting area)
Insulator	Heat resistant plastic	
Shell	Stainless steel	Au plating (mounting area)
Shield late	Copper alloy	Au plating (contact area) Au plating (mounting area)

Ordering Information (Plug)

**WP16RS - P 008 V A 1 - R \*\*\*\*\***

Series: WP16RS

Contact Shape  
P: Plug

Number of Contacts:  
in three digits (\*\*\*)

Reeled Part Number (Note1)  
(R20000)

Modification Code

Finish A: Au plating

Connection Type V: Stacking

Ordering Information (Receptacle)

**WP16RS - S 008 V A 1 - R \*\*\*\*\***

Series: WP16RS

Contact Shape  
S: Receptacle

Number of Contacts:  
in three digits (\*\*\*)

Reeled Part Number (Note1)  
(R20000)

Modification Code

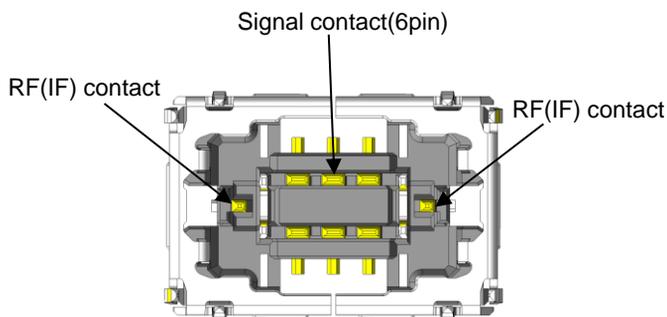
Finish A: Au plating

Connection Type V: Stacking

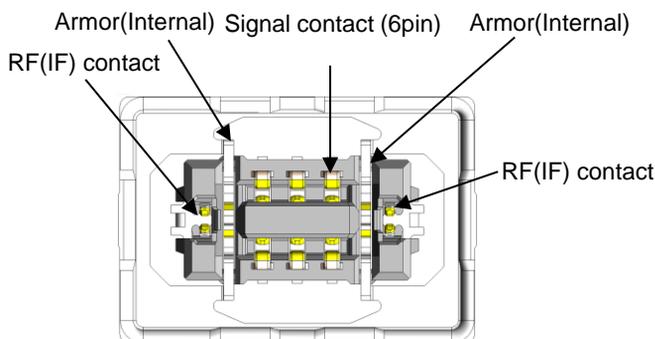
Note 1) An embossed tape reel contains 20,000 pieces

Please contact us for details on embossed tape specifications.

WP16RS Part details

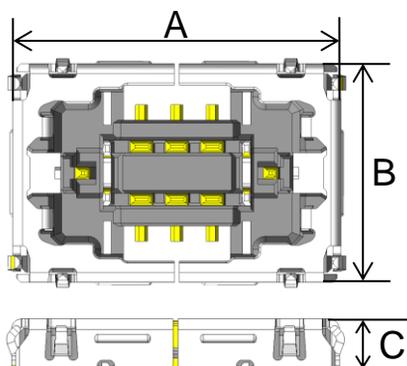


WP16RS-P008VA1(Plug)



WP16RS-S008VA1(Receptacle)

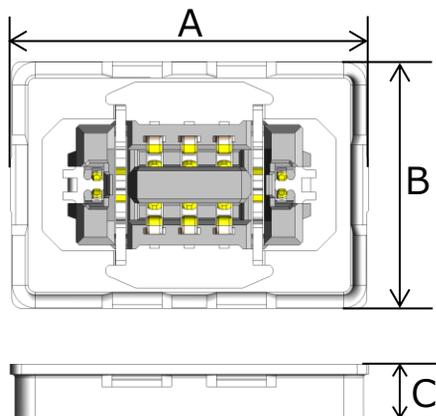
Outer Dimensions (Plug)



Unit: mm

Number of Contacts	Dimensions		
	A	B	C
8	3.25	2.15	0.5

**Outer Dimensions (Receptacle)**



Unit: mm

Dimensions		A	B	C
Number of Contacts				
	8	3.60	2.47	0.55

**Product Drawings and Specifications**

Part Number	Drawing Number	Specifications	Handling Instructions
WP16RS-P008VA1-R20000 (Plug side)	SJ124306 (Individual Product)	JACS-11363	JAHL-11363
	SJ124307 (Reeled Product)		
WP16RS-S008VA1-R20000 (Receptacle side)	SJ124308 (Individual Product)		
	SJ124309 (Reeled Product)		

**Notice:**

1. The values specified in this brochure are only for reference. The products and their specifications are subject to change without notice. Contact our sales staff for further information before considering or ordering any of our products. For purchase, a product specification must be agreed upon.

2. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE's products to the equipment.

3. The products presented in this brochure are designed for the uses recommended below. We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

(1) Applications that require consultation:

(i) Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry, such as:

Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.

(ii) We may separately give you our support with a quality assurance program that you specify, when you think of a use such as :

Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

(2) Recommended applications include:

Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.

**Japan Aviation Electronics Industry, Limited**

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