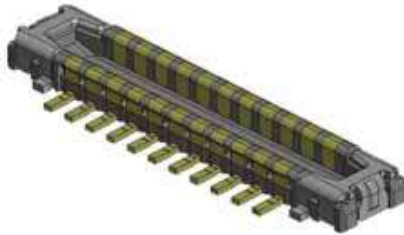


0.5mm Height, and 0.3mm Pitch- Board-to-board (FPC)
Connector

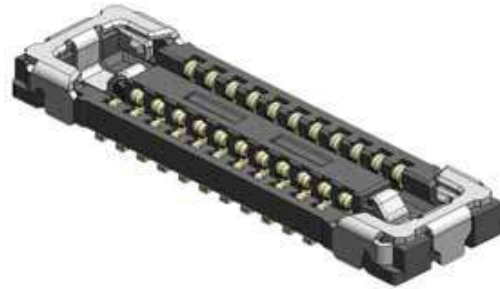
CONNECTOR
MB-0390-1
Jul.2023

WP55DK Series

RoHS Compliant



Plug



Receptacle

Today's highly functional small wearable devices, such as smartwatches, are becoming smaller and thinner. As more sophisticated devices become available in the future, the mounting density of components on interior circuit boards will increase, requiring connectors to be smaller and narrower in pitch. This product has a mating height of 0.5mm, 0.1mm lower than the conventional product, and has an extremely small contact pitch of 0.3mm. In addition, it has a robust structure with protective metal fittings on the mating surface and the molded part of the adsorption area. In addition, the luring structure of the protective metal fittings improves the alignment and realizes good workability.

Applicable Equipment

Smartwatches, smartphones, tablet PCs, laptops, digital cameras, AR / VR headsets and other small mobile devices

Features

- 0.3mm pitch, 1.6m width, 2 rows, 0.5mm mated height
- 2 power supply terminals supporting 3.0A each (Also serving as a hold-down)
- Hold-down structure adds protection to the top mating surface to prevent damage to the insulator (Armored)
- Improved workability for assembler with clear click feeling when fully mated
- 2 point contact structure for reliable connection
- Nickel barrier on contact prevents solder wicking
- Supports MIPI, USB 3.2 Gen2, PCIe Gen3 transmission

General Specifications

Number of Contacts	6, 8, 10, 22 positions (+2 power)
Pitch	0.3mm, 2 rows
Contact Resistance	Signal Terminal: 70mΩ max. (initial) Power Supply Terminal: 20mΩ max. (initial)
Dielectric Withstanding Voltage	AC250Vr.m.s for 1 minute
Insulation Resistance	100MΩ min. (initial)
Durability	30 mating cycles
Operating Temperature Range	-40°C to +85°C
Rated Current	Signal Terminal: AC, DC 0.3A per pos. Power Supply Terminal: AC, DC 3.0A per pos.
Rated Voltage	AC, DC 50 V
Total Insertion Force	1.5N x (n+4) max. (n: No. of pos.)
Total Extraction Force	0.15N x (n) min. (n: No. of pos.)

Materials and Finishes

Components	Materials	Finishes
Contact	Copper alloy	Au/Ni plating (Contact area) Au/Ni plating (Mounting area)
Insulator	Heat-resistant plastic	
Hold-down	Copper alloy	Au/Ni plating (Contact area) Au/Ni plating (Mounting area)

Ordering Information (Plug)

WP55DK - P * V A * - R*******

Series: WP55DK

Contact Shape
P: Plug

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

Reeled Part Number (Note 1)
(R20000)

Modification Code

Finish A: Au plating

Connection Type V: Stacking

Ordering Information (Receptacle)

WP55DK - S * V A * - R*******

Series: WP55DK

Contact Shape
S: Receptacle

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

Reeled Part Number (Note 1)
(R20000)

Modification Code

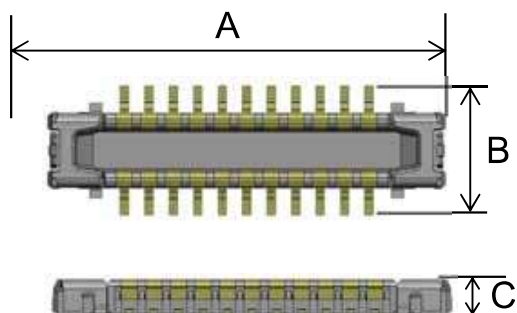
Finish A: Au plating

Connection Type V: Stacking

Note 1) An embossed tape reel contains 20,000 pieces.
Please contact us for details on embossed tape specifications.

Outer Dimensions (Plug)

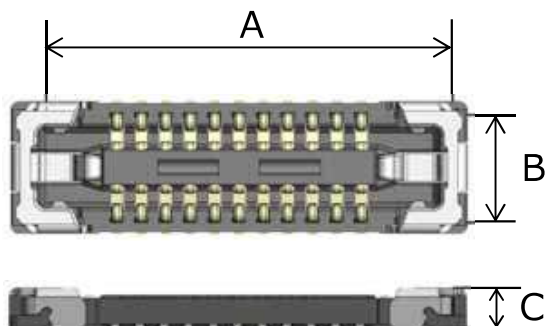
Unit: mm



Dimensions	A	B	C
Number of Contact			
6	2.47	1.6	0.42
8	2.77	1.6	0.42
10	3.07	1.6	0.42
22	4.87	1.6	0.42

Outer Dimensions (Receptacle)

Unit: mm



Dimensions Number of Contact	A	B	C
6	3.2	1.6	0.50
8	3.5	1.6	0.50
10	3.8	1.6	0.50
22	5.6	1.6	0.50

Product Drawings and Specifications

Part Number	Drawing Number	Specifications	Handling Instructions
WP55DK-P***VA*-R20000 (Plug side)	SJ126492 (Individual Product)	JACS-11408	JAHL-11408
	SJ126493 (Reeled Product)		
WP55DK-S***VA*-R20000 (Receptacle side)	SJ126494 (Individual Product)		
	SJ126495 (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

* The specifications in this brochure are subject to change without notice. Please contact JAE for information.