0.35mm Pitch Stacking Type Board-to-board (FPC) Connector with Power Supply Terminals

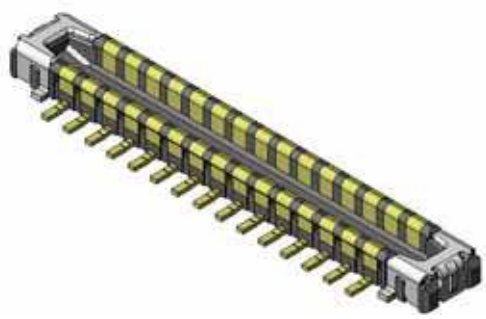
CONNECTOR

MB-0361-1

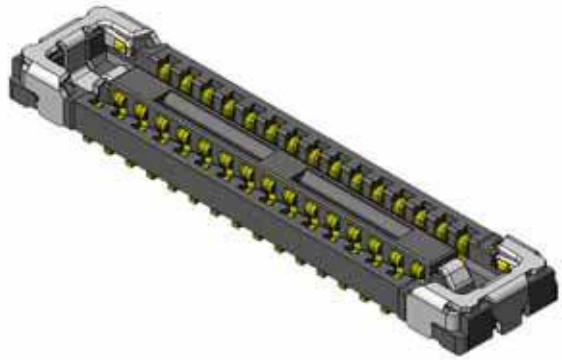
July.2020

WP66DK Series

RoHS Compliant



Plug



Receptacle

Recently, compact and high-function wearable devices such as smartwatches and smart glasses are becoming more popular. These devices must use boards that are smaller than those found in smartphones, so even smaller connectors must also be used. In addition to miniaturization of the connectors, implementing a robust structure to prevent damage during mating is critical. This product adopts our standard multifunction hold-down structure which allows them to be used as a power supply terminal to reduce total pin count, as well as maintaining strong board retention with enhanced soldering surface area. The hold-downs also incorporate protective metal fittings on the mating and internal surfaces of the insulator for ultimate strength and reliability.
In addition to achieving miniaturization and robustness, this series offers low pin count variations under 10 positions, contributing to design flexibility for engineers.

Applicable Market
Smartwatches, smartphones, wearable devices, tablet PCs, notebook PCs, digital cameras, VR/AR headsets and other small portable devices

Features

- 0.35mm pitch, 2 rows, 0.6mm stacking height, 1.6mm width
- Two hold-downs for power supply, supporting transmission of 3.0A
- Hold-down structure adds protection to the mating surface to prevent damage to the insulator (Armored)
- Robust design with metal fitting to prevent damage to the internal insulator surfaces during mating
- Improved workability for customers with a clear click feeling.
- Highly reliable 2-point contact structure
- Nickel barrier on contact prevents solder wicking
- Supports MIPI, USB3.1 Gen2, and PCIe Gen3 transmission.

General Specifications

Number of Contacts	6, 8, 30 positions (+2 power)
Pitch	0.35mm, 2 rows
Contact Resistance	Signal Terminal: 70mΩ max. (initial) Power Supply Hold-down: 20mΩ max. (initial)
Dielectric Withstanding Voltage	AC250V rms. for 1 minute
Insulation Resistance	100MΩ min. (initial)
Durability	30 mating cycles
Operating Temperature Range	-40°C ~ +85°C
Rated Current	Signal Terminal: AC, DC 0.3A per pos. Power Supply Hold-down: 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 plating (contact area) Au plating (mounting area)
Insulator	Heat resistant plastic	
Hold-down	Copper alloy	Au plating (contact area) Au plating (mounting area)

Ordering Information (Plug)

WP66DK - P * V A * - R ****

- WP66DK: Series: WP66DK
- P: Contact Shape P: Plug
- ***: Number of Contacts: in three digits (***)
- V: Connection Type V: Stacking
- A: Finish A: Au plating
- *: Modification Code
- R ****: Reeled Part Number (Note1) (R15000)

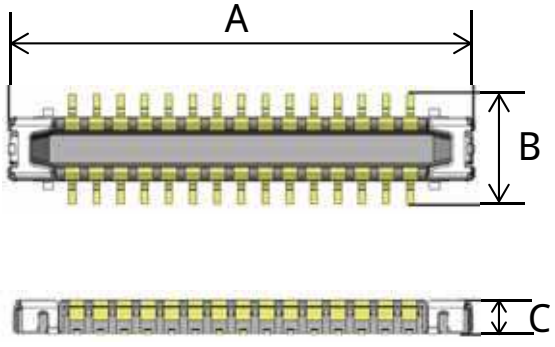
Ordering Information (Receptacle)

WP66DK - S * V A * - R ****

- WP66DK: Series: WP66DK
- S: Contact Shape S: Receptacle
- ***: Number of Contacts: in three digits (***)
- V: Connection Type V: Stacking
- A: Finish A: Au plating
- *: Modification Code
- R ****: Reeled Part Number (Note1) (R15000)

Note 1) An embossed tape reel contains 15,000 pieces
Please contact us for details on embossed tape specifications.

Outer Dimensions (Plug)

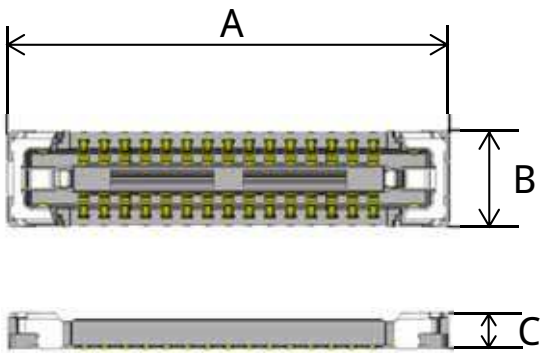


Unit: mm

Dimensions / Number of Contacts	A	B	C
6	2.57	1.58	0.49
8	2.92	1.58	0.49
30	6.77	1.58	0.49

Outer Dimensions (Receptacle)

Unit: mm



Dimensions / Number of Contacts	A	B	C
6	3.30	1.60	0.60
8	3.65	1.60	0.60
30	7.50	1.60	0.60

Product Drawings and Specifications

Part Number	Drawing Number	Specifications	Handling Instructions
WP66DK-P******-R15000 (Plug side)	SJ120360 (Individual Product)	JACS-11259	JAHL-11259
	SJ120361 (Reeled Product)		
WP66DK-S******-R15000 (Receptacle side)	SJ120362 (Individual Product)		
	SJ120363 (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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