

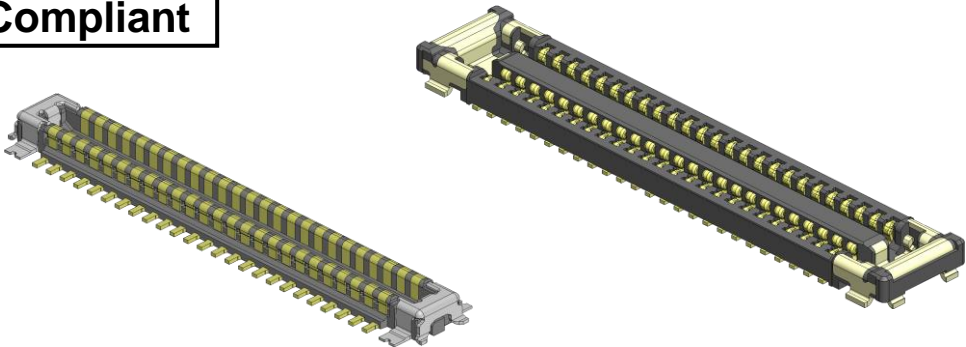
0.3mm Pitch Stacking Type Board-to-board (FPC) Connector CONNECTOR

WP56MS Series

MB-0399-1

Oct.2024

RoHS Compliant



Plug

Receptacle

With the spread of new technologies such as 5G, mounting density of parts is increasing inside of small mobile devices such as smartphones, wearable devices, and tablet PCs. There are also trends for improving on existing features including increasing battery size and adding more sensors such as cameras. For this reason, it is a prerequisite that connectors used inside these devices are smaller, but they must also support higher current and improved mechanical strength.

This product is smaller than its predecessor, with a depth of 1.73 mm. It is equipped with protective metal fittings that are integrated into the hold downs, which greatly improves the robustness of the product. In addition, by using hold-downs as power supply terminals, the total number of terminals can be reduced to achieve a smaller size, contributing to greater design freedom for customers.

Application

Smartphones, smart glasses, tablet and laptop PCs, gaming terminals, digital cameras, AR/VR headsets, other portable devices

Features

- 0.3mm pitch, 0.6mm stacking height, Depth 1.73mm (including SMT depth 1.9mm)
- Two hold-downs for power supply, supporting transmission of 5.0A
- 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, USB4[®], PCIe Gen4 transmission

Note) USB4[®] are trademark of USB Implementers Forum, Inc.

General Specifications

Number of Contacts	50 pos. (+2 power)
Pitch	0.3mm
Contact Resistance	Signal Terminal: 50mΩ max. (initial) Power Supply Terminal: 20mΩ 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. C
Rated Current	Signal Terminal: 0.3A per pos. Power Terminal: 5.0A 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)

WP56MS - P * V A * - R*******

Series: WP56MS

Reeled Part Number (Note 1)
(R20000)

Contact Shape
P: Plug

Modification Code

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

Finish A: Au plating

Connection Type V: Stacking

Ordering Information (Receptacle)

WP56MS - S * V A * - R*******

Series: WP56MS

Reeled Part Number (Note 1)
(R20000)

Contact Shape
S: Receptacle

Modification Code

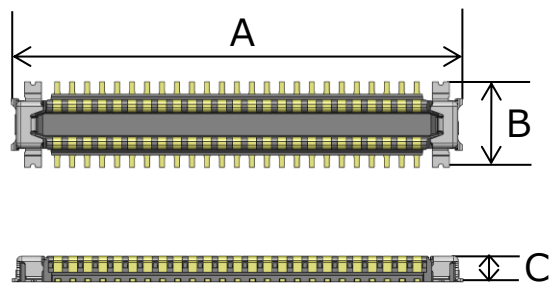
Number of Contacts :
in three digits (***)

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)

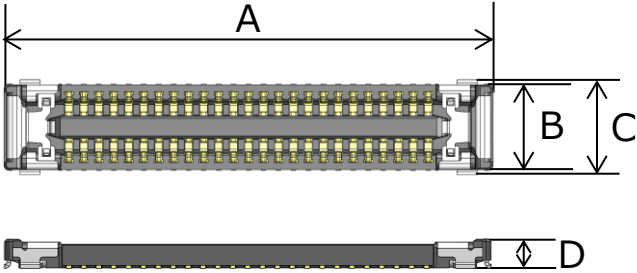


Unit : mm

Dimensions Number of Contacts	A	B	C
50 pos.	9.03	1.7	0.5

Note) 54 pos. to be added

Outer Dimensions (Receptacle)



Unit : mm

Dimensions Number of Contacts	A	B	C	D
50 pos.	9.8	1.73	1.9	0.57

Note) 54 pos. to be added

Product Drawings and Specifications

Part Number	Drawing Number	Specifications	Handling Instructions
WP56MS-P * * * VA * -R20000 (Plug side)	SJ130346 (Individual Product)	JACS-11422	JAHL-11422
	SJ130347 (Reeled Product)		
WP56MS-S * * * VA * -R20000 (Receptacle side)	SJ130348 (Individual Product)		
	SJ130349 (Reeled Product)		

Notice:

- 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.
- 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.
- 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.
 - Applications that require consultation:
 - 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.
 - 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.
 - Recommended applications include:
Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.