

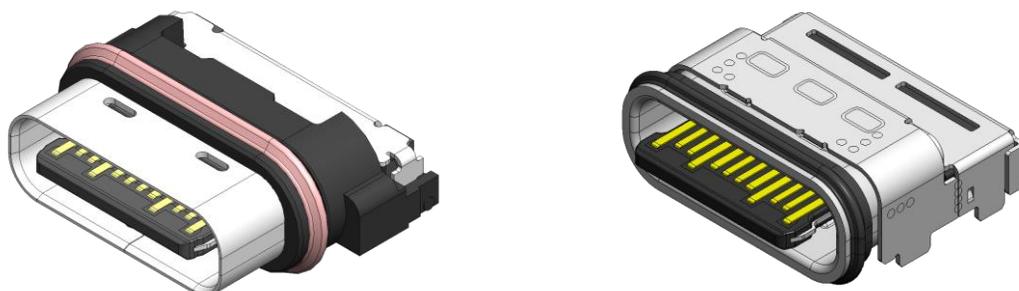
USB Type-C® Compatible DX07 Series Waterproof Receptacle

CONNECTOR

MB-0333-7

Sep.2024

RoHS Compliant



Overview

The waterproof DX07 Series connectors are the connector that is mating compatible with USB Type-C® and have become a popular standard interface for personal computers, mobile devices, audiovisual equipment, and portable gaming devices.

It is an individually waterproof receptacle connector which provides a solution to the ever growing trend of waterproofing portable devices.

Note) USB Type-C®, USB-C® are trademarks of USB Implementers Forum.

Application

Smartphones, tablets, waterproof speakers, Bluetooth earphones / headphones, action camera, VR / AR headset, and others

Features

- Waterproof performance rating of IPX7 or higher
- Supports 240W (5A/48V) max. power supply.
(Compatible with USB Power Delivery Extended Power Range)
- Symmetric interface which allows for the plug to be inserted upside down or right side up
- Lock structure with superior durability

Remarks: Large selection of other connector variations available in DX07 Series
Please refer to the chart below for brochures.

| Brochure Number | Brochure Name |
|-----------------|--------------------------------------|
| MB-0297-* | DX07 SMT Contact Receptacle |
| MB-0335-* | DX07 Hybrid Contact Receptacle |
| MB-0336-* | DX07 Vertical Receptacle |
| MB-0350-* | DX07 16-position Receptacle |
| MB-0362-* | DX07 USB4 Gen3 Compatible Receptacle |
| MB-0301-* | DX07 Plug Series |
| MB-0324-* | DX07 Harness |
| MB-0332-* | DX07 Vertical Plug |

Note: The asterisk (*) stands for revision number.

General Specifications

| | | | |
|---------------------------------|--------------------------------------------------------------------------------------------|---------------|-----------------------------------------------------------------|
| Number of Contacts | 24 positions | Rated Current | V _{BUS} (Terminal No. A4, A9, B4, B9) DC 5A (Total) |
| Contact Resistance | 40mΩ max. (initial) | | GND (Terminal No. A1, A12, B1, B12) DC 6.25A (Total) |
| Dielectric Withstanding Voltage | 100Vr.m.s. (per minute) | | V _{CONN} (Terminal No. B5) DC 1.25A |
| Insulation Resistance | 100MΩ (initial) | | Others are DC 0.25A/pin |
| Mating Durability | 10,000 times | Rated Voltage | 48Vr.m.s |
| Operating Temperature | -30 deg. C to +85deg. C (DX07W024JA3/DX07W024JA2) -30 deg. C to +80deg. C (DX07WH24JA3) | | |

Waterproof Performance

| Part Number | Waterproof Rating | |
|-------------|-------------------|---------------------------------------------------------|
| DX07W024JA3 | IPX8 | Protection from submersion of 1.5m depth for 30 minutes |
| DX07W024JA2 | | |
| DX07WH24JA3 | IPX7 | Protection from submersion of 1.0m depth for 30 minutes |

Ordering Information

DX07 W * 24 J A * R****

Series

DX07: USB Type C

W: Waterproof Receptacle

Modification Code: #1

Number of Contacts: 24 position

Reeled pcs. / reel

Modification Code: #2

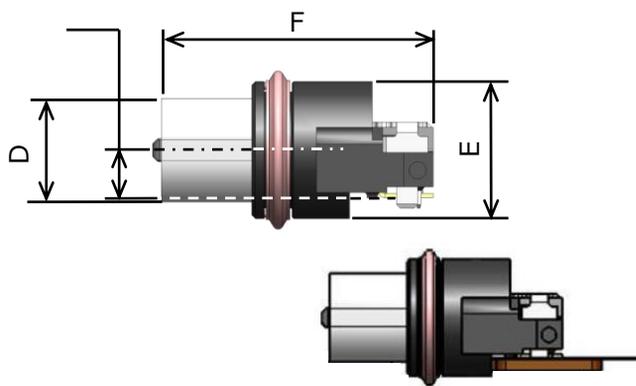
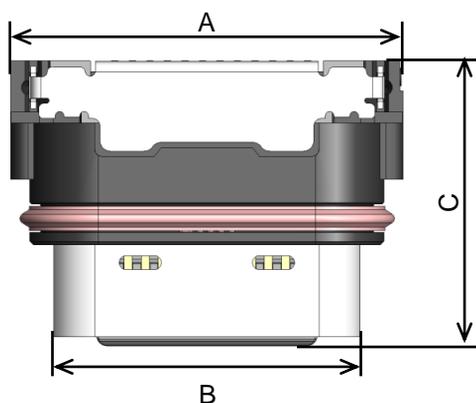
Plating Specification

A: Contact area: Au plating over Ni

Board Connection Type

J: 2 row, SMT type

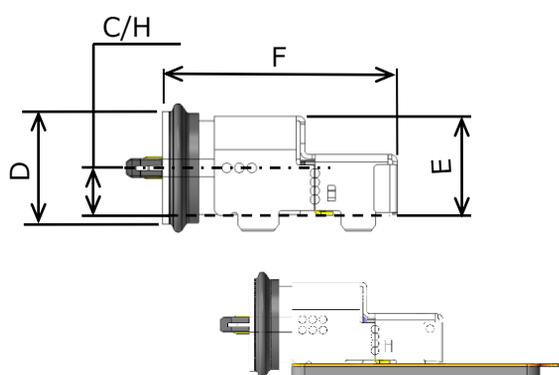
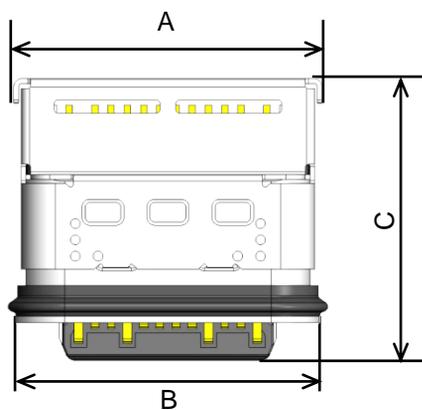
Outer Dimensions



Mated condition
(Please refer to attention on next page)

Unit: mm

| Part Number | C/H | Dimension A | Dimension B | Dimension C | Dimension D | Dimension E | Dimension F | Mating Length |
|-------------|------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| DX07W024JA3 | 1.35 | 11.2 | 8.74 | 8.05 | 2.94 | 3.9 | 7.8 | 4.2 |
| DX07W024JA2 | | | | | | | 6.2 | 2.6 |



Mated condition

Unit: mm

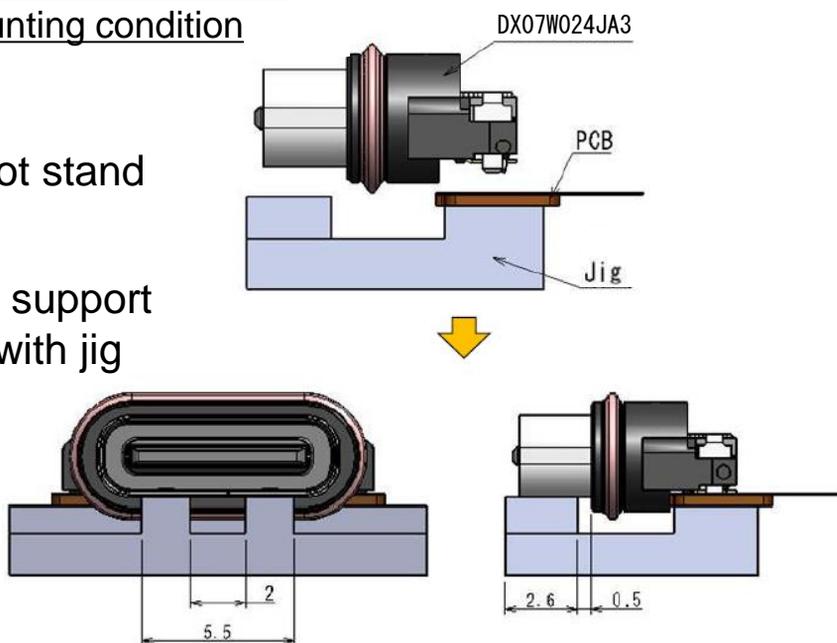
| Part Number | C/H | Dimension A | Dimension B | Dimension C | Dimension D | Dimension E | Dimension F | Mating Length |
|-------------|-----|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| DX07WH24JA3 | 1.5 | 9.5 | 9.35 | 8.65 | 3.56 | 3.13 | 7.50 | 3.3 |

Recommended board mounting condition

Attention

DX07W024JA3/2 cannot stand on its own.

When mounting please support connector mating side with jig so it will not fall over.



Technical Documents

| Part Number | Drawing Number | Specifications | Handling Instructions | Package Quantity |
|---------------------------------|----------------------|----------------|-----------------------|-------------------|
| DX07W024JA3 DX07W024JA3R1000 | SJ122198 SJ122199 | JACS-30398 | J AHL-30398 | 1,000 pieces/reel |
| DX07W024JA2 DX07W024JA2R1000 | SJ119766 SJ119767 | | | 1,000 pieces/reel |
| DX07WH24JA3 DX07WH24JA3R1200 | SJ120981 SJ120982 | JACS-30353-24 | --- | 1,200 pieces/reel |

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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