USB Type-C® Connector
DX07 Series Plug

CONNECTOR
MB-0301-7
Jun. 2024

RoHS Compliant



Plug



Slim Plug





Short Plug

Overview

The DX07 Series connectors are compliant with the USB Type-C® specification which is a popular standard interface for various devices and applications.

In addition, due to the progress of in-vehicle infotainment (IVI) and higher functionality of vehicles, the USB Type-C interface is being adopted as a user interface connection with consumer devices. It is able to support higher data rates and faster charging compared to other interfaces.

This product can be used for dongles and USB Type-C harnesses (C to C / A / B / μB and others).

Specific products have been tested to automotive specifications.

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

Application

Smartphones, tablets, PCs, high-definition camcorders, digital still cameras (single-lens reflex, compact), and others

Features

■Compatible with Universal Serial Bus Type-C Specification Release 2.3
■Compatible with 10Gbps SuperSpeed Plus communication. (USB 3.2 Gen 2)
■Compatible with USB Power Delivery Extended Power Range (240W (5A/48V) maximum)
■Symmetric interface which allows for the plug to be inserted upside down or right side up
■Superior EMI / EMC characteristics.
■Designed for high mechanical strength.
■Superior lock structure with high durability and clear click feeling during mating.
■Easy to insert with a smooth “R” on the tip of the mating area of the metal outer shell.
*Not compatible with IATF.

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Features Specific to Short Plug

■Compatible with USB 80Gbps communication. (USB4)
■Adopted as the official test fixture golden plug used for USB4 receptacle certification testing.
■Deep drawn shell leads to approximately 2mm reduction in depth which allows for miniaturization of the plug hood and improved cable designs.
■Compatible with USB4 GEN3 PLUG CONNECTOR HIGH SPEED DESIGN GUIDE
*Not compatible with IATF.

General Specifications

*Products compatible with automotive specification tests are available.

	Plug	Slim Plug		Short Plug
Part Number	DX07P024MA2	DX07P024AJ5	DX07P022AA6*	DX07P022FA1
Number of Contacts	24 position		22 position	
Rated Current	V_{BUS} (Terminal No. A4, A9, B4, B9)		DC 5A(Total)	
	GND (Terminal No. A1,A12,B1,B12)		DC 6.25A(Total)	
	V_{CONN} (Terminal No. B5)		DC 1.25A	
	Others		DC 0.25A/pin	
Rated Voltage	48Vrms			
USB Certification	Certified			
TID	1916	5,210,000,067	979	4025
Contact Resistance	40mΩ max. (initial)			
Dielectric Withstanding Voltage	100Vrms for 1 minute			
Insulation Resistance	100MΩ (initial)			
Mating Durability	10,000 times			
Operating Temperature Range	-40˚C ~ +85˚C		-40℃ ～ +85℃ (general products) -40℃ ～ +125℃** (for evaluation to automotive specifications)	-40˚C ~ +85˚C

**including temperature rise when energized

Ordering Information

DX07 P 0 ** * * * R**

Series
DX07: USB Type C

P: Plug

Modification Code: #1

No. of Contacts: 24 pos., 22 pos.

Plug Type - M: Plug F: Short Plug
A: Slim Plug

No. of pcs. per reel

Modification Code: #2

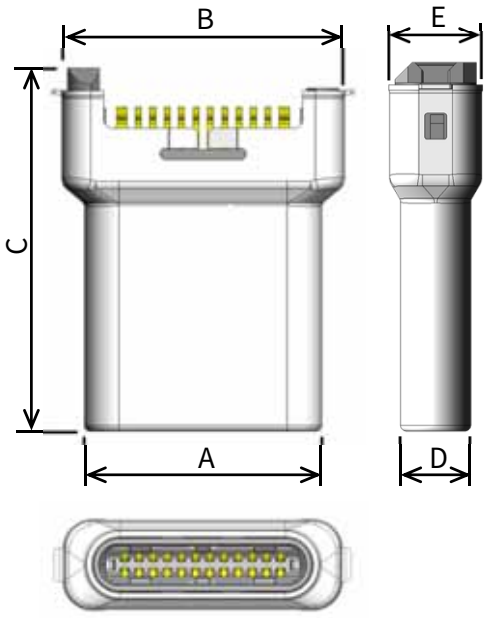
Plating Specification
J: Contact area:
Au flash over Palladium Ni over Ni
A: Contact area: Au plating over Ni

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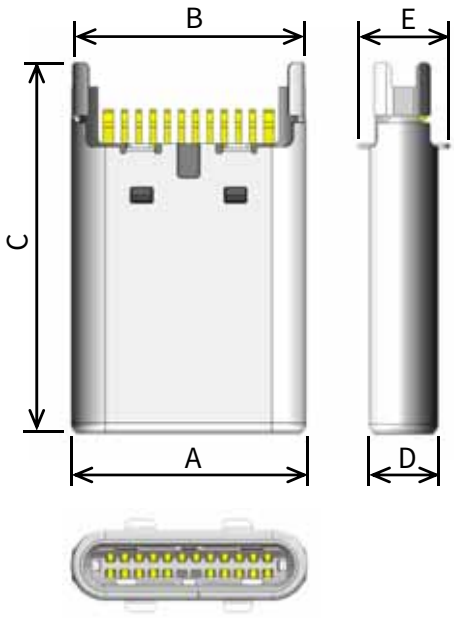
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Outer Dimensions

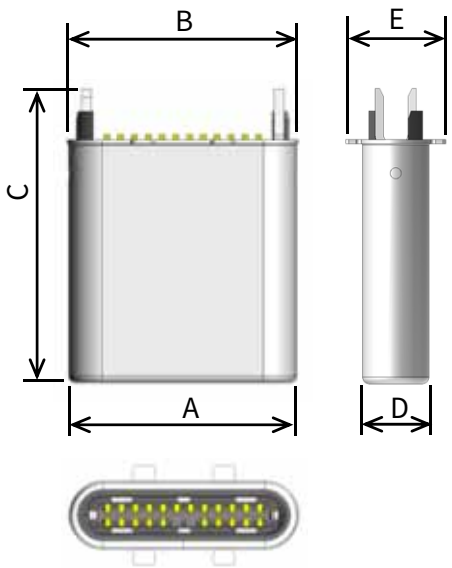
Plug



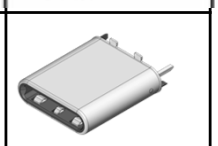
Slim Plug



Short Plug

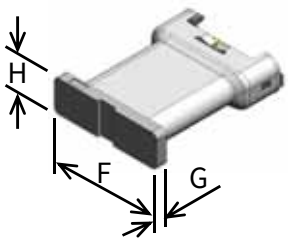


Unit: mm

Part Number		Dimension								Note
		A	B	C	D	E	F	G	H	
Plug DX07P024MA2		8.25	9.8	12.7	2.4	3.35	10.5	1	3.2	Drawn shell
Slim Plug DX07P024AJ5			8.19	13		3.2	8.5			—
Slim Plug DX07P022AA6										—
Short Plug DX07P022FA1			8.35	10.7		3.6	8.3		3.6	Drawn shell

<With Protection Cap>
* Plug will be packaged with the protection cap on.

DX07P024MA2



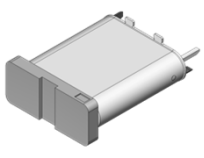
DX07P024AJ5



DX07P022AA6



DX07P022FA1



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Part Numbers and Product Drawings

Part Number	Drawing Number	Specifications	Handling Instructions	Reel Packaging Quantity
DX07P024MA2 DX07P024MA2R1500	SJ121849 SJ121850	JACS-30353	JAHL-30353-4	1,500
DX07P024AJ5 DX07P024AJ5R1500	SJ118710 SJ118711		JAHL-30353	
DX07P022AA6 DX07P022AA6R2000	SJ121220 SJ121221	JACS-30353 (General specification) JACS-30503 (Automotive spec tested product)	JAHL-30353-6	2,000
DX07P022FA1 DX07P022FA1R1800	SJ122510 SJ122511	JACS-30353-33	JAHL-30353-33	1,800

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-0333-*	DX07 Waterproof 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-0324-*	DX07 Harness
MB-0332-*	DX07 Vertical Plug

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

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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