DX07 Series
USB Type-C™ Connector

Connector Training Module

Technology to Inspire Innovation
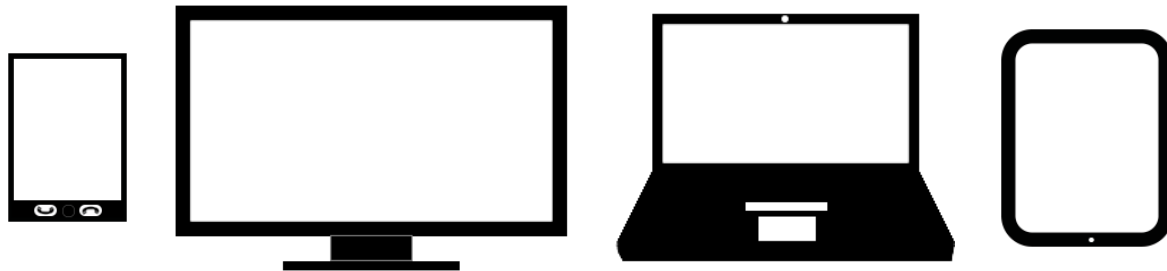
JAE

JAE DX07 Series
USB Type-C™ Connector

Application Examples

- Smartphones
- Tablets
- PCs
- Monitors/TVs
- Digital cameras
- Other consumer devices

DX07 Series Overview

The next-generation USB Type-C™ interface has been defined by the USB-IF[Note] for connecting current and future consumer and industrial devices such as mobile phones, various PCs, and imaging devices. It features a reversible plug that enables insertion and removal in the right side up, or up side down orientation. It also supports USB 3.1 transmission speeds of up to 10Gbps, and a maximum of 5A of power. JAE's new family of Type-C™ connectors, the DX07 Series, includes plugs, receptacles, and harnesses.


Note - USB Implementers Forum, Inc. is a non-profit corporation founded by the group of companies that developed the Universal Serial Bus specification.

DX07 Series Features

## *User friendly – Reversible insertion*

- Compatible with Universal Serial Bus (USB) Type-C™ Cable and Connector Specification Release 1.1

- Compatible with 10Gbps, USB 3.1 Gen 2 SuperSpeed communication

- Supports a maximum of 5A and 20V of power for charging

    - Compatible with USB Power Delivery

- Reversible plug allows for easy insertion and removal

- Superior EMI / EMC characteristics with multiple ground contact points

- Friction lock included within plug connector

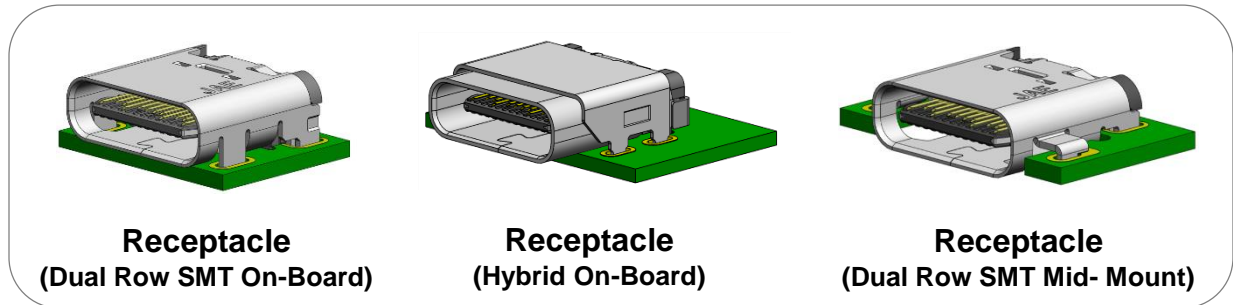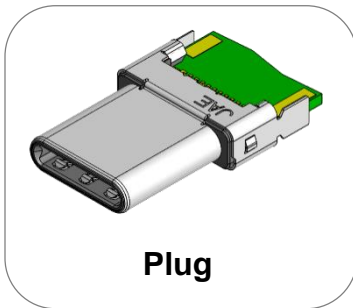- Rear shell option available for additional shielding

Removable rear shell
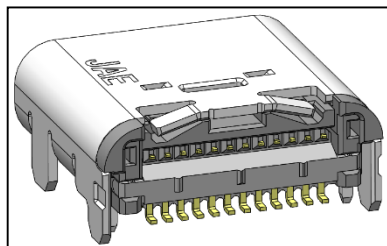
Without rear shell
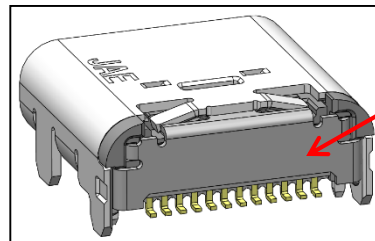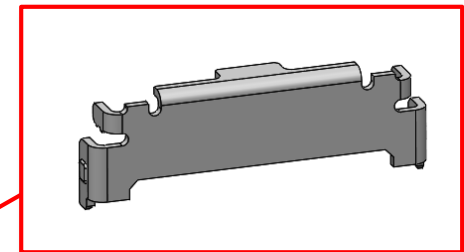
With rear shell

General Specifications

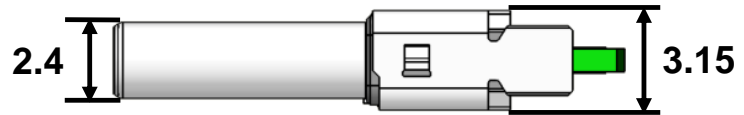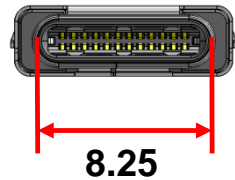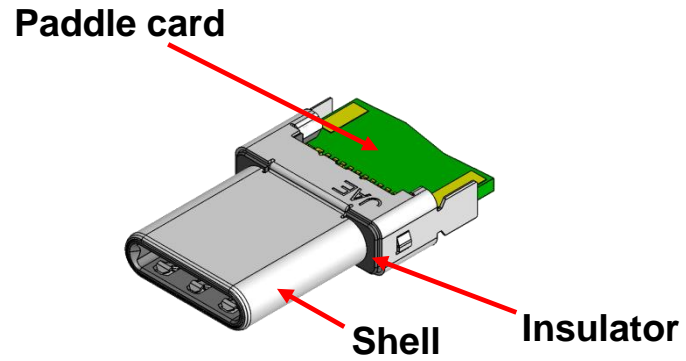| No. of Contacts	24
Rated Current	5A max.
Rated Voltage	AC20V r.m.s.
Contact Resistance	40mΩmax. (initial)
Dielectric Withstanding Voltage	AC 100V r.m.s. for 1minute
Insulation Resistance	100MΩmin. (initial)
Operating Temperature Range	-30 Deg. C ~ +80 Deg. C
Mating Durability	10,000 cycles

Plug

Receptacle
(Dual Row SMT On-Board)

Receptacle
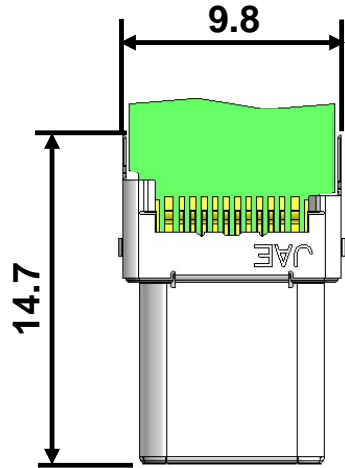**(Hybrid On-Board)**

Receptacle
(Dual Row SMT Mid- Mount)
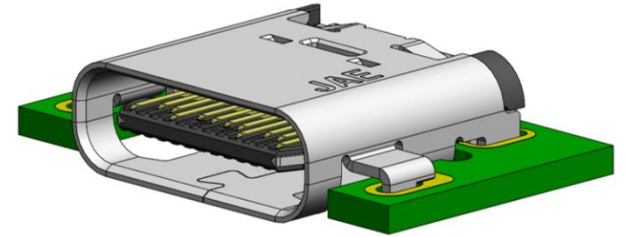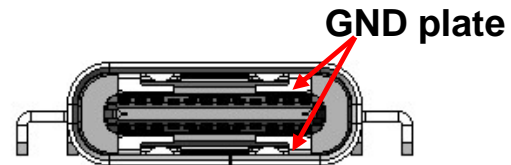
Basic Dimensions

*All units in mm

Plug

p/n: DX07P024MJ1

9.8

14.7

Paddle card

Shell
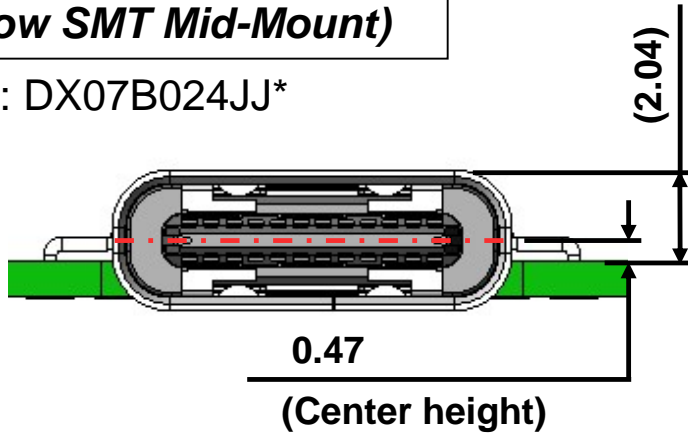
Insulator

8.25

2.4

3.15

Basic Dimensions

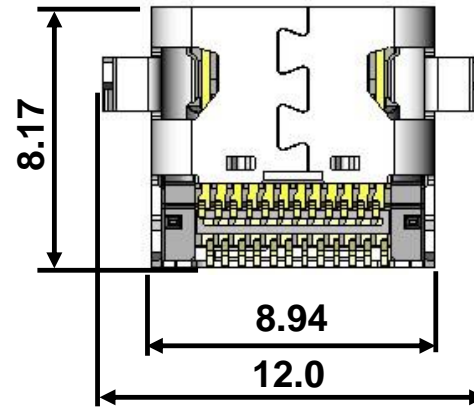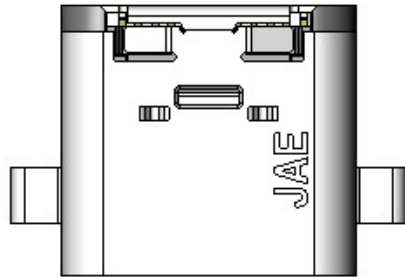*All units in mm

Receptacle
(Dual Row SMT Mid-Mount)

p/n: DX07B024JJ*

(Dual Row SMT Mid-Mount)

(2.04)

0.47

(Center height)

GND plate

8.17

8.94

12.0

Basic Dimensions (cont.)

*All units in mm

Receptacle
(Dual Row SMT Mid-Mount)

Footprint will be on the Type C spec for dual row SMT mid mount.

Basic Dimensions

*All units in mm

(Dual Row SMT On-board)

Receptacle
(Dual Row SMT On-board)

p/n: DX07S024JJ*

(3.14)

1.57

(Center height)

GND plate

8.17

8.94
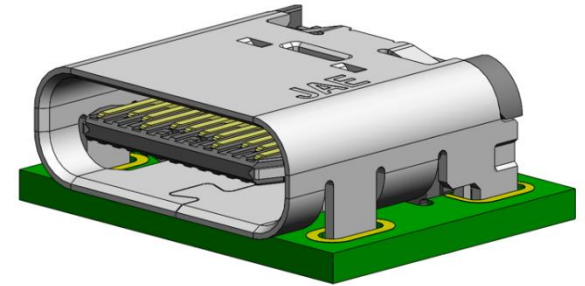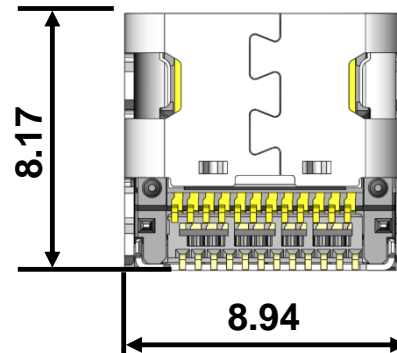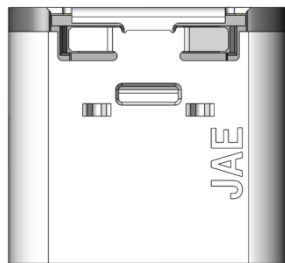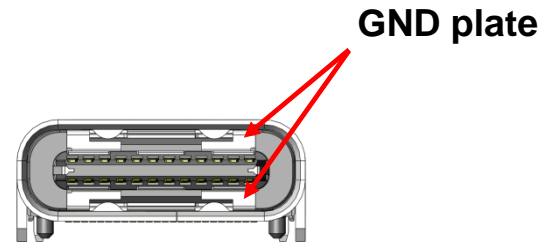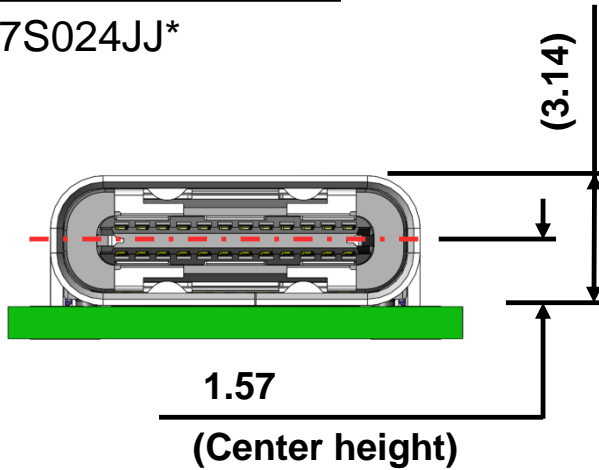
Basic Dimensions (cont.)

*All units in mm

Receptacle
(Dual Row SMT On-board)

Not compatible with reference footprint on the Type C spec.

NOTE2. NO PCB ROUTING ALLOWED IN THIS AREA.

Basic Dimensions

*All units in mm

(Hybrid On-board)

Receptacle
(Hybrid On-board)

p/n: DX07S024XJ1

(3.34)

GND plate

1.57

(Center height)

Rear shield

9.65

9.4

Locator

Basic Dimensions (cont.)

*All units in mm

Receptacle
(Hybrid On-board)
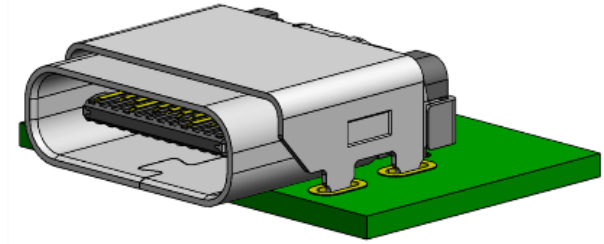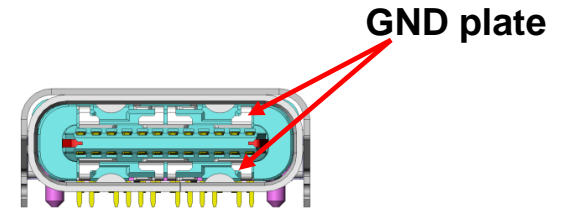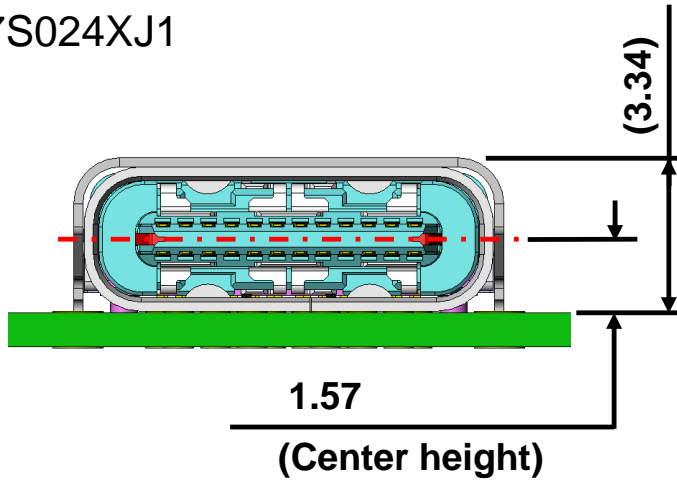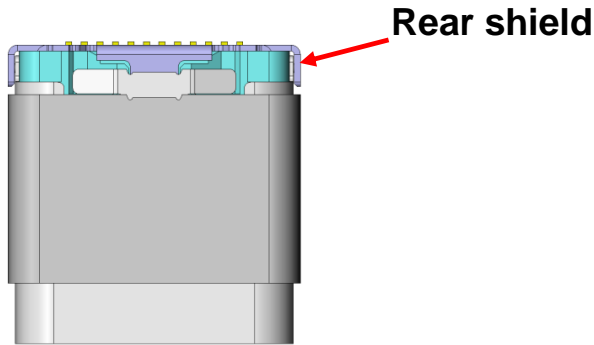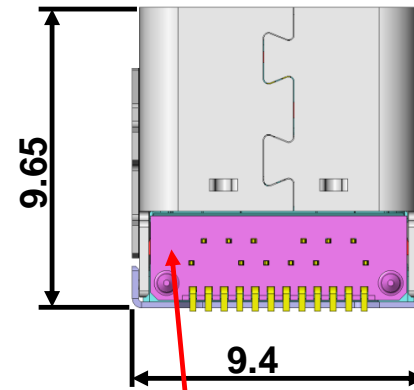
Materials and Finishes

Component	Material / Finish
Insulators	Heat-Resistant Plastic
Rear Shield (optional)	Stainless Steel w/ Nickel Plating
Shell	Stainless Steel w/ Nickel Plating
Ground Plate	Stainless Steel w/ Nickel Plating
Mid Plate	Stainless Steel w/ Nickel Plating
Contacts	Copper Alloy w/ Contact area: Gold Flash plating over Palladium-Nickel over Nickel Solder tails: Gold Flash plating over Nickel

Ordering Information

	Type	Part Number	Rear Shield
Receptacles	Plug	DX07P024MJ1	-
	Mid-mount type	DX07B024JJ1R1500	Yes
		DX07B024JJ2R1500	No
	On-board type	DX07S024JJ2R1300	Yes
		DX07S024JJ3R1300	No

DX07 ☐ - 024 JJ* - R****

Series

Modification Code
B: Mid-mount type
S: On-board type

No. of Contacts

Modification Code
JJ1: w/ rear shield
JJ2 (B-type): no rear shield
JJ2 (S-type): w/ rear shield
JJ3: no rear shield

Reel Amount
1300 (On-board type)
1500 (Mid-mount type)
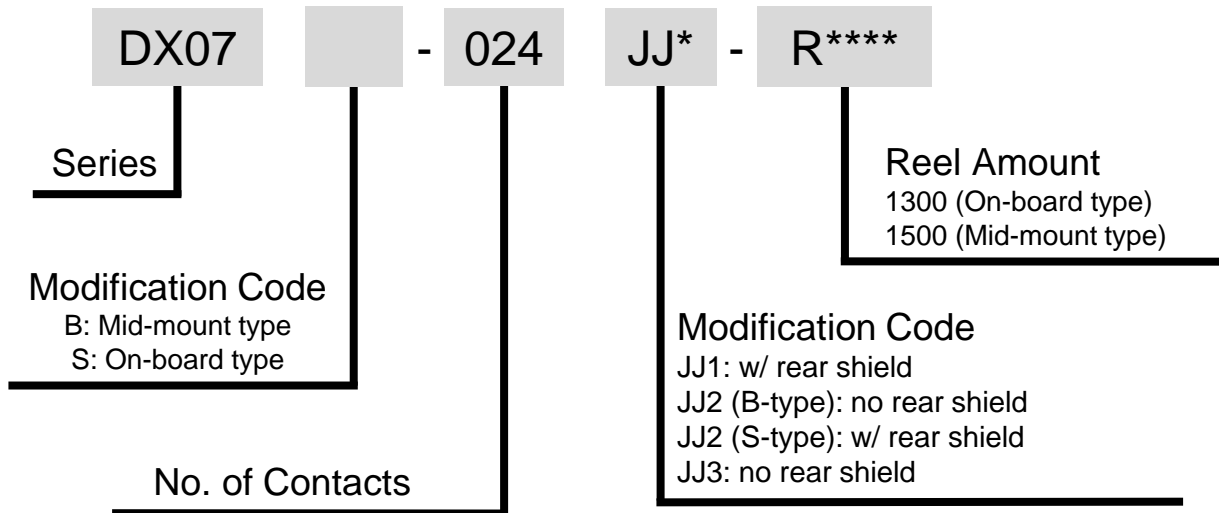
Summary

- USB 3.1 high speed signaling supported

- Mid-mount type and On-board type available

- User-friendly – Reversible insertion

- Optional rear shell

- Friction lock equipped

- Enhanced EMI performance

- Power delivery supported (3A/5A)

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