v1.0

DX07 Series
USB Type-C™ Connector

Connector Training Module

Technology to Inspire Innovation

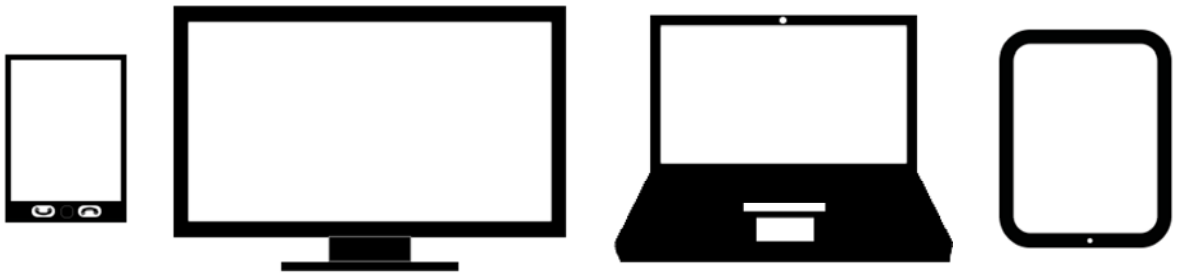
JAE

JAE DX07 Series

USB Type-C™ Connector

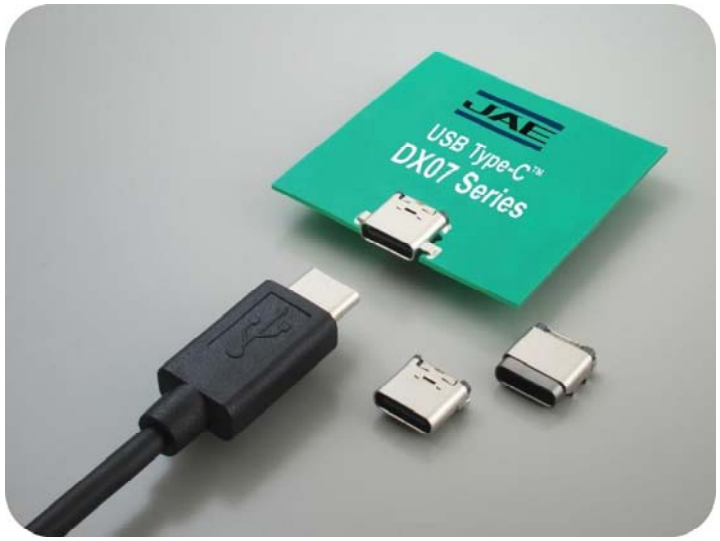
Application Examples

- 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.

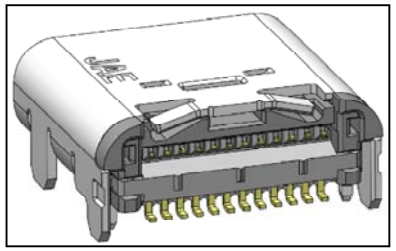


Note - USB Implementers Forum, Inc. is a non-profit corporation founded by the group of companies that developed the Universal Serial Bus specification.

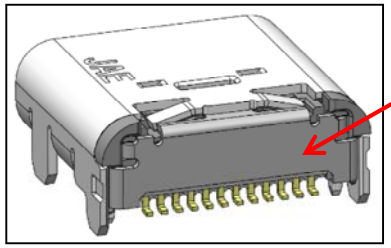
DX07 Series Features

User friendly – Reversible insertion

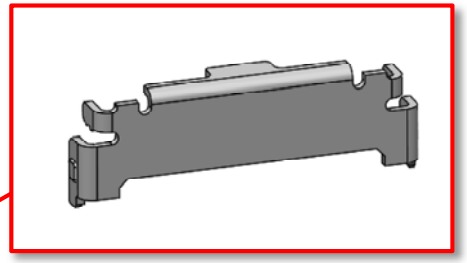
- Compatible with Universal Serial Bus (USB) Type-CTM Cable and Connector Specification
- Compatible with SuperSpeed USB 3.1 communication
- Supports a maximum of 5A and 20V of power for charging
  - Compatible with USB Power Delivery
- Reversible plug allows for easy insertion and removal
- Superior EMI / EMC characteristics with multiple ground contact points
- Friction lock included within plug connector
- Rear shell option available for SMT variants



Without rear shell



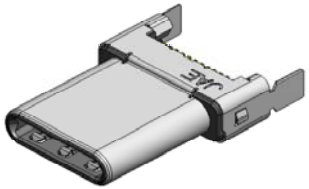
With rear shell



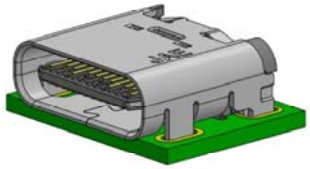
Optional rear shell for extra shielding

General Specifications

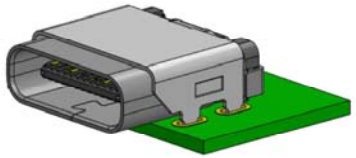
No. of Contacts	24
Rated Current	Terminal No. A1, A4, A9, A12, B1, B4, B5, B9, B12 are DC 1.25A (maximum), Others are DC 0.25A
Rated Voltage	AC 20V r.m.s.
Contact Resistance	40mΩ max. (initial)
Dielectric Withstanding Voltage	AC 100V r.m.s. for 1minute
Insulation Resistance	100MΩ min. (initial)
Operating Temperature Range	-30 Deg. C ~ +80 Deg. C
Mating Durability	10,000 cycles



Plug

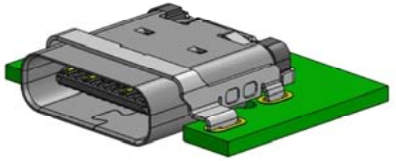


Receptacle
(Dual Row SMT On-Board)



Receptacle
(Hybrid On-Board)

Receptacle
(Dual Row SMT Mid- Mount)



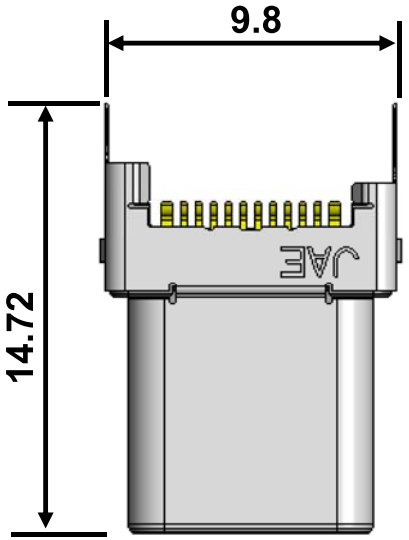
Receptacle
(Hybrid Mid- Mount)

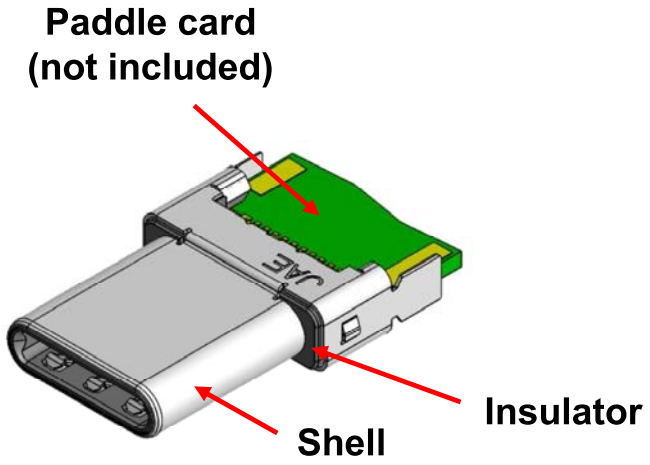
Basic Dimensions

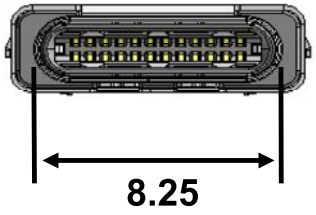
*All units in mm

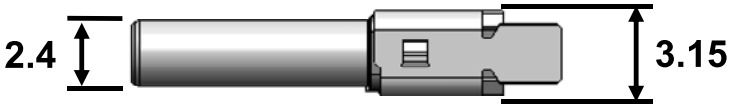
Plug

p/n: DX07P024MJ1





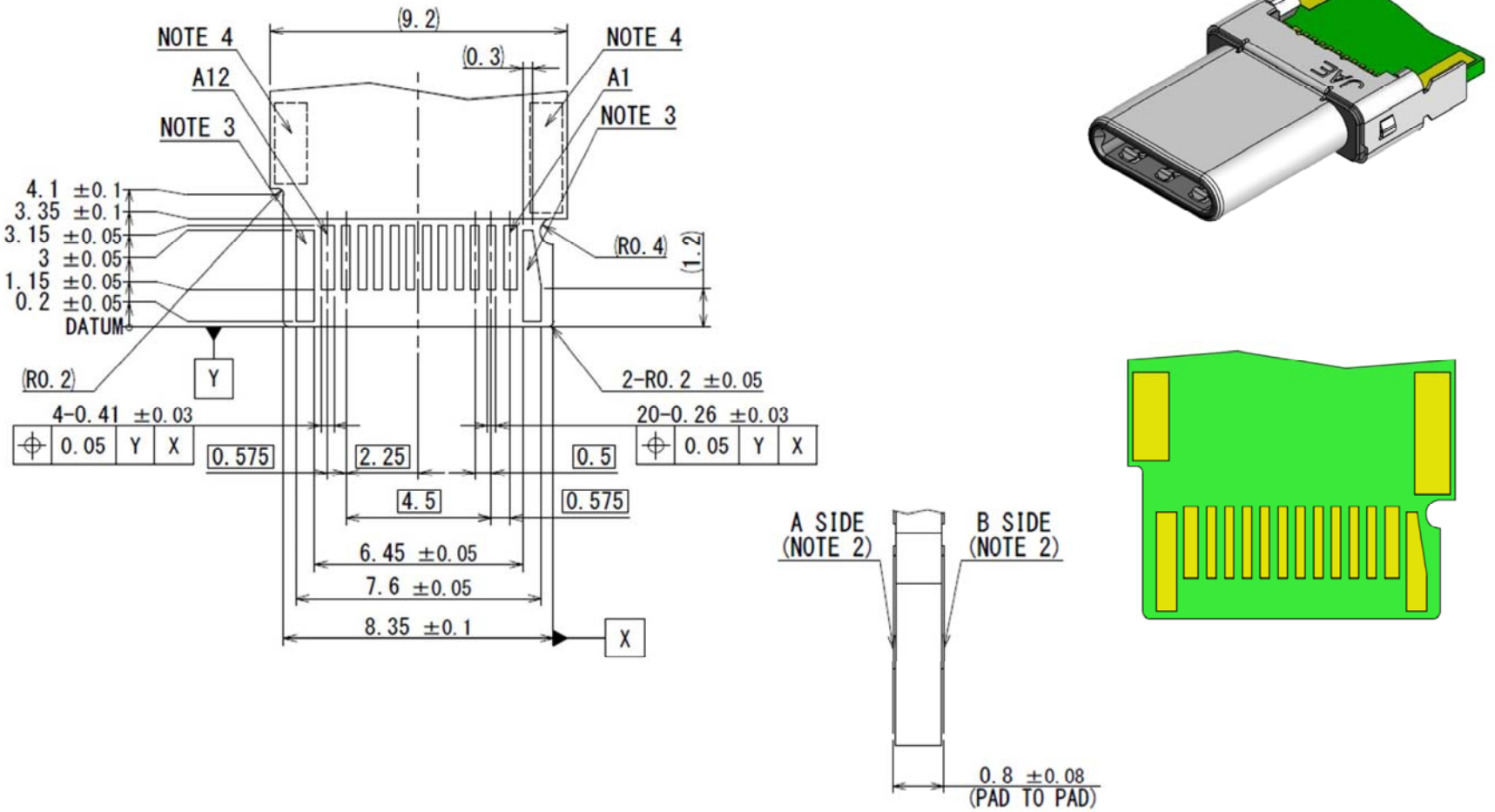




Basic Dimensions (continued)

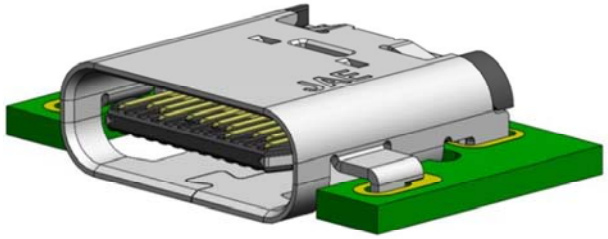
*All units in mm

Plug



Basic Dimensions

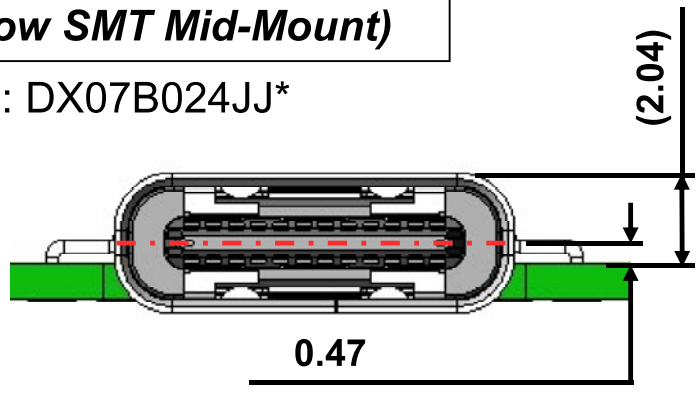
*All units in mm

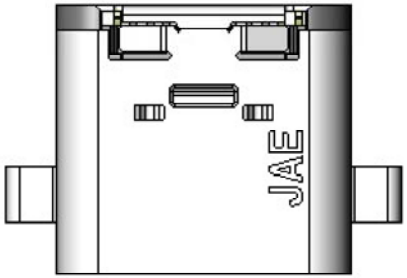


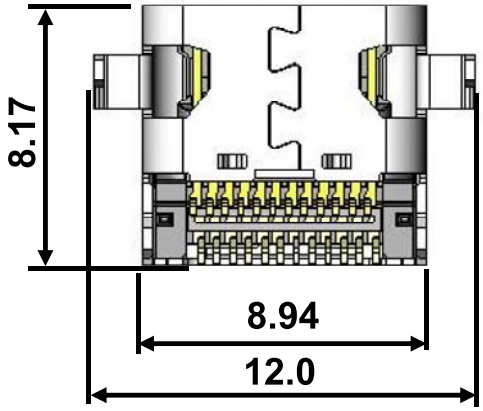
(Dual Row SMT Mid-Mount)

Receptacle
(Dual Row SMT Mid-Mount)

p/n: DX07B024JJ*



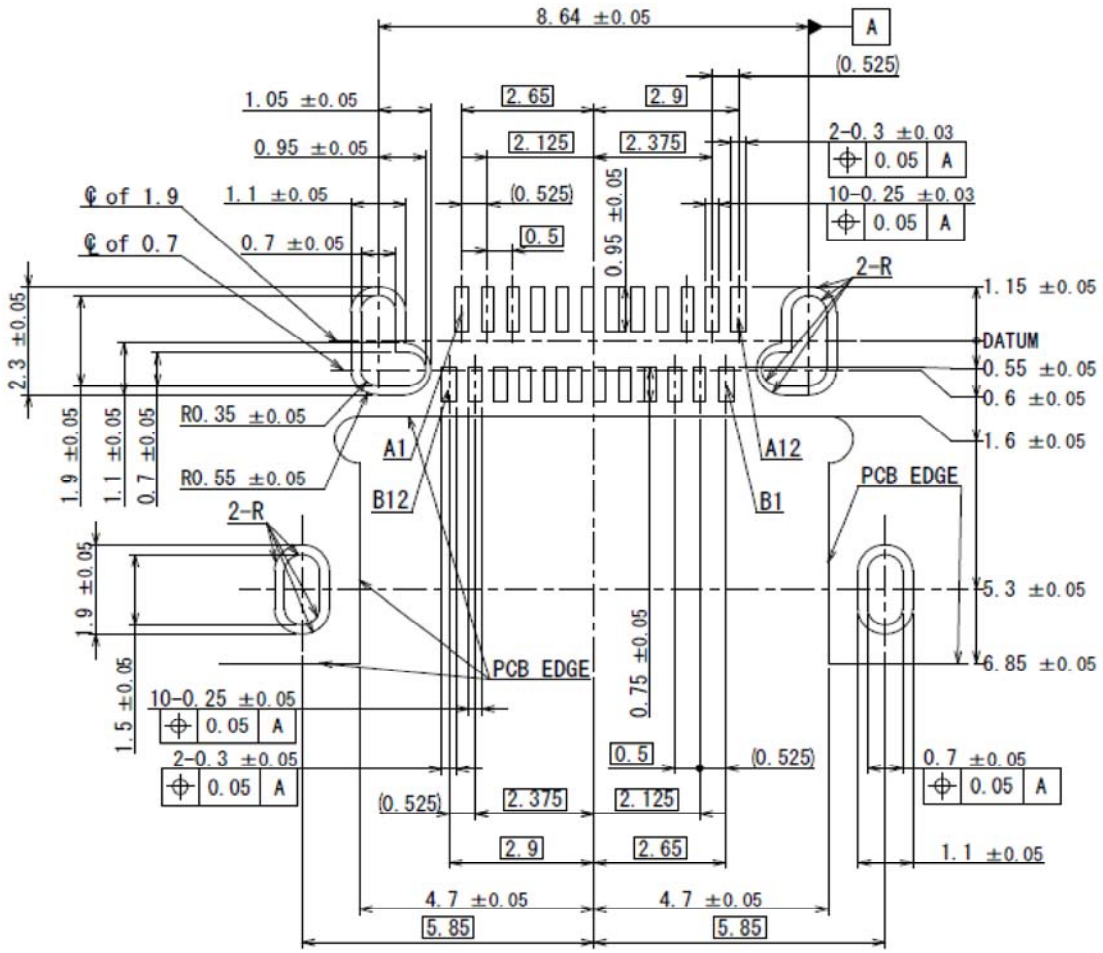


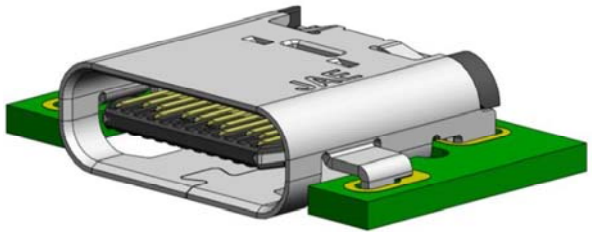


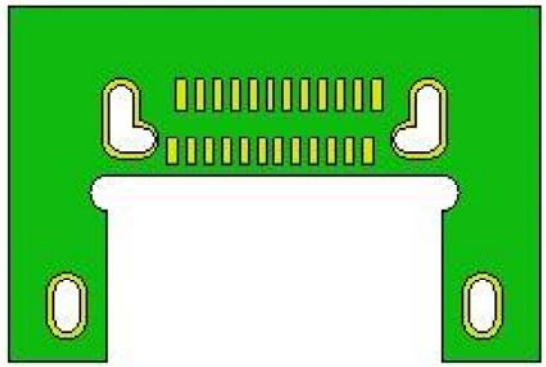
Basic Dimensions (continued)

*All units in mm

Receptacle
(Dual Row SMT Mid-Mount)



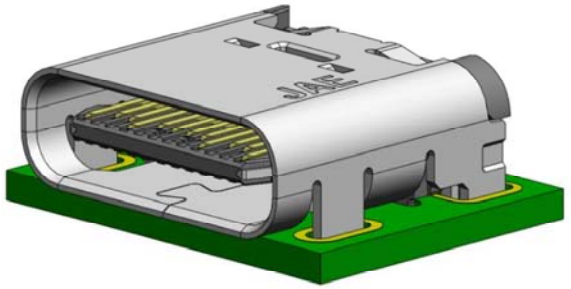




Footprint will be on the Type C™ spec for dual row SMT mid mount.

Basic Dimensions

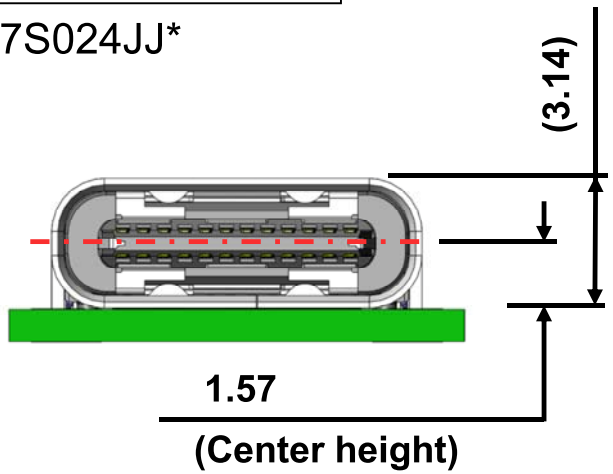
*All units in mm

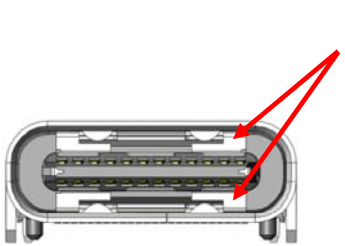


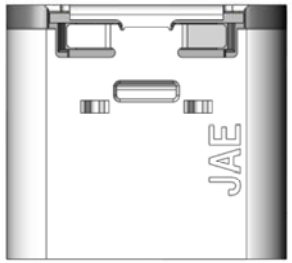
(Dual Row SMT On-board)

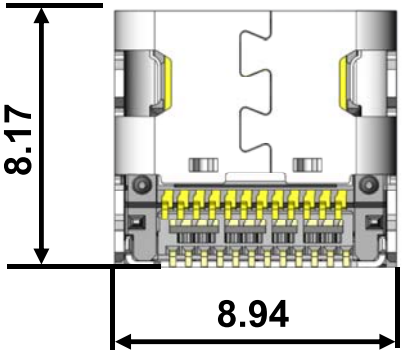
Receptacle
(Dual Row SMT On-board)

p/n: DX07S024JJ*





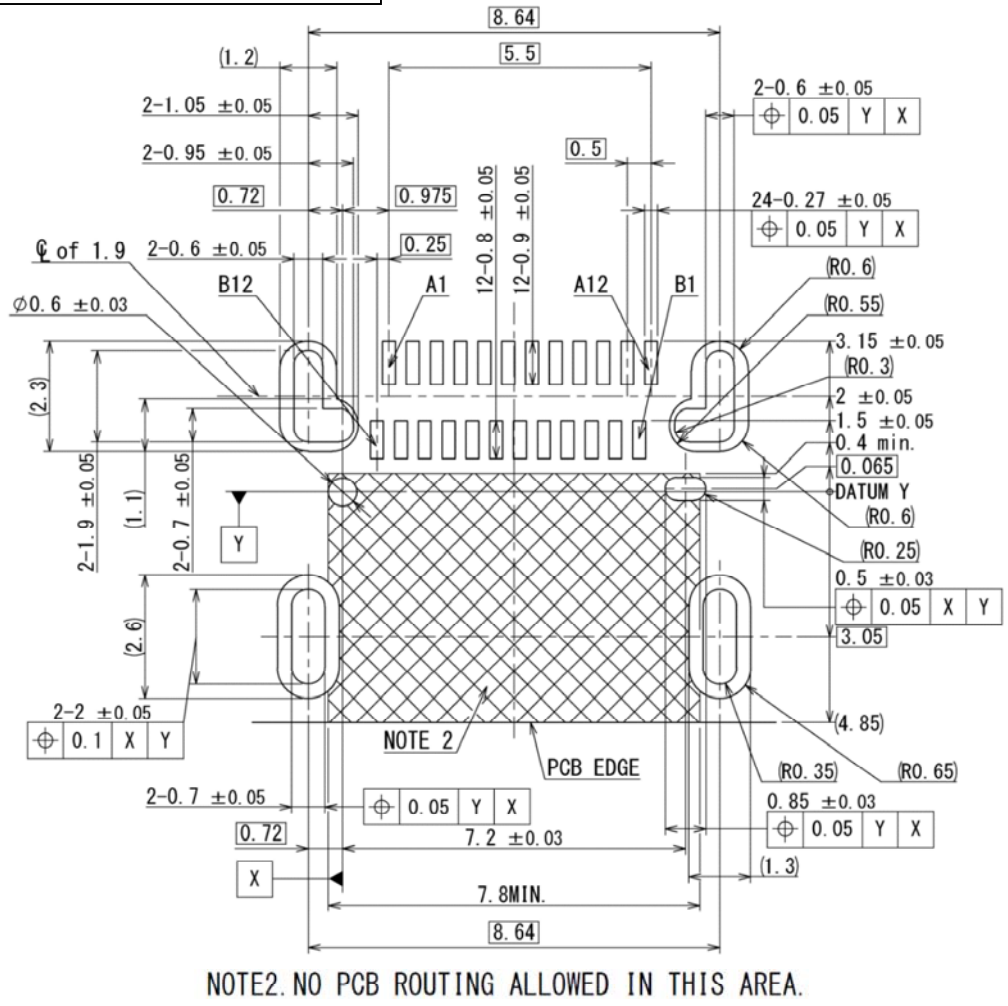


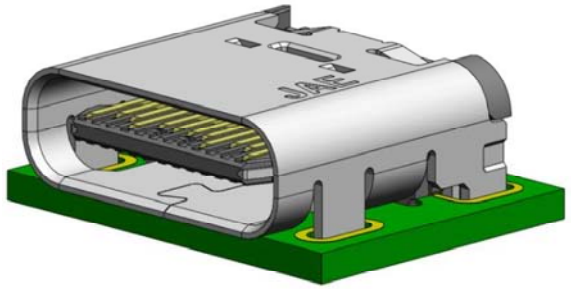


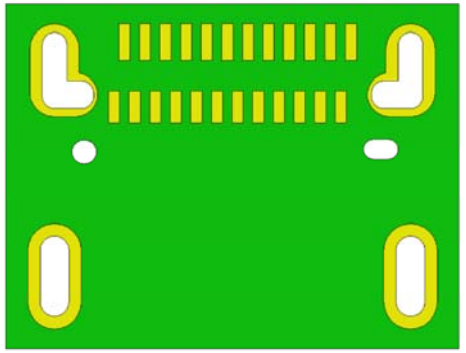
Basic Dimensions (continued)

*All units in mm

Receptacle
(Dual Row SMT On-board)







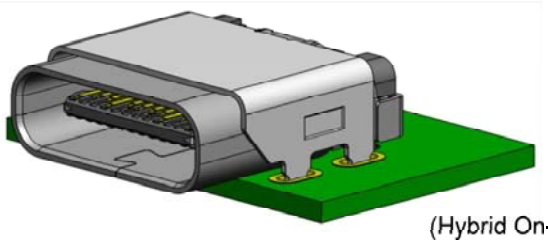
Not compatible with reference footprint on the Type C™ spec.

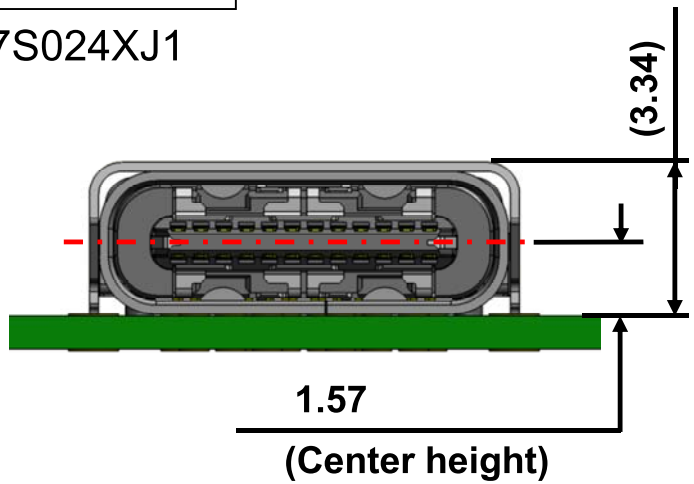
Basic Dimensions

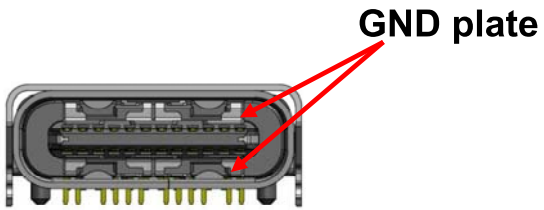
*All units in mm

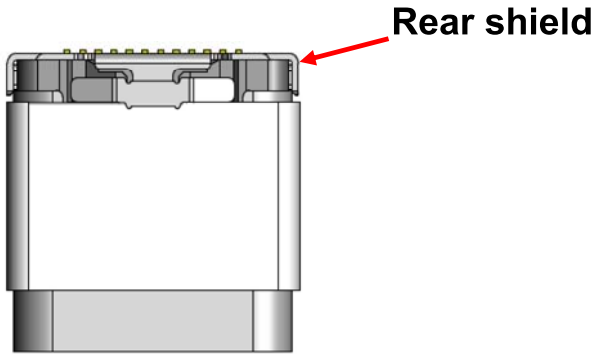
Receptacle
(Hybrid On-board)

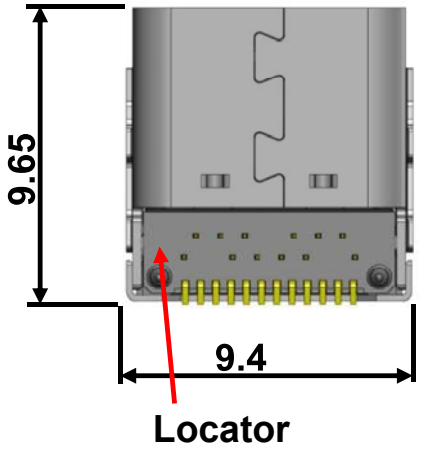
p/n: DX07S024XJ1







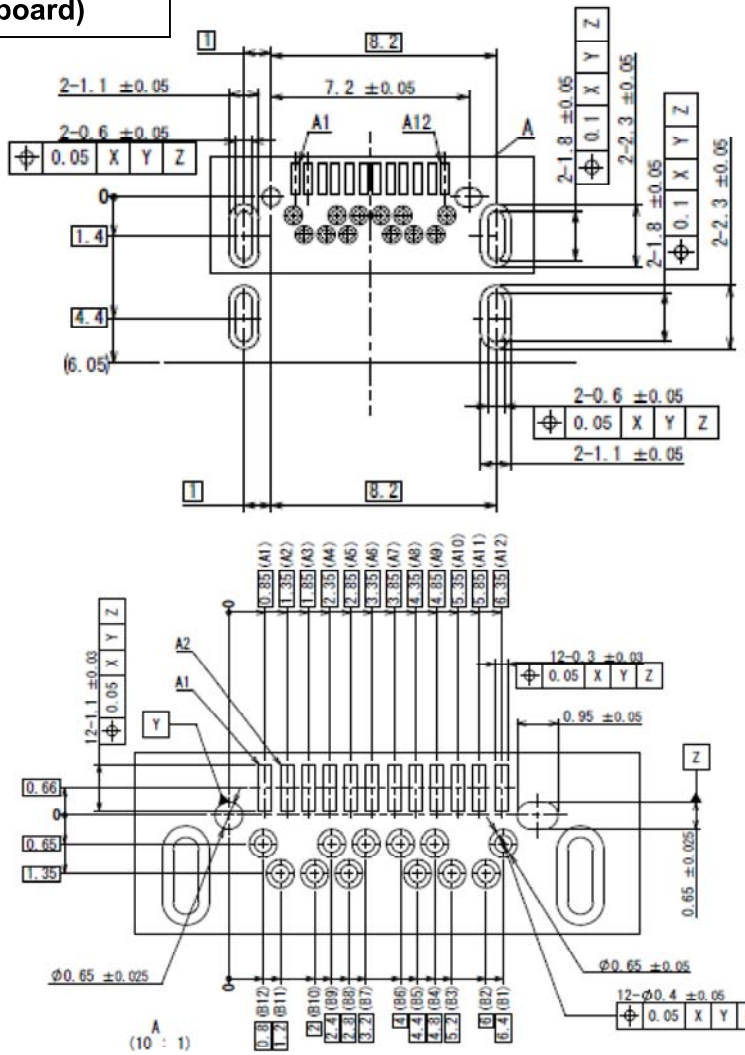


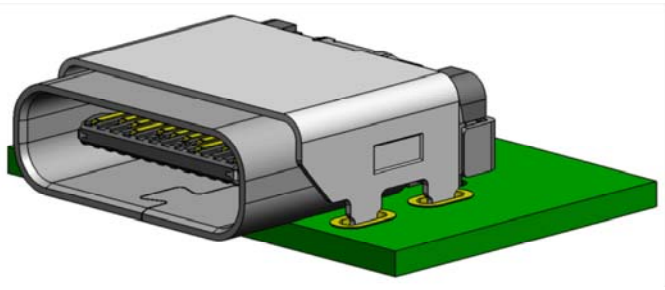


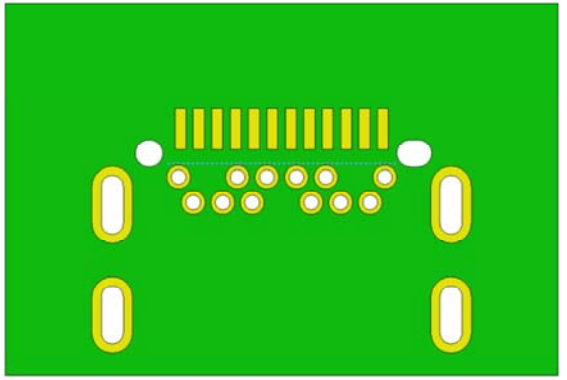
Basic Dimensions (continued)

*All units in mm

Receptacle
(Hybrid On-board)







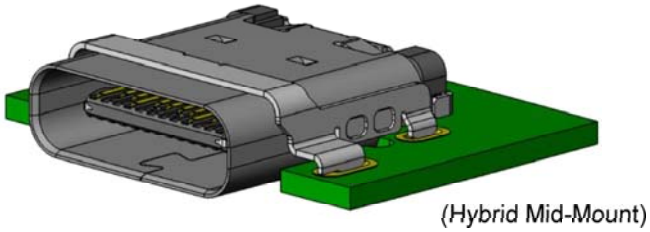
Not compatible with reference footprint on the Type C™ spec.

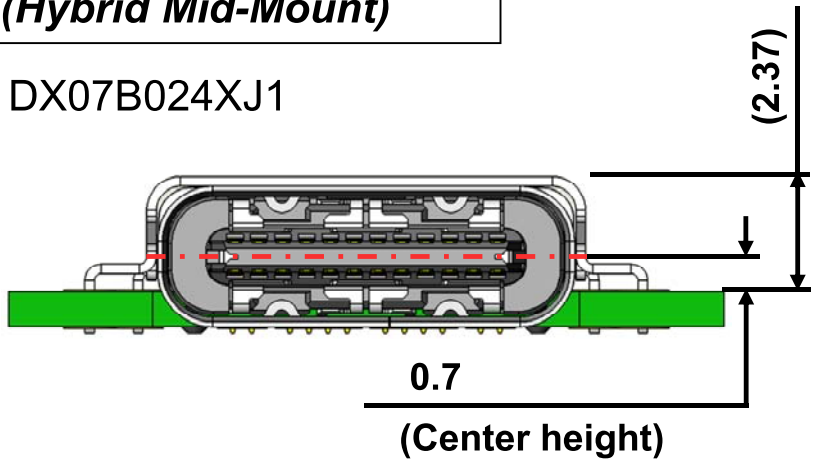
Basic Dimensions

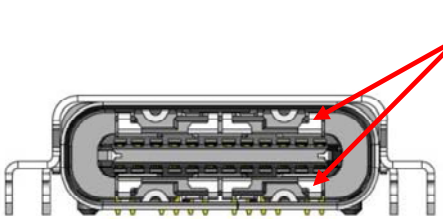
*All units in mm

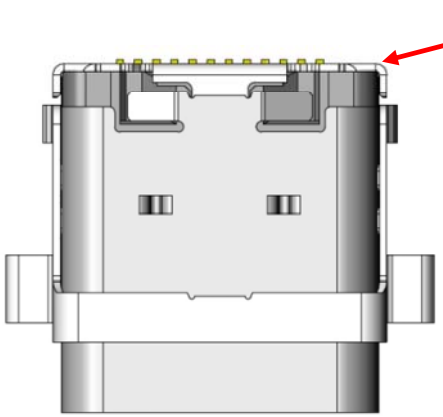
Receptacle
(Hybrid Mid-Mount)

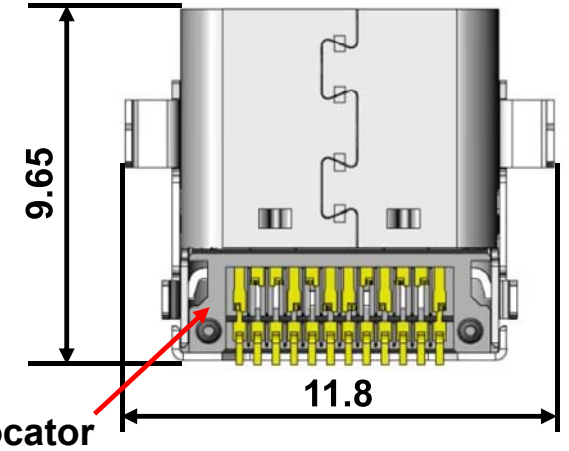
p/n: DX07B024XJ1







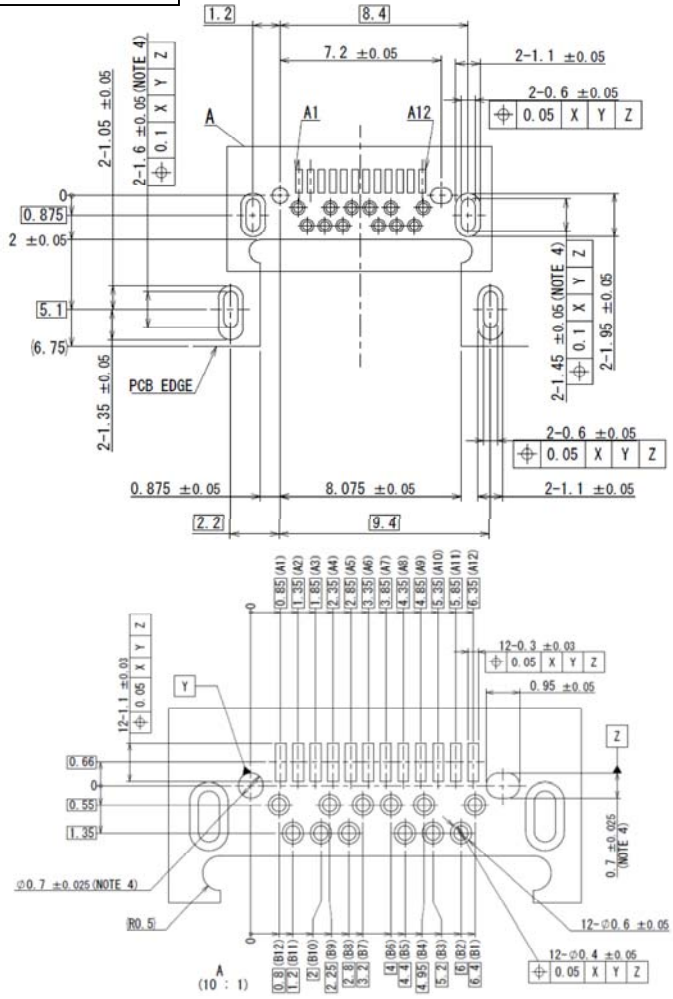


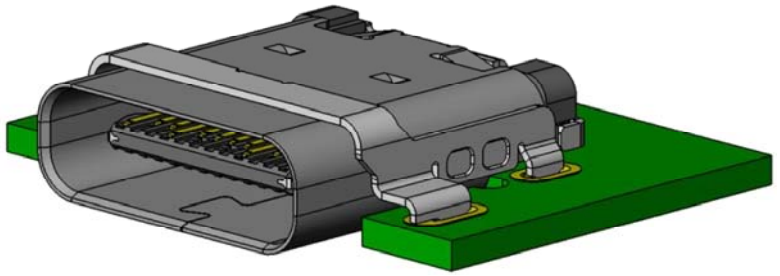


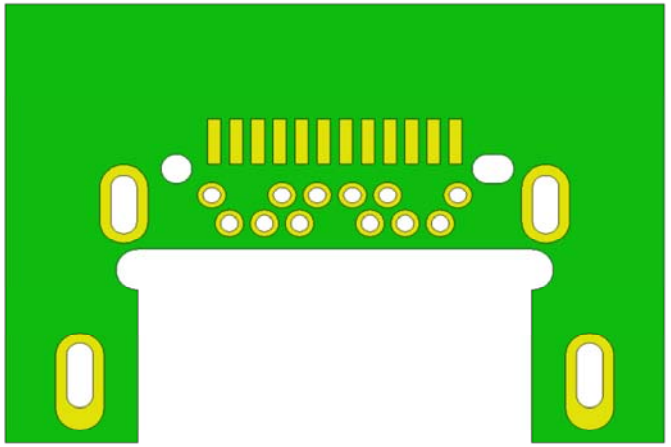
Basic Dimensions (continued)

*All units in mm

Receptacle
(Hybrid Mid-Mount)







Not compatible with reference footprint on the Type C™ spec.

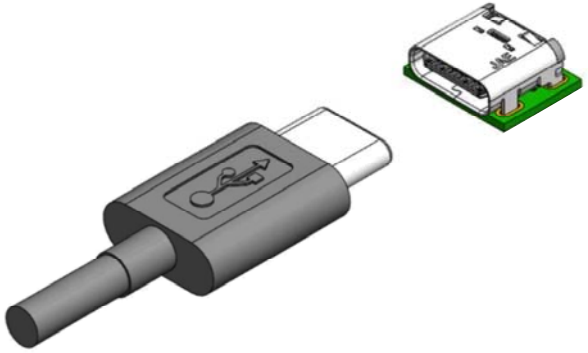
Materials and Finishes

Dual Row SMT Receptacle	
Component	**Material / Finish**
Insulators	Synthetic Resin
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

Hybrid Receptacle	
Component	**Material / Finish**
Insulator	Synthetic Resin
Rear Shield	Stainless Steel w/ Nickel Plating
Bracket	Stainless Steel w/ Nickel Plating
Shell	Stainless Steel w/ Black 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

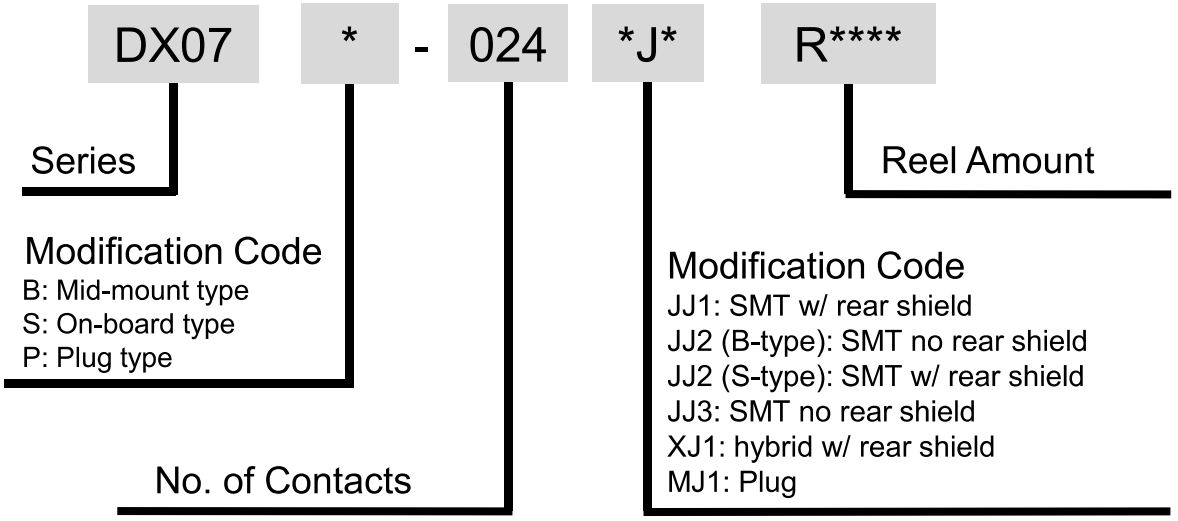
Materials and Finishes (continued)

Plug	
Component	**Material / Finish**
Contact	Copper Alloy w/ Contact area: Gold Flash plating over Palladium-Nickel over Nickel Solder tails: Gold Flash plating over Nickel
Ground Spring	Stainless Steel w/ Nickel Plating
Friction Lock	Stainless Steel
Shell	Stainless Steel w/ Nickel Plating
Insulator	Heat Resistant Resin / Black
Inner Insulator	Heat Resistant Resin / Black
Insulation Tape	Polyimide
Protection Cap	Heat Resistant Resin / Black



Ordering Information

Type		Part Number	Rear Shield	SJ Drawing
Plug		DX07P024MJ1R1500	-	**SJ115803** (Individual Connector)
				SJ115804 (Reeled Product)
Receptacles	Mid-mount type	DX07B024JJ1R1500	Yes	**SJ115850** (Individual Connector)
				SJ115851 (Reeled Product)
		DX07B024JJ2R1500	No	**SJ115996** (Individual Connector)
				SJ115997 (Reeled Product)
		DX07B024XJ1R1300	Yes	**SJ116121** (Individual Connector)
				SJ116122 (Reeled Product)
	On-board type	DX07S024JJ2R1300	Yes	**SJ115946** (Individual Connector)
				SJ115947 (Reeled Product)
		DX07S024JJ3R1300	No	**SJ115994** (Individual Connector)
				SJ115995 (Reeled Product)
		DX07S024XJ1R1100	Yes	**SJ116123** (Individual Connector)
				SJ116124 (Reeled Product)



Summary

- USB 3.1 high speed signaling supported
- Mid-mount and On-board type receptacles available
- User-friendly – Reversible insertion
- Optional rear shell
- Friction lock equipped
- Enhanced EMI performance
- Power delivery supported (3A/5A)

Technology to Inspire Innovation

JAE