USB Type-C Connectors and Cables

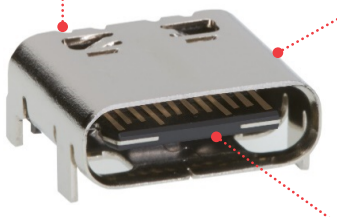
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The compact USB Type-C Connectors and Cables expanded family supports up to 10 Gbps speeds and offers robust, reliable connectivity in IoT, wearable devices and other high-speed data I/O applications

Features and Advantages

Supports 5.0A power in plugs and receptacles
Reduces battery-charging time by 64% versus micro-USB 2.0's current rating of 1.8A

High-temperature nylon insert-mold receptacle housing
Increases connector strength to reduce potential shorting between mid-plate and terminals

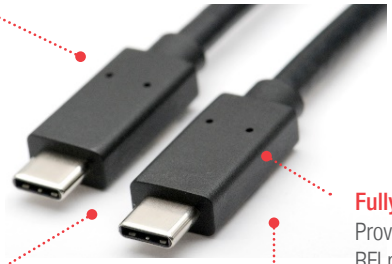


USB Type-C Receptacle

Mid-plate connector "tongue" design in receptacle
Ensures high reliability while preventing damage from connector mishandling

10,000 mating cycles
Delivers high durability

Up to 100W (20V/5.0A) delivery
Suitable for high-power applications



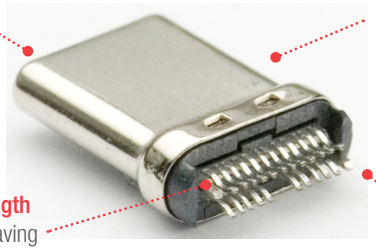
Fully shielded
Provides EMI/RFI protection

Up to 10 Gbps data speed
Ideal for high-speed network applications

USB Cable

Single-piece metal shell on cable plug
Provides easy identification and differentiation against non-Type-C USB cables

High normal force terminal design on plug
Increases connector strength to reduce potential shorting between mid-plate and terminals



Short mating length
Provides space-saving and design flexibility

USB Type-C Plug

Polyester film between plug housing and shell
Prevents potential electrical shorting during mating

Supports 4K resolution display
Delivers high-quality display

Availability of different cable options meeting USB 2.0 and 3.1 speeds
Suits a variety of user-application requirements

Applications

Consumer
- Electronic watches
- Smartphones/Wireless chargers
- Power banks
- PCs/Laptops
- Televisions
- Video games
- Graphic cards

Aviation
- In-flight entertainment systems

Industrial and Commercial
- Identity door-locking systems
- Oscilloscopes
- Air purification systems
- Projectors
- Point-of-sale registers
- ATM

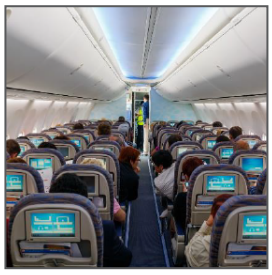
Medical
- Glucometers
- Electronic inhalers

Automotive
- Car infotainment
- Connected Home

Smart home systems



Electronic Watches



In-Flight Entertainment Systems

USB Type-C Connectors and Cables

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Specifications

REFERENCE INFORMATION

Packaging: Tape and reel
UL File No.: NA
CSA File No.: NA
Mates With: 68798 series with 105450/105454/105455/201267/202410
Terminal Used: Copper Alloy
Designed In: Millimeters
RoHS: Yes
Halogen Free: Yes

MECHANICAL

Contact Retention to Housing:
Insert molded type
Insertion Force to PCB: Zero Insertion Force
Mating Force: 5 to 20N
Unmating Force:
8 to 20N (1 to 30 cycles); 6 to 20N (after 10,000 insertion/extraction cycles)
Durability (min.): 10,000 cycles

ELECTRICAL

Voltage (max.): 30V (DC/AC) max.
Current (max.):
5.0A (105450, 105454, 105455, 201267, 105444)
6.0A (202410)
Contact Resistance (max.):
40 milliohms (initial); 50 milliohms after test (105450, 105454, 105455, 201267, 105444)
40 milliohms (initial); 10 milliohms after test (202410)
Dielectric Withstanding Voltage:
100V AC (105450, 105454, 105455, 201267, 105444) or 500V AC (202410)
Insulation Resistance (min.):
100 Megohms (105450, 105454, 105455, 201267, 105444)
1000 Megohms (initial); 100 Megohms after environmental test (202410)

PHYSICAL

Housing:
Receptacle: High-temperature Nylon (105450, 105454, 105455, 201267), PA46 (202410)
Plug: LCP
Contact: Copper Alloy
Plating:
Contact Area —
Receptacle: Gold Flash over 0.75micron min. Palladium/Nickel (Pd/Ni) (105450, 105454, 105455) or 0.75micron min. Gold (Au) (201267/202410)
Plug: 0.76micron min. Gold (Au)
Solder Tail Area —
Receptacle: 0.05micron Gold (Au) min. (105450, 105454, 105455, 201267) or 0.025micron min. Gold (Au) (202410)
Plug: 3.05micron min. Matte Tin (Sn)
Underplating —
2micron min. Nickel (Ni) overall (105450, 105454, 201267, 202410) or 1.5micron min. Nickel (Ni) overall (105455)
PCB Thickness:
Receptacle: 0.60 to 0.80mm (105450, 105454, 105455, 202410); 1.60mm (201267)
Plug: 0.80mm
Operating Temperature:
-30 to 85°C (105450, 105454, 105455, 201267, 105444)
-40 to 85°C (202410)

Ordering Information

Series No.	Product	Design	Product Configuration	USB Standard / Data Speed
105450	Receptacle	Standard	Top-mount, Right-Angle	USB 3.1 Gen 2 speed
105455			Mid-mount, Right-Angle, Single Shell	USB 3.1 Gen 2 speed
201267			Top-mount, Right-Angle, 0.35mm Stand-off	USB 3.1 Gen 2 speed
202410		Waterproof version	Mid-mount, Right-Angle	USB 3.1 Gen 2 speed
68798	Cable	Standard	C-to-A and C-to-C	USB 2.0, 3.0 and 3.1
203800			C-to-A	USB 2.0 and 3.0

www.molex.com/link/usbproducts.html

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