USB Type-C Connectors and Cables

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

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

- **Supports 4K resolution display**
  Delivers high-quality display

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

- **10,000 mating cycles**
  Delivers high durability

- **Fully shielded**
  Provides EMI/RFI protection

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

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

- **10,000 mating cycles**
  Delivers high durability

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

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

- **4-stopper design**
  Prevents plug over insertion that may cause separation between shell and/or solder tail

- **4 tabs in the shell and 2 tabs in the middle plate**
  Delivers robust PCB mount design

- **Flexible height and tooling design**
  Meets customers’ requirements regarding height options with minimized cost and changeover time

Applications

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

**Aviation**
- In-flight entertainment systems

**Medical**
- Glucometers
- Electronic inhalers

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

**Automotive**
- Car infotainment
- Connected Home

**Smart home systems**

**Electronic Watches**

**In-Flight Entertainment Systems**
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
204711 series with 105444/68798/203800
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 cycles)
Durability (min.): 10,000 cycles

ELECTRICAL
Voltage (max.): 30V (DC/AC) max.
Current (max.):
5.0A (105450, 105454, 105455, 201267, 105444, 204711)
6.0A (202410)
Contact Resistance (max.):
40 milliohms (initial); 50 milliohms after test
(105450, 105454, 105455, 201267, 105444, 204711)
40 milliohms (initial); 10 milliohms after test
(202410)
Dielectric Withstanding Voltage:
100V AC (105450, 105454, 105455, 201267, 105444, 204711) or 500V AC (202410)
Insulation Resistance (min.):
100 Megohms (105450, 105454, 105455, 201267, 105444, 204711)
1000 Megohms (initial); 100 Megohms after environmental test (202410)

PHYSICAL
Housing:
Receptacle: High-temperature Nylon
(105450, 105454, 105455, 201267, 204711), PA46 (202410)
Plug: LCP
Contact: Copper Alloy
Plating:
Contact Area —
Receptacle: Gold Flash over 0.75micron min.
Palladium/Nickel (Pd/Ni) (105450, 105454, 204711, 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, 204711) 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, 204711)
PCB Thickness:
Receptacle: 0.60 to 0.80mm (105450, 105454, 105455, 202410, 204711); 1.60mm (201267)
Plug: 0.80mm
Operating Temperature:
-30 to 85°C
(105450, 105454, 105455, 201267, 105444, 204711)
-40 to 85°C (202410)

Ordering Information

<table>
<thead>
<tr>
<th>Series No.</th>
<th>Product</th>
<th>Design</th>
<th>Product Configuration</th>
<th>USB Standard / Data Speed</th>
</tr>
</thead>
<tbody>
<tr>
<td>105450</td>
<td>Receptacle</td>
<td>Standard</td>
<td>Top-mount, Right-Angle</td>
<td>USB 3.1 Gen 2 speed</td>
</tr>
<tr>
<td>105454</td>
<td>Receptacle</td>
<td>Standard</td>
<td>Mid-mount, Right-Angle, Single Shell</td>
<td>USB 3.1 Gen 2 speed</td>
</tr>
<tr>
<td>201267</td>
<td>Receptacle</td>
<td>Top-mount, Right-Angle, 0.35mm Stand-off</td>
<td>USB 3.1 Gen 2 speed</td>
<td></td>
</tr>
<tr>
<td>202410</td>
<td>Waterproof version</td>
<td>Mid-mount, Right-Angle</td>
<td>USB 3.1 Gen 2 speed</td>
<td></td>
</tr>
<tr>
<td>204711</td>
<td>Receptacle</td>
<td>Standard</td>
<td>SMT, Vertical</td>
<td>USB 3.1 Gen 2 speed</td>
</tr>
<tr>
<td>68798</td>
<td>Cable</td>
<td>Standard</td>
<td>C-to-A and C-to-C</td>
<td>USB 2.0, 3.0 and 3.1</td>
</tr>
<tr>
<td>203800</td>
<td></td>
<td></td>
<td>C-to-A</td>
<td>USB 2.0 and 3.0</td>
</tr>
</tbody>
</table>

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