0.25mm Pitch FPC Connectors
Right Angle, SMT, ZIF

The 0.25mm Pitch FPC Connector family features a range of sizes and styles to accommodate other PCB components and add space savings

Features and Benefits

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compact design</td>
<td>Overall space savings for tight packaging applications</td>
</tr>
<tr>
<td>Spring feature on odd and even contacts</td>
<td>Higher contact and cable retention reliability, and protection to FPC cable pads</td>
</tr>
<tr>
<td>Actuator-to-housing friction lock</td>
<td>Increased mating retention and an audible “click” when mating</td>
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<tr>
<td>Space underneath FPC (503320 only)</td>
<td>Provides customers more PCB space to place components</td>
</tr>
<tr>
<td>Solder tabs under housing and footprint compatible</td>
<td>Space savings, and enables three different connector heights with same footprint design</td>
</tr>
<tr>
<td>Extended actuator design (except 502078-**10)</td>
<td>Easier handling, especially for larger circuit sizes</td>
</tr>
<tr>
<td>Zero Insertion Force (ZIF) contact design</td>
<td>Smooth cable insertion and extraction</td>
</tr>
</tbody>
</table>

Applications

Consumer
- Smart Phone / Mobile Phone
- Tablet PC
- Digital Still Camera / Video Camera
- Wearable Device
- Medical Device
- Fingerprint / Voice Recognition
- Portable Navigation Equipment
- Portable Game
- Notebook PC
- UAV / Drone

Smart phones
Portable Medical Devices
Drone
0.25mm Pitch FPC Connectors
Right Angle, SMT, ZIF

Specifications

**REFERENCE INFORMATION**
Packaging: Embossed Tape
Use With: 0.20mm thick FFC/FPC
Designed In: Millimeters
RoHS: Yes
Low-Halogen Status: Low-Harogen

**ELECTRICAL**
Voltage (max.): 50V
Current (max.): 502078, 503300 - 0.2A
503320 - 0.3A
Contact Resistance:
502078, 503320
80 milliohms max. (Odd terminal)
50 milliohms max. (Even terminal)
503300
80 milliohms max. (Odd terminal)
60 milliohms max. (Even terminal)
Dielectric Withstanding Voltage: 150V AC
Insulation Resistance: 50 Megohm min.

**MECHANICAL**
Durability (min.): 10 mating cycles

**PHYSICAL**
Housing/Actuator
502078-**10: Thermoplastic resin
502078-**60/62, 503320, 503300: LCP
Contact
502078-**60/62, 503320: Copper Alloy
502078-**10, 503300: Phosphor Bronze
Plating:
Contact Area — Gold
Solder Tail Area — Gold
Underplating — Nickel
Nail — Tin
Operating Temperature
502078: -20 to +85°C
503320, 503300: -40 to +85°C

**ADDITIONAL PRODUCT FEATURES**

**Locking and Space Saving Features for 502078 and 503320**

- Actuator-to-housing friction lock provides secure cable retention
- Front solder tab (nail) under housing provides space savings and stability

**(Features apply to both 502078 and 503320)**

**PRODUCT FEATURES OF 503300**

1) Moving terminals provide superior contact and actuator reliability
2) Full ZIF design

Unique moving-terminal design provides secure FPC retention. Even if the FPC moves, contacts follow to provide secure electrical reliability. A robust actuator is designed to prevent drop-off.

**FPC insertion depth and contact position are the same as Molex’s other 0.25mm bottom-contact FPC series (502078 and 503320). Although the 503300 series is a top contact type, full ZIF functionality provides smooth cable insertion with nominally thick FPC.**

**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Order No.</th>
<th>Description</th>
<th>Circuit Sizes</th>
<th>Height (mm)</th>
<th>Width (mm)</th>
<th>Quantity (pieces/reel)</th>
</tr>
</thead>
<tbody>
<tr>
<td>502078-**10</td>
<td>1.00mm Height, Bottom Contact, Short Actuator</td>
<td>17, 21, 25, 33, 39, 51</td>
<td>1.00</td>
<td>2.75</td>
<td>3,000</td>
</tr>
<tr>
<td>502078-**60</td>
<td>1.00mm Height, Bottom Contact, Long Actuator</td>
<td>13, 17, 21, 25, 33, 37, 39, 51, 53, 61</td>
<td>2.98</td>
<td>3,000</td>
<td></td>
</tr>
<tr>
<td>502078-**62</td>
<td></td>
<td>45</td>
<td>1.65</td>
<td>2.98</td>
<td>3,000</td>
</tr>
<tr>
<td>503320-**60</td>
<td>1.62mm Height, Bottom Contact</td>
<td>25, 37, 41</td>
<td>1.20</td>
<td>3.20</td>
<td>3,000</td>
</tr>
<tr>
<td>503300-**10</td>
<td>1.20mm Height, Top Contact</td>
<td>21, 29, 31, 37, 41, 43, 53</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
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