Molex’s 0.20mm pitch FPC connector offers optimum space savings in height, width and length for mobile and other tight-packaging applications.

This 504070 series FPC connector includes a spring terminal design that provides more secure contact retention force. This is achieved by bottom terminals that move with the cable in case it is pulled up or down to assure that electrical contact is maintained between the cable pads and terminals. A dual-contact design can accept cable in the top or bottom position. This provides design flexibility to mate with the same connector or a different top-or bottom-mount type.

The 504070 series also includes clearance between the housing and solder tails to prevent flux intrusion, and low-halogen housing material to meet environmental requirements.

### Features and Benefits

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefit</th>
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</thead>
<tbody>
<tr>
<td>Ultra-fine-pitch, low profile, short length and narrow depth design</td>
<td>Offers greater space savings for tight-packaging applications</td>
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<tr>
<td>Dual-contact terminal design</td>
<td>Provides more design flexibility for PCB layout</td>
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<tr>
<td>BackFlip™ actuator</td>
<td>Ensures ease of use in tight mobile device designs</td>
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<tr>
<td>No prohibited pattern area under housing</td>
<td>Allows for no restrictions on PCB pattern design</td>
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<tr>
<td>Moving contact structure</td>
<td>Maintains secure electrical connection even if cable is pulled up or down</td>
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<tr>
<td>Clearance between housing and solder tails</td>
<td>Prevents flux wicking</td>
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</tbody>
</table>

### Markets and Applications

- Smart phone/mobile phone
- Tablet PC
- Digital still camera/video camera
- Portable navigation equipment
- Portable game
- Notebook PC
- Potable Player
- Digital Still Camera
- Smart Phone
- Notebook PC
- Tablet PC
Specifications

REFERENCE INFORMATION
Packaging: Embossed Tape
Use With: 0.20mm thick FPC
Designed in: Millimeters
RoHS: Compliant
Low Halogen: Yes

ELECTRICAL
Voltage (max.): 50V
Current (max.): 0.2A
Contact Resistance:
120 milliohm max (Odd circuits)
90 milliohm max (Even circuits)
Dielectric Withstanding Voltage: 250V AC for 1 minute
Insulation Resistance:
50 Megohm min.

PHYSICAL
Housing: LCP, Black, UL94 V-0
Actuator: PA, Grey, UL94 HB
Contact: Phosphor Bronze
Plating:
Contact Area — Gold
Solder Tail Area — Gold
Underplating — Nickel
PCB Thickness:
Operating Temperature:
-25 to +85°C

MECHANICAL
Durability (min.): 10 cycles

Dimensional Overview

Optimum combination of low profile, narrow depth and short length

3.00mm Depth

0.95mm (Actuator Closed)
1.43mm (Actuator Open)

Additional Product Features
Moving Terminal Design

Bottom contacts move when FPC cable inserted
Bottom contacts move to maintain secure electrical contact even if cable is pulled up or down

Ordering Information

<table>
<thead>
<tr>
<th>Series No.</th>
<th>Circuit Size</th>
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</thead>
<tbody>
<tr>
<td>504070-3991</td>
<td>39</td>
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<td>504070-5191</td>
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<tr>
<td>504070-6191</td>
<td>61</td>
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</table>

FPC Connector, 0.20mm Pitch, SMT, Dual Contact, 0.95mm Height, BackFlip™ Actuator, 3.00mm Depth

504070 Right Angle, SMT

www.molex.com/product/smt_ffc-fpc.html