



**Ideal for tight packaging applications, Molex's 0.20mm pitch front-flip style FPC connector offers an overall compact size for maximum space savings along with contact assurance and easy operation**

The 503419 series connector is the smallest pitch FPC connector that Molex has released for the general market. It is designed for tight-packaging applications such as smart phones, digital still cameras or Tablet PCs.

A key feature of this connector is its short length. When combined with a low profile and narrow width, it offers the smallest overall volume size of any 0.20mm pitch connector in the market today.

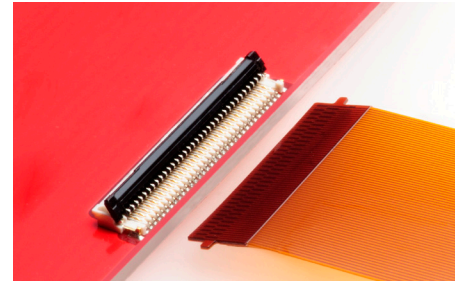
The 503419 connector incorporates some of the proven features of other Molex FPC connectors such as a robust Easy-On™ actuator for secure cable retention and easy cable access; movable contacts for more secure contact retention force; and FPC tabs that facilitate correct cable insertion for additional contact assurance.

Along with providing space savings versus competitive 0.20mm pitch versions, the 503419 FPC connector also provides significant space savings versus 0.30mm pitch versions. For instance, a 71 circuit version of the 503419 series offers more circuit functionality, plus about 15% space savings, versus a 51-circuit version with 0.30mm pitch and the same mated height.

Staggered odd and even contacts on both the front and rear side provide easy solderability, board placement and PCB routing. The connector is also RoHS compliant and low-halogen approved to meet environmental requirements.

**FPC Connector,  
0.20mm Pitch,  
SMT, Bottom  
Contact, 0.90mm  
Height, Front-Flip  
Actuator, 2.85mm  
Depth**

**503419 Right Angle**



**Features and Benefits**

Ultra-fine pitch, low profile, short length and narrow depth design	Delivers maximum space savings for tight-packaging applications
Moving contact structure	Maintains secure electrical connection even if the cable is pulled up or down
FPC tabs	Facilitate cable insertion for proper alignment and additional contact assurance
Extended length Easy-On™ actuator	Promotes secure cable retention and easy cable insertion and removal
Housing design and color visually highlight cable ear tabs	Ensures proper cable alignment
Zero Insertion Force (ZIF) design	Provides smooth and safe cable insertion

**Markets and Applications**

- > Mobile Devices
  - Smart Phones
  - Tablet PCs
  - Portable Audio
  - Portable Navigation Equipment
- > Consumer
  - Home Entertainment
  - Home Security
  - Home Office
  - Personal Care

- > Medical
  - Patient Monitoring
  - Therapeutic and Surgical



Tablet PC



Portable Audio Player



Smart Phone

## Specifications

### REFERENCE INFORMATION

Packaging: Embossed Tape and Reel  
 Use With: 0.20mm thick FPC cable  
 Designed In: Millimeters  
 RoHS: Yes  
 Halogen Free: Low-Halogen

### ELECTRICAL

Voltage (max.): 50V  
 Current (max.): 0.2A  
 Contact Resistance:  
 120 milliohms max. for odd terminals;  
 70 milliohms max. for even terminals  
 Dielectric Withstanding Voltage:  
 250V AC for 1 minute  
 Insulation Resistance:  
 50 Megaohms minimum

### MECHANICAL

Durability (min.): 10 cycles

### PHYSICAL

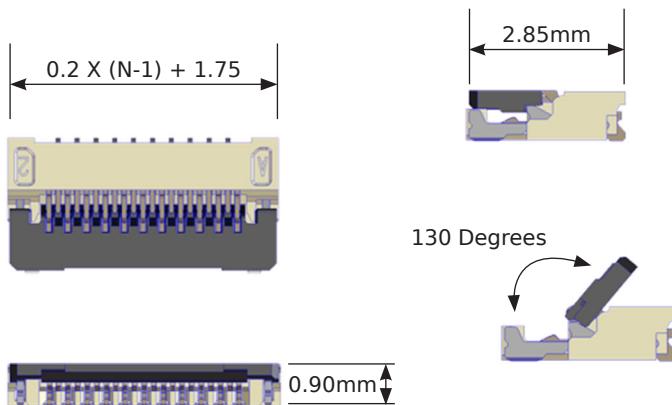
Housing:  
 Glass-filled LCP, UL 94V-0, white  
 Actuator: Glass-filled Polyamide,  
 UL 94-HB, black  
 Contact: Copper alloy  
 Plating:  
 Contact Area — Gold  
 Solder Tail Area — Gold  
 Underplating — Nickel  
 Operating Temperature:  
 -40 to +85°C

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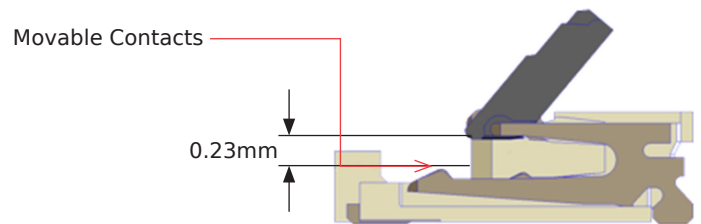
**503419** Right Angle

## Additional Product Features

### Dimensional Overview



### Movable Contacts and ZIF Features



The 503419 series includes movable contacts that provide more secure contact retention force. This is achieved by the terminals moving and maintaining contact with the cable pads in the event the cable is pulled up or down. The design also includes a gap that is wider than the thickness of the FPC cable to provide Zero Insertion Force (ZIF) performance for easier cable insertion.

## Ordering Information

Order No.	Circuits
503419-0710	71