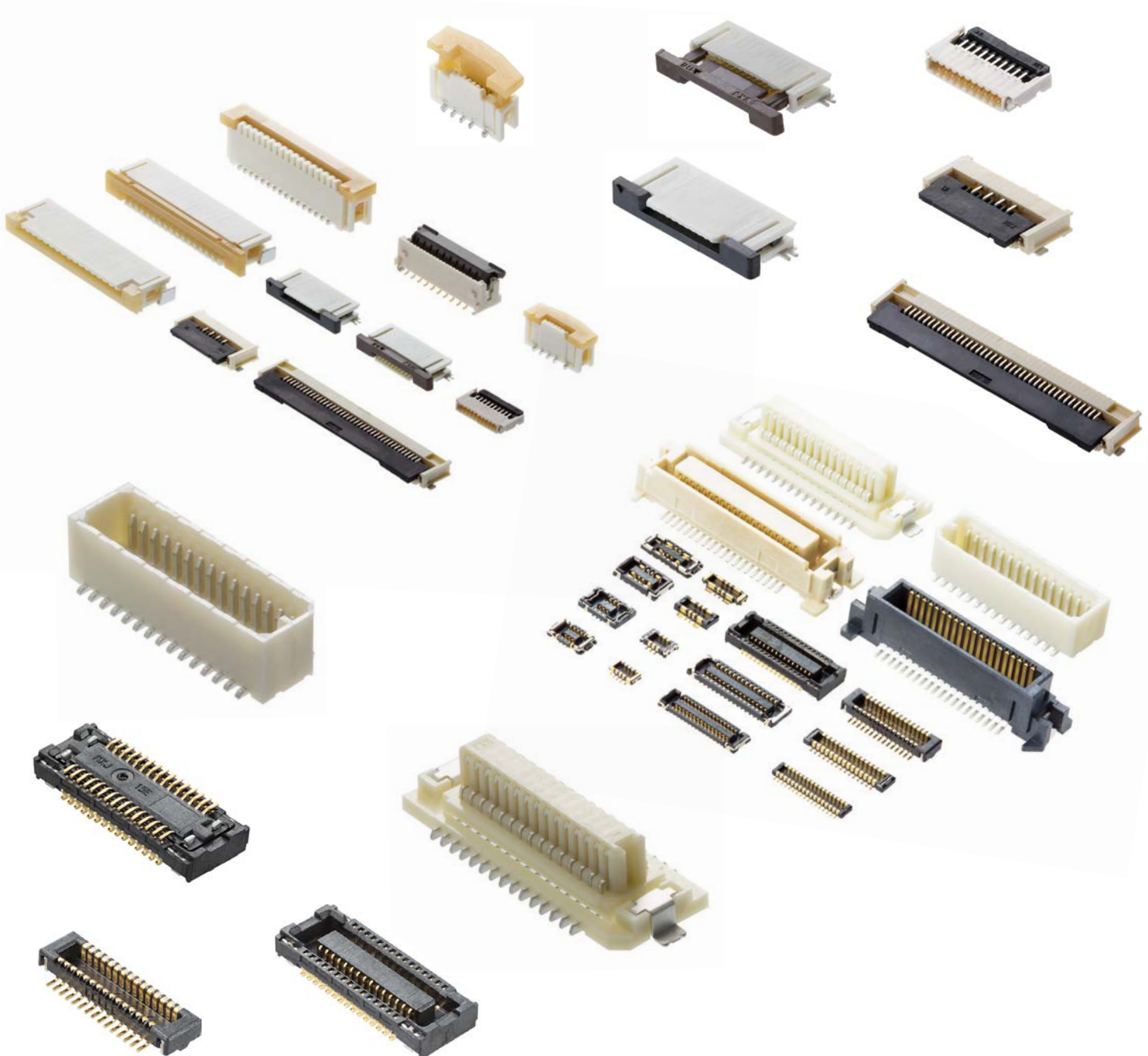


Micro Products Easy-On FFC/FPC Connectors and SlimStack Board-to-Board Connectors > Reference Guide



molex

Easy-On FFC/FPC Connectors Core Products

| | |
|----------------------------------------------------------------------------------------------------------|---------|
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SlimStack Board-to-Board Connectors Core Products

| | |
|----------------------------------------------------------------------------------------------------------|---------|
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| Product Schematic Diagrams and Application Examples of SlimStack Board-to-Board Connectors Core | 15 |
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| SlimStack Board-to-Board Connector 0.40 mm B8 Series | 24 • 25 |
| SlimStack Board-to-Board Connector 0.40 mm J-Bend Series | 26 • 27 |
| SlimStack Board-to-Board Connector 0.635 mm Series | 28 • 29 |
| SlimStack Board-to-Board Connector 0.80 mm Floating Series | 30 • 31 |



Easy-On FFC/FPC Connectors Core Products

| Pitch (mm) | Orientation | Contact Position | Circuit Size | Series Number | Image | |
|------------|-------------|------------------|--------------|---------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| 0.50 | Right Angle | Dual | 4 to 32 | 503480 |  | |
| | | Bottom | 4 to 80 | 505110 |  | |
| | | Top | 4 to 20 | 52745 |  | |
| | | | 21 to 30 | 52435 | | |
| | | | 30 to 50 | 54104 | | |
| | | Bottom | 4 to 20 | 52746 |  | |
| | | | 21 to 30 | 52437 | | |
| | | | 30 to 50 | 54132 | | |
| | Vertical | | | 20 to 70 | 501951 |  |
| | | | | 6 to 42 | 52559 |  |
| 1.00 | Right Angle | Bottom | 4 to 30 | 200528 |  | |
| | | Top | 3 to 34 | 52207 |  | |
| | | Bottom | 4 to 30 | 52271 |  | |
| | Vertical | | | 5 to 30 | 52610 |  |

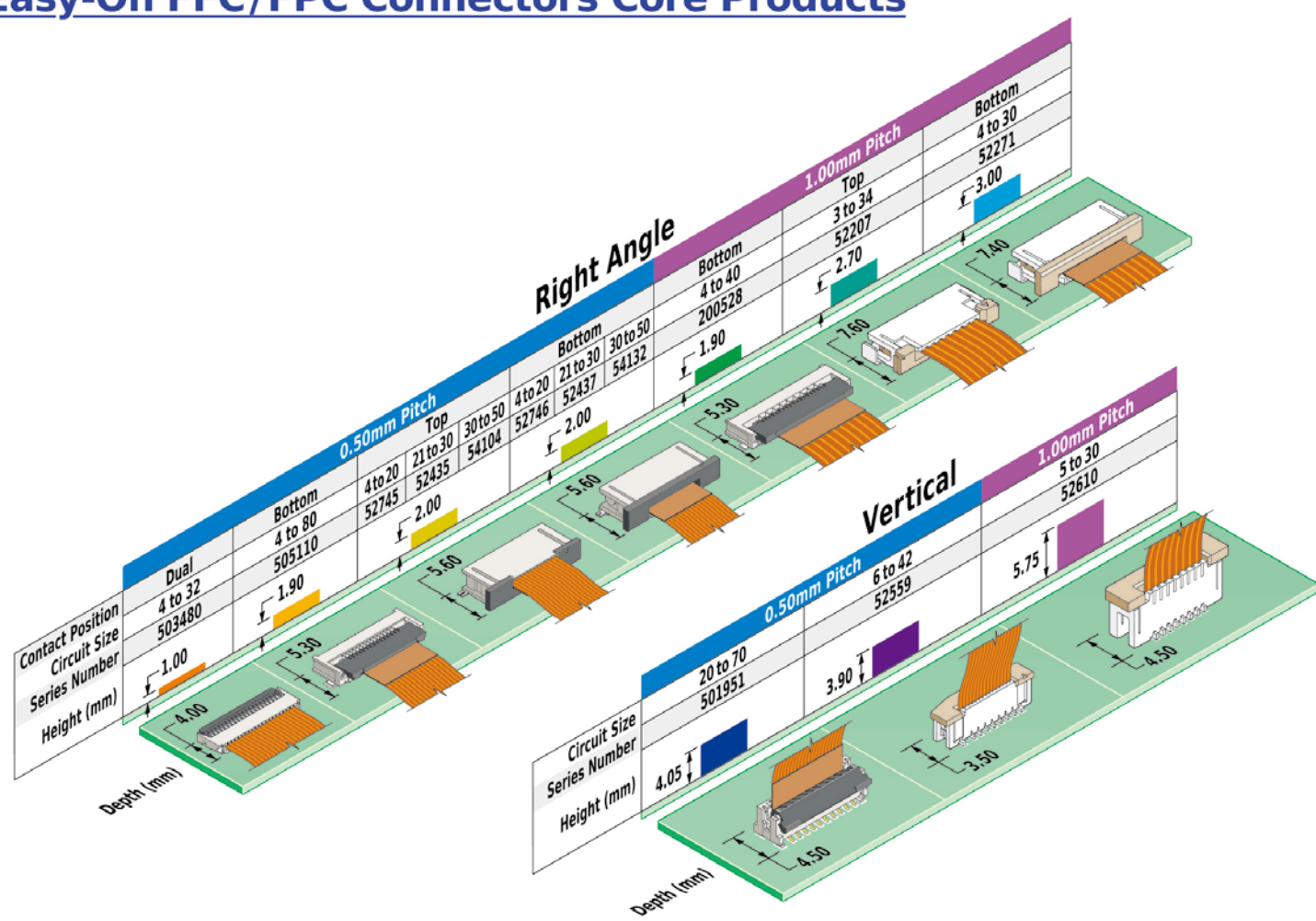
www.molex.com/link/easyon.html

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Order No. 987651-8061

Easy-On FFC/FPC Connectors Core Products



Application Examples



Automotive infotainment



Home appliances



Medical devices



POS terminals



IoT devices



Servers

Easy-On FFC/FPC Connectors, 0.50mm Pitch, FBH1 Series

Product 503480

molex

The Easy-On FFC/FPC Connectors, 0.50mm Pitch, FBH1 Series, with a low profile and user-friendly features, are ideal for consumer or commercial market applications of any design layout

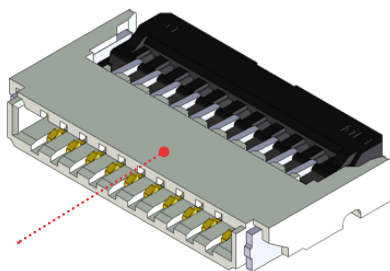


503480-00

Features and Advantages

Back Flip actuator

Eases cable insertion and allows for a high upward pull force



Low profile height of 1.00mm and width of 4.00mm

Offers space savings

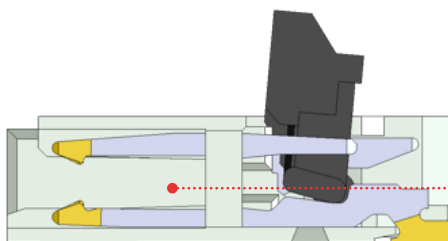
Actuator rotation

Rotates 94° for easy operation and cable access



Dual contact terminal

Delivers secure connectivity



Applications

Consumer

- POS terminals
- Game machines
- Digital still cameras
- Digital video cameras
- Car navigation systems
- Drones
- Consumer displays



POS



Drone



Game Machine

Easy-On FFC/FPC Connectors, 0.50mm Pitch, FBH1 Series

Product 503480



Specifications

REFERENCE INFORMATION

Packaging: Embossed Tape and reel
Use With: FFC/FPC
Designed In: Millimeters
RoHS: Yes
Halogen Free: Low-Halogen

ELECTRICAL

Voltage (max.): 50V
Current (max.): 0.5A per circuit
Contact Resistance (max.): 100 milliohms
Dielectric Withstanding Voltage: 200V AC
Insulation Resistance (min.): 50 Megaohms

MECHANICAL

FFC/FPC Thickness: 0.30mm
Durability (min.): 10 cycles

PHYSICAL

Housing: LCP, UL 94V-0, Natural
Actuator: PA, UL 94V-0, Black
Contact: Copper Alloy
Plating:
Contact Area — Gold
Solder Tail Area — Gold
Underplating — Nickel
Operating Temperature: -40 to +85°C

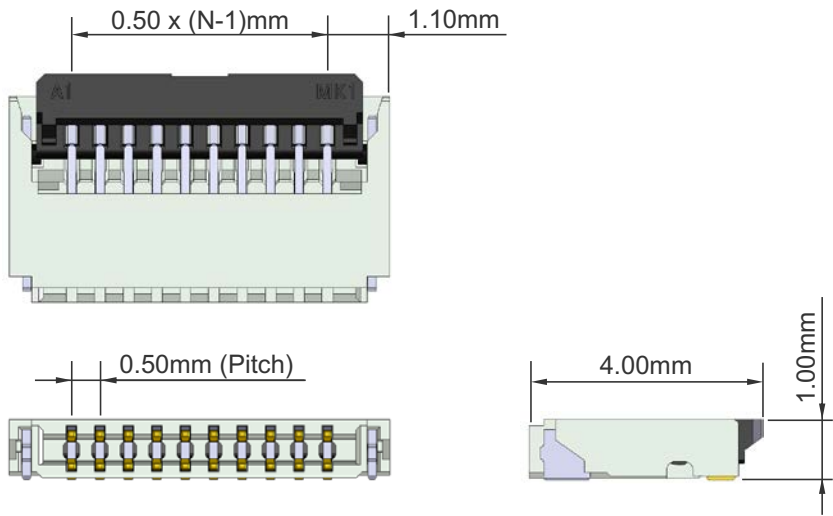
CIRCUIT SIZES

4, 5, 6, 8, 10, 12, 14, 16, 17, 18
20, 22, 24, 26, 30, 32, 36, 38, 40

Dimensions

Refer to molex.com for detail dimension

N = Circuit size



Ordering Information

| Series No. | Pitch | Orientation | Contact Position | Circuits | Operating Temperature | Plating |
|--------------|--------|-------------|------------------|----------|-----------------------|---------|
| 503480-**-00 | 0.50mm | Right-Angle | Dual | 4 to 40 | -40 to +85°C | Gold |

Replace ** with circuit size

www.molex.com/link/easyon.html

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Easy-On FFC/FPC Connector, 0.50/1.00mm pitch, FD19 Series

Product 505110 / 200528

molex

Versatile dual-contact FD19 Series FFC/FPC Connectors meet temperature requirements up to 125°C and come in a wide range of circuit sizes for maximum design flexibility across multiple markets and applications

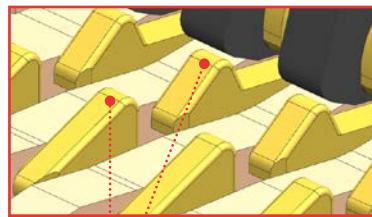


505110-****
(0.50mm pitch)



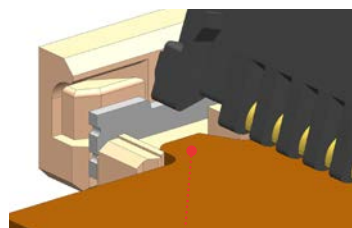
200528-****
(1.00mm pitch)

Features and Advantages



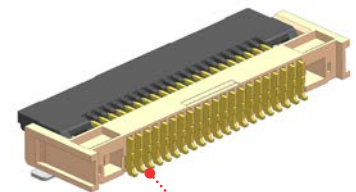
Dual contact

Delivers secure connectivity



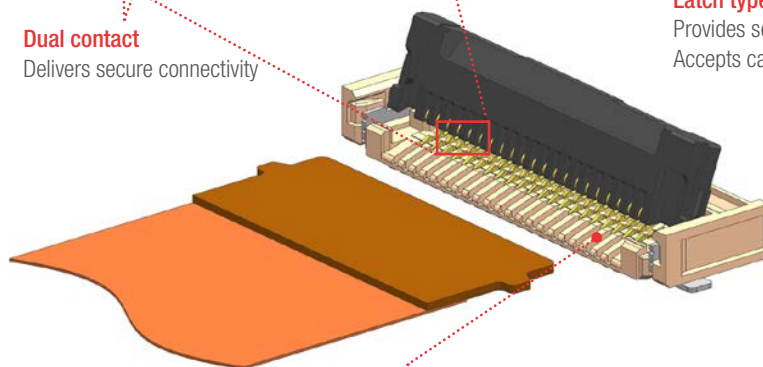
Latch type FPC

Provides secure cable retention.
Accepts cable with or without tabs



Nickel barrier

Eliminates the concern for solder and flux wicking

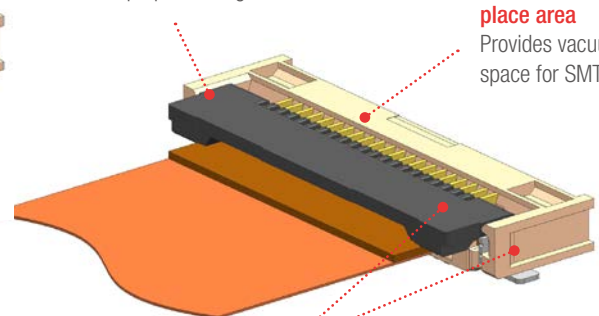


Wide frontage

Eases FFC/FPC insertion

Lock with clear, audible click

Ensures proper mating



Wide pick-and-place area

Provides vacuum space for SMT nozzle

Low-Halogen material

Meets environmental considerations

Applications

Automotive

- Car navigation
- Instrument panels
- Car infotainment

Home Appliance

- Flat panel TVs
- Refrigerators
- Vacuuuming machines

Industrial

- UAV (drone)
- Robotics

Consumer

- Game units
- VR/AR
- Printers



Car Infotainment



Home Appliance



UAV (Drone)

Easy-On FFC/FPC Connector, 0.50/1.00mm pitch, FD19 Series

Product 505110 / 200528

molex

Specifications

REFERENCE INFORMATION

Packaging: Embossed tape and reel
Use with: FFC/FPC
Designed in: Millimeters
RoHS: Yes
Halogen free: Low-Halogen

ELECTRICAL

Voltage (max.): 50V
Current (max.): 0.5A per circuit
Contact Resistance (max.): 40 milliohms
Dielectric Withstanding Voltage: 125V AC
Insulation Resistance (min.): 50 Megohms

MECHANICAL

FFC/FPC Thickness: 0.30mm
Durability (max.): 20 cycles

PHYSICAL

Housing: LCP, UL 94V-0, Beige
Actuator: PA, UL 94V-0, Black
Plating:
Contact Area — Gold
Solder Tail Area — Gold
Underplating — Nickel
Operating Temperature: -40 to +105°C
or -40 to +125°C

CIRCUIT SIZE (0.50MM PITCH)

4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18,
19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44,
45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57,
58, 59, 60, 61, 64, 68, 70, 80

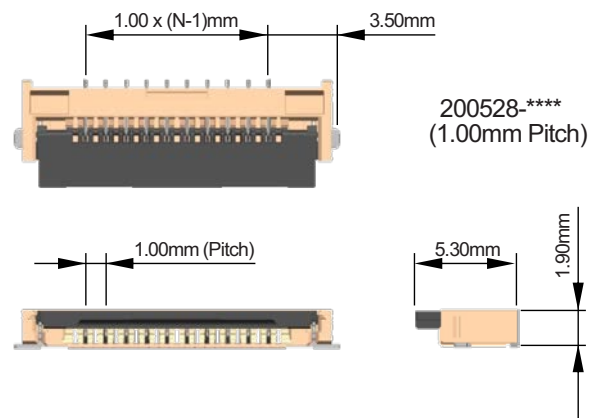
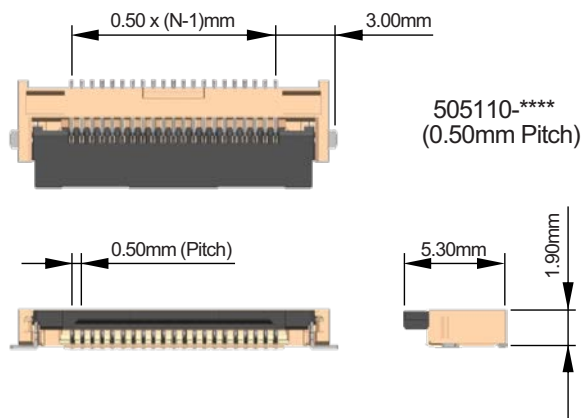
CIRCUIT SIZE (1.00MM PITCH)

4 to 30

Dimensions

Refer to molex.com for detail dimension

N = Circuit size



Ordering Information

| Series No. | Pitch (mm) | Orientation | Contact Position | Circuits | Operating Temperature | Plating |
|-------------|------------|-------------|------------------|----------|-----------------------|---------|
| 505110-**92 | 0.50 | Right-Angle | Bottom | 4 to 19 | -40 to +105°C | Gold |
| 505110-**91 | | | | 20 to 80 | -40 to +105°C | |
| 505110-**97 | | | | 4 to 19 | -40 to +125°C | |
| 505110-**96 | | | | 20 to 80 | -40 to +125°C | |
| 200528-0**0 | 1.00 | | | 4 to 30 | -40 to +105°C | |
| 200528-0**1 | | | | 4 to 30 | -40 to +125°C | |

Replace with ** for Circuit size.

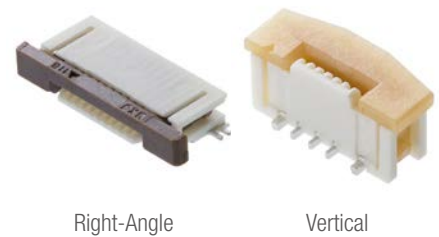
www.molex.com/link/easyon.html

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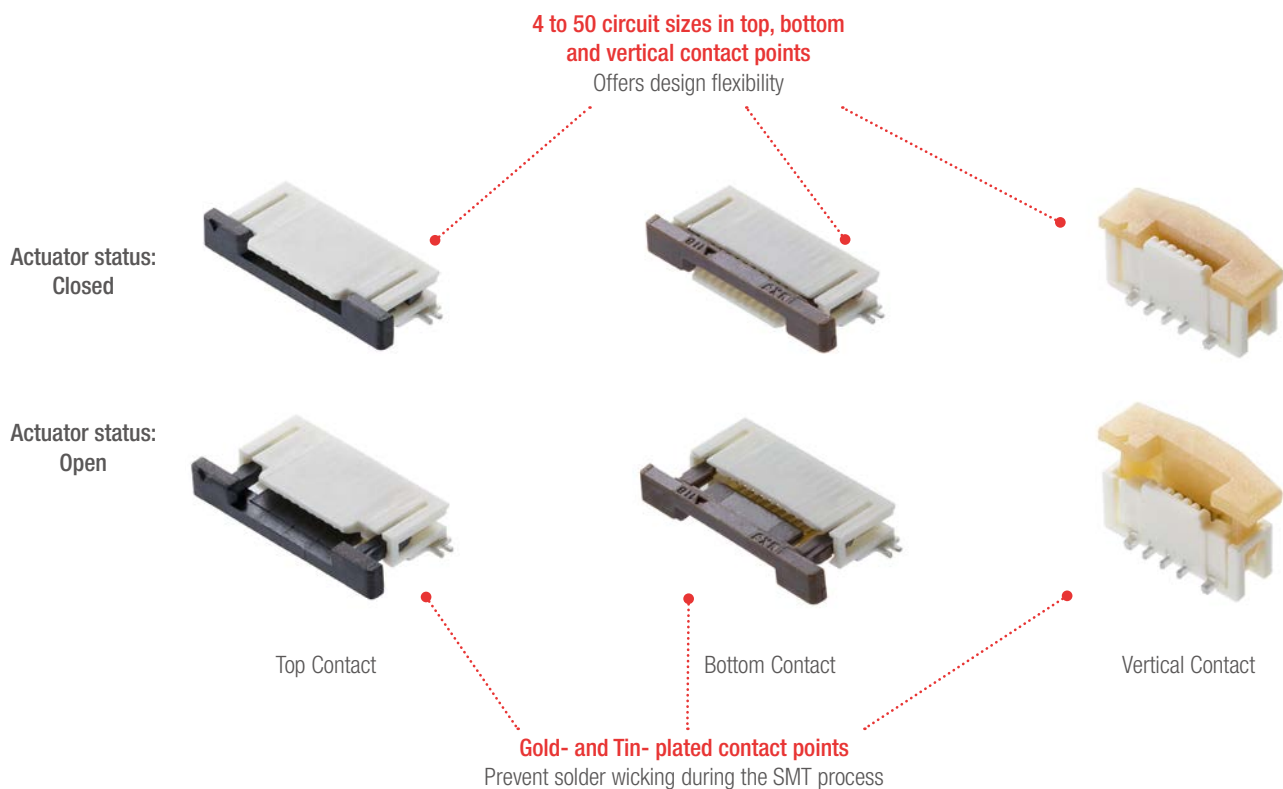
Easy-On FFC/FPC Connectors, 0.50/1.00mm Pitch, Slider Series

molex

The Easy-On FFC/FPC Connectors, 0.50/1.00mm Pitch, Slider Series, with their market proven 'Slider' locking mechanism and wide circuit options in top, bottom and vertical contact variations, offer design flexibility for FFC/FPC cable routing applications



Features and Advantages



Applications

Industry

- IoT interconnection devices
- Smart speakers
- UAVs (Drones)
- FA robots
- Security cameras

Mobile

- POS terminals

Consumers

- Home appliances

Medical

- Patient monitoring
- MRI/CT machines
- Disposable inspection devices



POS terminal



Medical



IoT device

Easy-On FFC/FPC Connectors, 0.50/1.00mm Pitch, Slider Series

molex

Specifications

REFERENCE INFORMATION

Packaging: Embossed Tape and Reel
Use With: FFC/FPC
Designed In: Millimeters
RoHS: Yes

ELECTRICAL

Voltage (max.): 50V
Current (max.): 0.5A per circuit
Contact Resistance (max.): 20 milliohms
Dielectric Withstanding Voltage: 250V AC
Insulation Resistance (min.): 50 Megohms

MECHANICAL

FFC/FPC Thickness: 0.30mm
Durability (max.): 20 cycles

PHYSICAL

Housing: LCP, UL 94V-0
Actuator: PA, UL 94V-0
Contact: Copper Alloy
Plating:
Contact Area — Gold
Solder Tail Area — Gold
Underplating — Nickel
Fitting Nail: Copper Alloy, Tin over Nickel plating
Operating Temperature: -40 to +85°C

CIRCUIT SIZES

4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18,
19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44,
45, 50

Dimensions

Refer to molex.com for detail dimension

Ordering Information

| Series No. | Pitch (mm) | Orientation | Contact Position | Circuits | Operating Temperature | Plating |
|------------|------------|-------------|------------------|----------|-----------------------|---------|
| 52745-**33 | 0.50 | Right-Angle | Top | 4 to 20 | -40 to +85°C | New Tin |
| 52745-**97 | 0.50 | Right-Angle | Top | 4 to 20 | -40 to +85°C | Gold |
| 52746-**33 | 0.50 | Right-Angle | Bottom | 4 to 20 | -40 to +85°C | New Tin |
| 52746-**71 | 0.50 | Right-Angle | Bottom | 4 to 20 | -40 to +85°C | Gold |
| 52435-**33 | 0.50 | Right-Angle | Top | 21 to 30 | -40 to +85°C | New Tin |
| 52435-**71 | 0.50 | Right-Angle | Top | 21 to 30 | -40 to +85°C | Gold |
| 52437-**33 | 0.50 | Right-Angle | Bottom | 21 to 30 | -40 to +85°C | New Tin |
| 52437-**71 | 0.50 | Right-Angle | Bottom | 21 to 30 | -40 to +85°C | Gold |
| 54104-**33 | 0.50 | Right-Angle | Top | 30 to 50 | -40 to +85°C | New Tin |
| 54104-**31 | 0.50 | Right-Angle | Top | 30 to 50 | -40 to +85°C | Gold |
| 54132-**33 | 0.50 | Right-Angle | Bottom | 30 to 50 | -40 to +85°C | New Tin |
| 54132-**62 | 0.50 | Right-Angle | Bottom | 30 to 50 | -40 to +85°C | Gold |
| 52559-**34 | 0.50 | Vertical | Vertical | 6 to 42 | -40 to +85°C | New Tin |
| 52559-**52 | 0.50 | Vertical | Vertical | 6 to 42 | -40 to +85°C | Gold |
| 52207-**33 | 1.00 | Right-Angle | Top | 3 to 34 | -40 to +85°C | New Tin |
| 52207-**60 | 1.00 | Right-Angle | Top | 3 to 34 | -40 to +85°C | Gold |
| 52271-**79 | 1.00 | Right-Angle | Bottom | 4 to 30 | -40 to +85°C | New Tin |
| 52271-**69 | 1.00 | Right-Angle | Bottom | 4 to 30 | -40 to +85°C | Gold |
| 52610-**33 | 1.00 | Vertical | Vertical | 5 to 30 | -40 to +85°C | New Tin |
| 52610-**72 | 1.00 | Vertical | Vertical | 5 to 30 | -40 to +85°C | Gold |

Replace ** with circuit size

www.molex.com/link/easyon.html

Easy-On FFC/FPC Connector, 0.50mm pitch, V-Flip Series

Product 501951

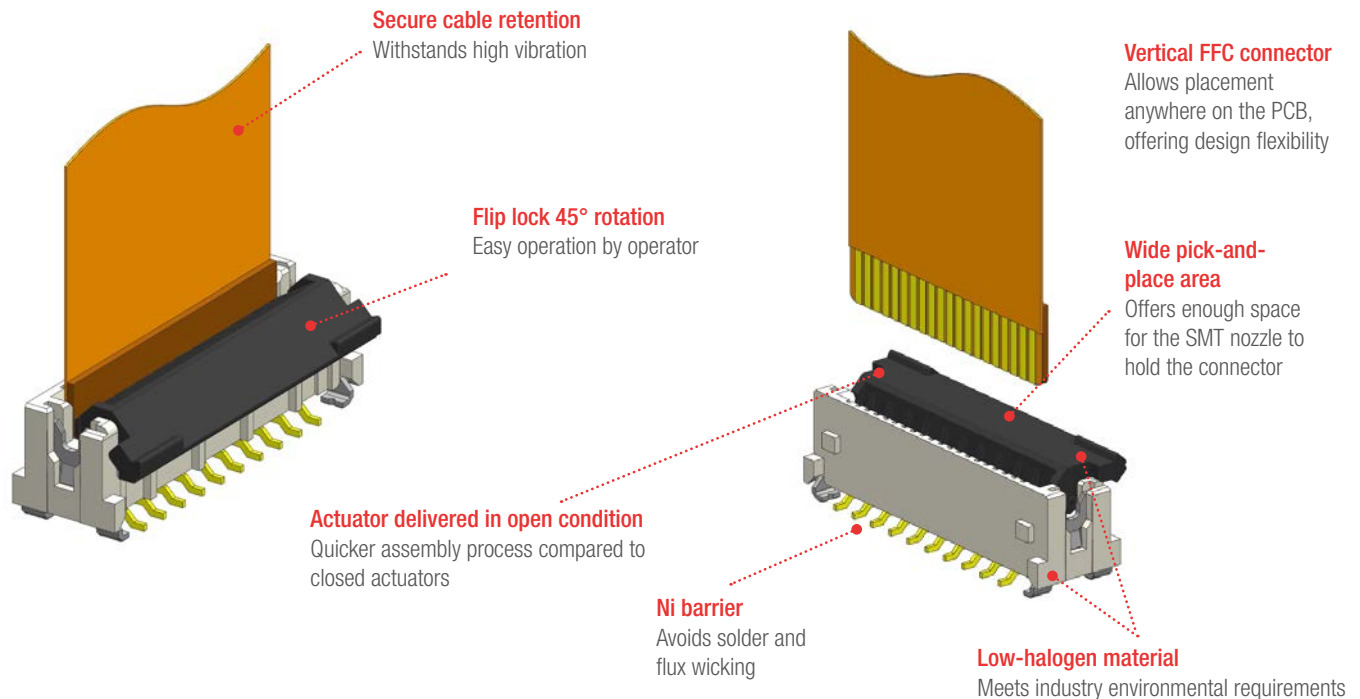
molex

Vertical Flip Connectors facilitate multiple SMT on PCB, and feature 4 to 70 circuit sizes, wide operating temperature of up to 125°C and a flip lock for secure locking

Features and Advantages



501951-****



Applications

Automotive

- Car navigation
- Car infotainment

Office Equipment

- Printer

Consumer

- Home appliances
- Flat TVs

Industry

- UAVs (drones)
- IoT interconnection devices

Datacom

- Servers

Medical

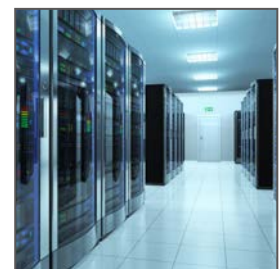
- Patient-monitoring systems



Car Infotainment



Office Equipment



Servers

Easy-On FFC/FPC Connector, 0.50mm pitch, V-Flip Series

Product 501951



Specifications

REFERENCE INFORMATION

Packaging: Embossed Tape and Reel
Use With: FFC/FPC
Designed In: Millimeters
RoHS: Yes
Halogen Free: Low-Halogen

ELECTRICAL

Voltage (max.): 50V
Current (max.): 0.5A per circuit
Contact Resistance (max.): 40 milliohms
Dielectric Withstanding Voltage: 250V AC
Insulation Resistance (min.): 50 Megohms

MECHANICAL

FFC/FPC Thickness: 0.30mm
Durability (max.): 20 cycles

PHYSICAL

Housing: LCP, UL 94V-0, White
Actuator: PA, UL 94V-0, Black
Plating:
Contact Area — Gold
Solder Tail Area — Gold
Underplating — Nickel
Operating Temperature: -40 to +85°C or
-40 to +125°C

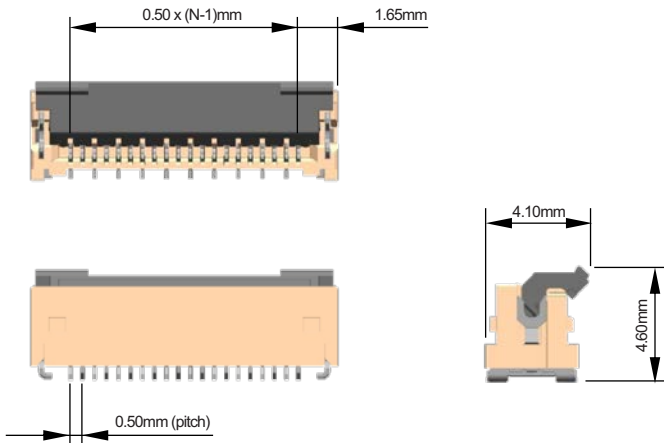
4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18,
19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31,
32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44,
45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57,
58, 59, 60, 70

Dimensions

Refer to molex.com for detail dimension

CIRCUIT SIZE

N = Circuit size



Ordering Information

| Series No. | Pitch (mm) | Orientation | Contact Position | Circuits | Operating Temperature | Plating |
|-------------|------------|-------------|------------------|----------|-----------------------|---------|
| 501951-**30 | 0.50 | Vertical | Vertical | 4 to 70 | -40 to +85°C | Gold |
| 501951-**50 | 0.50 | Vertical | Vertical | 4 to 70 | -40 to +125°C | Gold |

Replace ** with circuit size

SlimStack Board-to-Board Connectors Core Products

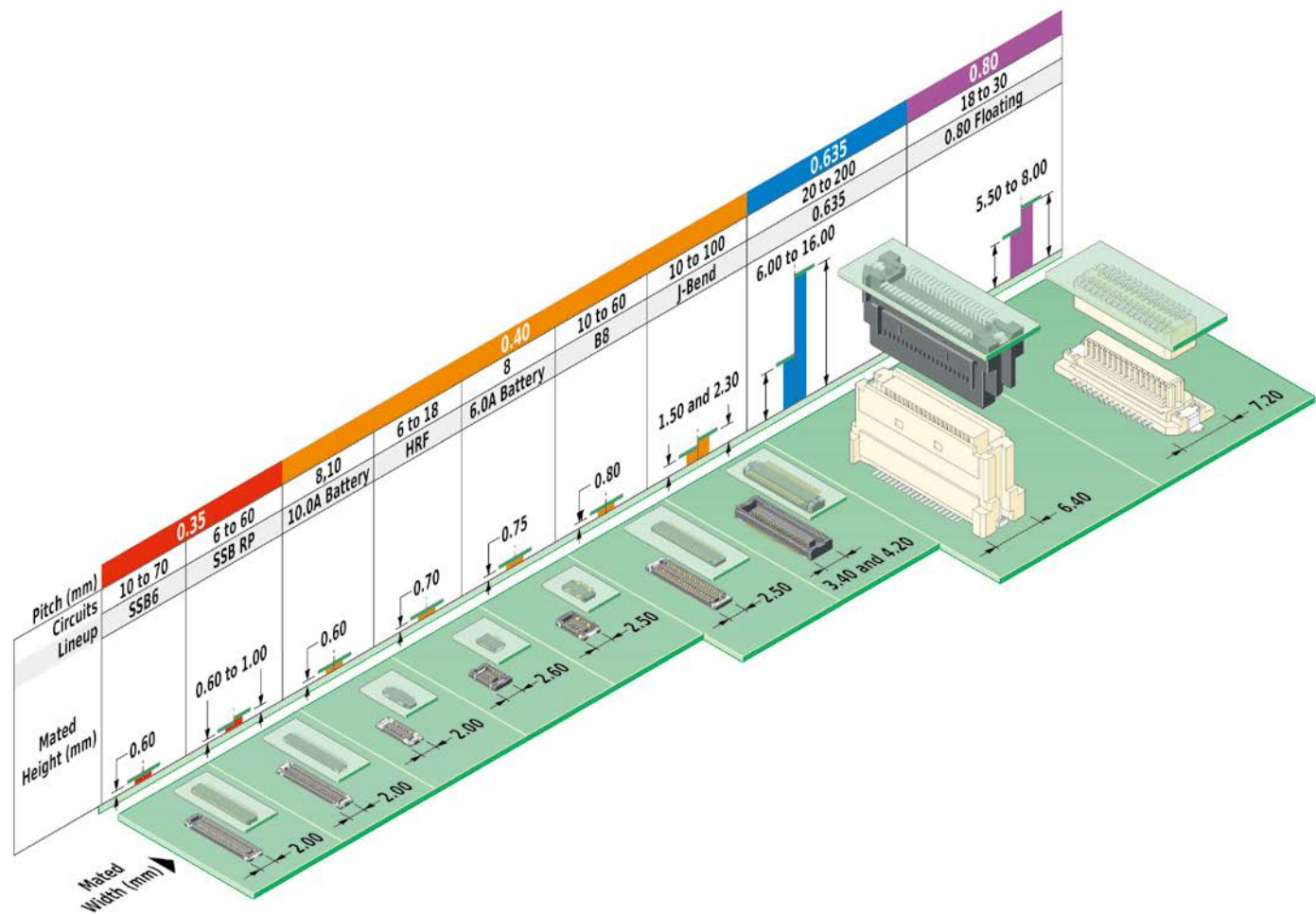
| Pitch (mm) | Mated Height (mm) | Mated Width (mm) | Circuits | Lineup | Series Number | | Image |
|------------|-------------------|------------------|-----------|---------------|---------------|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | | | | | Receptacle | Plug | |
| 0.35 | 0.60 | 2.00 | 10 to 70 | SSB6 | 504618 | 504622 |  |
| | 0.60 | 2.00 | 6 to 60 | SSB RP | 505066 | 505070 |  <small>*POWER SUPPLY</small>  |
| | 0.70 | | | | 505270 | | |
| | 0.80 | | | | 505413 | 505417 | |
| | 0.90 | | | | | | |
| | 1.00 | | | | | | |
| 0.40 | 0.60 | 2.00 | 8, 10 | 10.0A Battery | 505473 | 505476 |  <small>*POWER SUPPLY</small>  |
| | 0.70 | 2.60 | 6 to 18 | HRF | 503548 | 503552 |  |
| | 0.75 | 2.50 | 8 | 6.0A Battery | 505004 | 505006 |  <small>*POWER SUPPLY</small>  |
| | 0.80 | 2.50 | 10 to 60 | B8 | 503772 | 503776 |  |
| | | | | | 505550 | 505551 | |
| | 1.50 | 3.40 | 10 to 100 | J-Bend | 51338 | 55909 |  |
| | 1.80 | 4.20 | | | 500913 | | |
| | 2.00 | 3.40 | 12 to 80 | | 51338 | 501745 |  |
| | 2.30 | 4.20 | | | 500913 | | |
| | 0.635 | 6.00 | 6.40 | 20 to 200 | 0.635 | 52885 | 55091 |
| 7.00 | | 53625 | | | | | |
| 8.00 | | 53647 | | | | | |
| 9.00 | | 53649 | | | | | |
| 10.00 | | 53627 | | | | | |
| 12.00 | | 52901 | | | | 55091 |  |
| 13.00 | | | | | | 53625 | |
| 14.00 | | | | | | 53647 | |
| 15.00 | | | | | | 53649 | |
| 16.00 | | | | | | 53627 | |
| 0.80 | 5.50 | 7.20 | 18 to 30 | 0.80 Floating | 52588 | 53307 |  |
| | 7.00 | | | | | 53364 | |
| | 8.00 | | | | | 53353 | |

www.molex.com/link/slimstack.html

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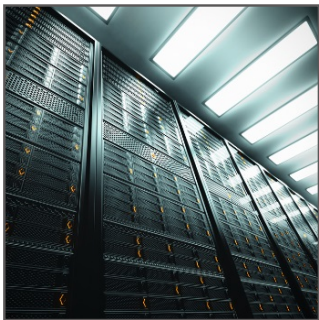
SlimStack Board-to-Board Connectors Core Products



Application Examples



Patient monitoring systems



Network servers



Office equipment



Portable navigation



Wearable devices



Automation machines

SlimStack Board-to-Board Connectors, 0.35mm Pitch, SSB6 Standard Series

molex

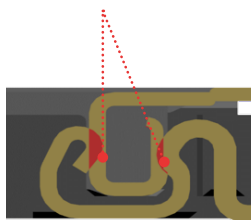
0.35mm pitch connectors deliver up to 3.0A power through protective metal covers and provide superior mating guidance and electrical contact assurance.

SSB6 Standard Series delivers design flexibility while meeting tight-packaging needs. As consumers continue to demand smaller devices, the need for microminiature designs grows. We can meet these low-profile needs with pitch sizes as small as 0.35mm, mated heights as low as 0.60mm and widths as narrow as 2.00mm.

Features and Advantages

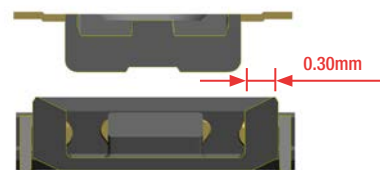
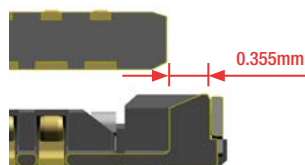
Dual-Contact Design

Provides secure reliability



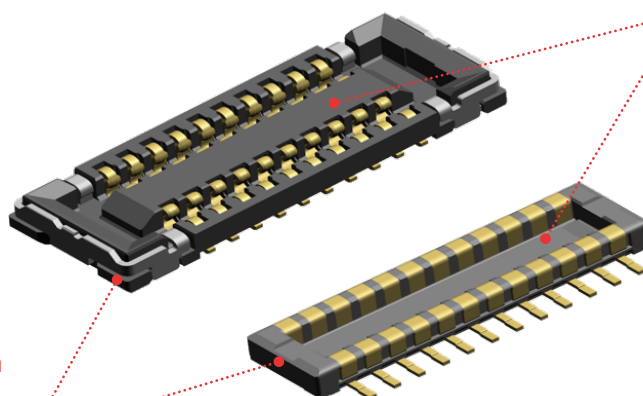
Wide Alignment Area

Provides easy and secure mating



Wide Pick-and-Place Area

Vacuum space for SMT nozzle



Low-Halogen

Best material selection for environmental considerations

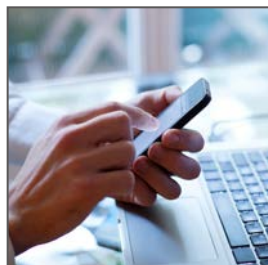
Applications

Mobile Devices

- Smartphones
- Tablet PCs
- Wearable Devices
- Portable Audio
- Portable Navigation Equipment

Medical Devices

- Patient Monitoring
- Therapeutic and Surgical



Smartphone



Wearable Watch



Patient Monitoring

SlimStack Board-to-Board Connectors, 0.35mm Pitch, SSB6 Standard Series



Specifications

REFERENCE INFORMATION

Packaging: Embossed Tape on Reel
Designed In: Millimeters
RoHS: Yes
Halogen Free: Low-Halogen

ELECTRICAL

Voltage (max.): 50V
Current (max.): 0.3A per circuit
Contact Resistance (max.): 80 milliohms
Dielectric Withstanding Voltage: 250V AC
Insulation Resistance (min.): 100 Megohms

MECHANICAL

Durability (max.): 30 cycles

PHYSICAL

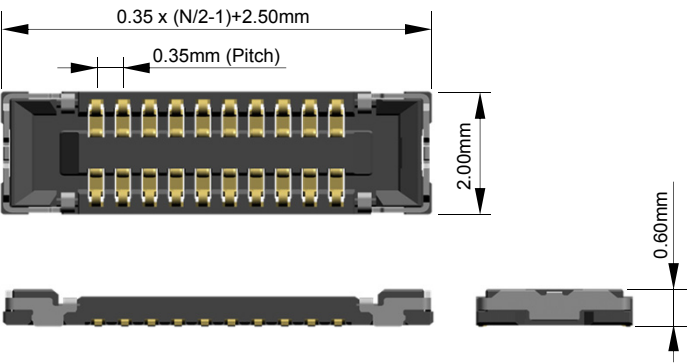
Housing: LCP, UL 94V-0, Black
Contact: Copper Alloy
Plating:
 Contact Area – Gold
 Solder Tail Area – Gold
 Underplating – Nickel
Operating Temperature: -40 to +85°C

Dimensions

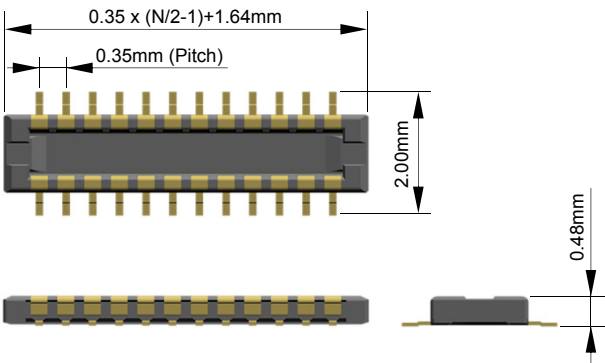
* Refer to drawing for detail dimension

N: Circuit Size

Receptacle



Plug



Ordering Information

| Order No. | | Mated Height (mm) | Mated Width (mm) | Circuits |
|-------------|-------------|-------------------|------------------|------------------------------------|
| Receptacle | Plug | | | |
| 504618-**12 | 504622-**12 | 0.60 | 2.00 | 10, 20, 24, 30, 34, 40, 50, 64, 70 |

** : Circuit Size

SlimStack Board-to-Board Connectors, 0.35mm Pitch, SSB RP Series

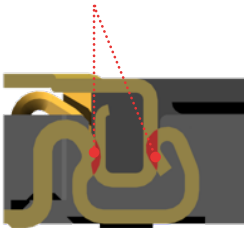


0.35mm pitch connectors deliver up to 3.0A power through protective metal covers and provide superior mating guidance and electrical contact assurance.

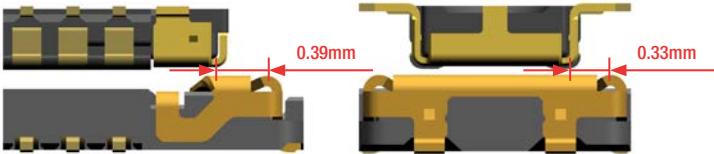
SSB RP Series delivers design flexibility while meeting tight-packaging needs with mated height variation, 0.60mm to 1.00mm, without having to redesign the PCB layout. As consumers continue to demand smaller devices, the need for microminiature designs grows.

Features and Advantages

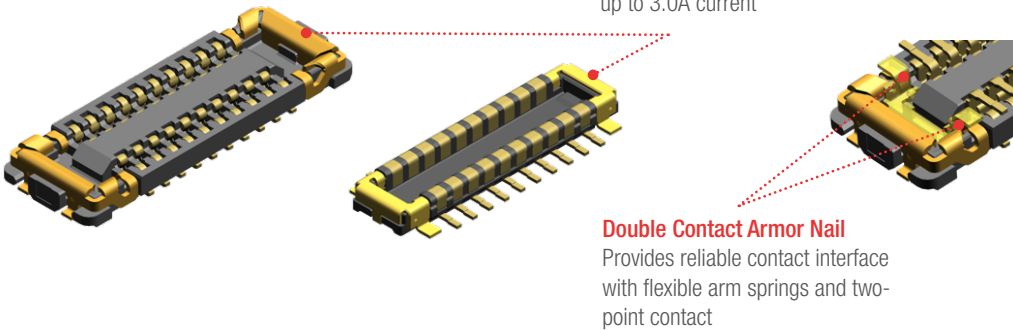
Dual-Contact Design
Provides secure reliability



Wide Alignment Area
Provides easy and secure mating



Metal Power Armor Nail Feature
Provides housing protection with up to 3.0A current



Customer can select stack height without having to redesign the PCB layout.

| Lineup Combination | | |
|--------------------|------------|--------|
| Mated Height (mm) | Receptacle | Plug |
| 0.60 | 505066 | 505070 |
| 0.70 | 505270 | |
| 0.80 | | 505413 |
| 0.90 | 505274 | |
| 1.00 | 505417 | |

Applications

- Mobile Devices**
 - Smartphones
 - Tablet PCs
 - Wearable Devices
 - Portable Audio
 - Portable Navigation Equipment

- Medical Devices**
 - Patient Monitoring
 - Therapeutic and Surgical



Smartphone



Wearable Watch



Patient Monitoring

SlimStack Board-to-Board Connectors, 0.35mm Pitch, SSB RP Series

molex

Specifications

REFERENCE INFORMATION

Packaging: Embossed Tape on Reel
Designed In: Millimeters
RoHS: Yes
Halogen Free: Low-Halogen

ELECTRICAL

Voltage (max.): 50V
Current (max.):
Signal Contact: 0.3A per circuit
Nail Contact: 3.0A per circuit
Contact Resistance (max.):
Signal Contact: 80 milliohms
Nail Contact: 30 milliohms
Dielectric Withstanding Voltage: 250V AC
Insulation Resistance (min.): 100 Megohms

MECHANICAL

Durability (max.): 30 cycles

PHYSICAL

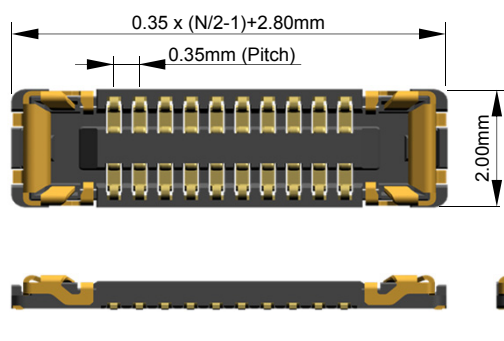
Housing: LCP, UL94V-0, Black
Contact: Copper Alloy
Plating:
Contact Area – Gold
Solder Tail Area – Gold
Underplating – Nickel
Operating Temperature: -40 to +85°C

Dimensions

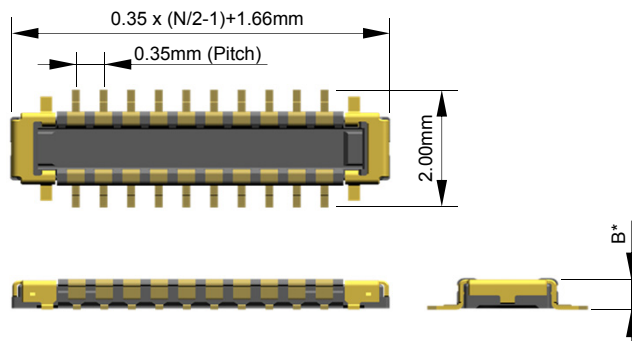
* Refer to drawing for detail dimension

N: Circuit Size

Receptacle



Plug



Ordering Information

| Order No. | | Mated Height (mm) | Mated Width (mm) | Circuits |
|-------------|-------------|-------------------|------------------|--------------------------------------------------------------|
| Receptacle | Plug | | | |
| 505066-**22 | 505070-**22 | 0.60 | 2.00 | 6, 8, 10, 12, 14, 16, 20, 22, 24, 30, 34, 40, 42, 48, 50, 54 |
| 505270-**12 | | 0.70 | | 6, 10, 16, 20, 22, 24, 30, 34, 40, 54 |
| | 505274-**12 | 0.80 | | 6, 10, 16, 20, 24, 30, 34, 40, 54 |
| 505413-**10 | | 0.90 | | 6, 30, 34, 40 |
| | 505417-**10 | 1.00 | | 6, 30, 34, 40, 60 |

** : circuit size

www.molex.com/link/slimstack.html

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SlimStack Board-to-Board Connectors, 0.40mm Pitch and 0.80mm Pitch, Battery Series

molex

Achieve up to 10.0A of power and electrical reliability in an ultra-compact design with SlimStack Hybrid Power Connectors, designed for battery and other power applications.

As consumers continue to demand smaller devices and bigger current value, the need for microminiature designs grows. Hybrid connectors deliver design flexibility while meeting tight-packaging needs.

Features and Advantages

Delivers up to 10.0A power

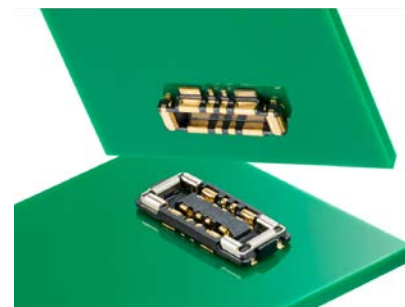
Meets the growing power needs of tight-packaging applications

Dual-contact design for both power and signal contacts

Assures contact reliability

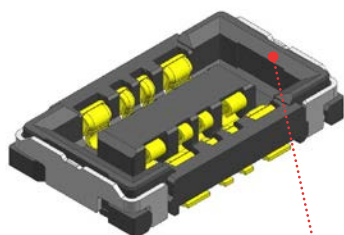
Compact hybrid interface with power and signal contacts

Combines extra signal lines into power connector footprint for space savings

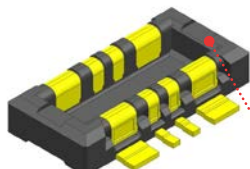


Delivers up to 6.0A

Receptacle 505004 Series

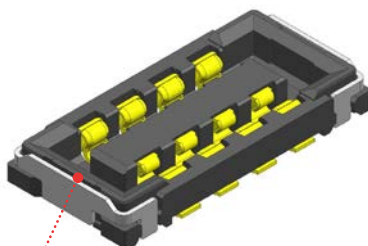


Plug 505006 Series

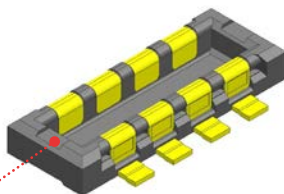


Delivers up to 9.0A

Receptacle 104249 Series

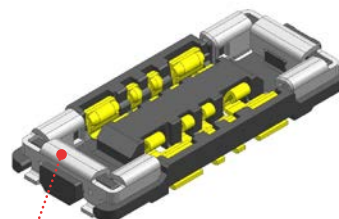


Plug 104250 Series

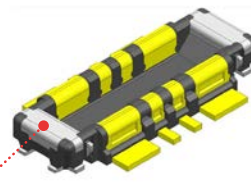


Delivers up to 10.0A

Receptacle 505473 Series



Plug 505476 Series



Wide Alignment Area
Provides easy and secure mating

Armor Nail
Prevents damage to the housing

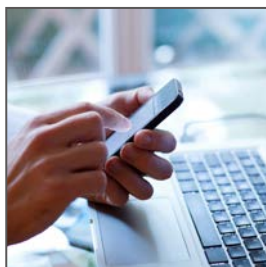
Applications

Mobile Devices

- Smartphones
- Tablet PCs
- Wearable Devices
- Portable Audio
- Portable Navigation Equipment

Medical Devices

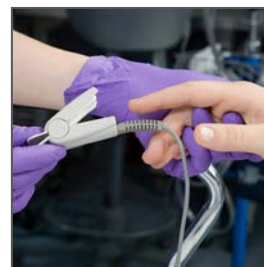
- Patient Monitoring
- Therapeutic and Surgical



Smartphone



Wearable Watch



Patient Monitoring

SlimStack Board-to-Board Connectors, 0.40mm Pitch and 0.80mm Pitch, Battery Series

molex

Specifications

REFERENCE INFORMATION

Packaging: Embossed Tape on Reel
Designed In: Millimeters
RoHS: Yes
Halogen Free: Low-Halogen

ELECTRICAL

Voltage (max.): 50V
Current (max.):
505004/505006
Signal Contact: 0.3A per circuit
Power Contact: 3.0A per circuit
104249/104250
Signal Contact: 0.3A per circuit
Power Contact: 4.5A per circuit
505473/505476
Signal Contact: 0.5A per circuit
Power Contact: 5.0A* per circuit

ELECTRICAL

Contact Resistance (max.):
505004/505006
Signal Contact: 80 milliohms
Power Contact: 10 milliohms
104249/104250
10 milliohms
505473/505476
Signal Contact: 60 milliohms
Power Contact: 10 milliohms
Dielectric Withstanding Voltage: 250V AC
Insulation Resistance (min.): 100 Megohms

MECHANICAL

Durability (max.): 10 cycles

PHYSICAL

Housing: LCP, UL94V-0, Black
Contact: Copper Alloy
Plating:
Contact Area – Gold
Solder Tail Area – Gold
Underplating – Nickel
Operating Temperature: -40 to +85°C

Dimensions

Refer to drawing for detail dimension

Ordering Information

| Order No. | | Mated Height (mm) | Mated Width (mm) | Circuits | Metal Armor Housing Cover | Current |
|-------------|-------------|-------------------|------------------|------------------------|---------------------------|---------|
| Receptacle | Plug | | | | | |
| 505473-0810 | 505476-0810 | 0.60 | 2.00 | 8 (4 power; 4 signal) | Yes | 10.0A* |
| 505473-1010 | 505476-1010 | | | 10 (4 power; 6 signal) | | |
| 505004-0812 | 505006-0812 | 0.75 | 2.50 | 8 (4 power; 4 signal) | No | 6.0A* |
| 104249-0810 | 104250-0820 | | | 8 (power or signal) | | 9.0A* |

*10.0A of current per circuit is applicable if the circuit was constructed by two power circuits via a PWB/FPC circuit.
The same applies for the 6.0A and 9.0A versions.

www.molex.com/link/slimstack.html

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SlimStack Board-to-Board Connectors, 0.40mm Pitch, HRF Series

molex

SlimStack Board-to-Board 0.40mm-Pitch High Retention Force (HRF) Series Connectors offer high mating-retention force in a triple-lock low-profile design, making them ideal for rugged and compact applications

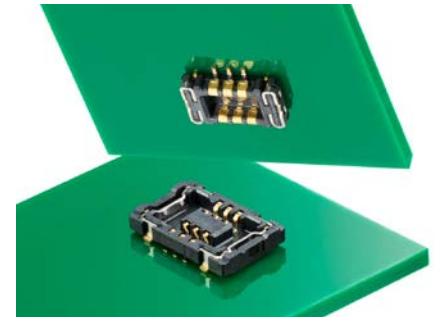
Features and Advantages

High mating-retention

Provides superior mating reliability for applications subject to high vibration or rugged conditions

Narrow width, low profile and small pitch

Yields space savings for mobile and compact applications



Dual-contact terminal design

Provides secure electrical contact

Nickel-barrier plating

Prevents solder flux intrusion

Audible click on mating

Indicates mating confirmation

Terminal Lock (New Option)

Contact Lock (New Option)

Integral end solder tabs with friction-lock

Provide secure PCB as well as additional mating force retention

Nail Lock (New Option)

Triple contact design

Provides high retention force, offering superior contact reliability

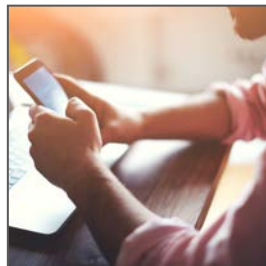
Low-halogen material

Meets environmental considerations

Applications

Mobile Devices

- Smartphones
- Tablet PCs
- Digital cameras
- Wearable devices
- Portable audio devices
- Navigation equipment



Smartphone



Wearables



Portable Navigation

SlimStack Board-to-Board Connectors, 0.40mm Pitch, HRF Series

molex

Specifications

REFERENCE INFORMATION

Packaging: Embossed tape on reel
Designed In: Millimeters
RoHS: Yes
Halogen Free: Low-halogen

ELECTRICAL

Voltage (max.): 50V
Current (max.): 0.3A per circuit
Contact Resistance (max.): 80 milliohms
Dielectric Withstanding Voltage: 250V AC
Insulation Resistance (min.): 100 Megohms

MECHANICAL

Durability (max.): 30 cycles

PHYSICAL

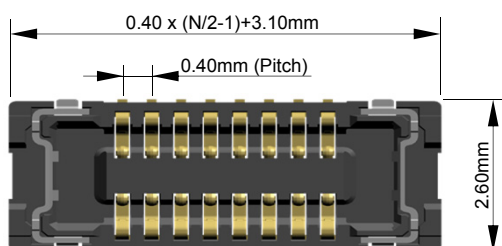
Housing: LCP, UL94V-0, Black
Contact: Copper Alloy
Plating:
Contact Area – Gold
Solder Tail Area – Gold
Underplating – Nickel
Operating Temperature: -40 to +85°C

Dimensions

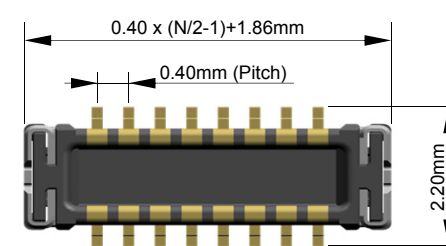
* Refer to drawing for detail dimension

N: Circuit Size

Receptacle



Plug



Ordering Information

| Order No. | | Mated Height (mm) | Mated Width (mm) | Circuits |
|-------------|-------------|-------------------|------------------|-----------------------|
| Receptacle | Plug | | | |
| 503548-**22 | 503552-**22 | 0.70 | 2.60 | 6, 10, 12, 14, 16, 18 |

** : Circuit Size

www.molex.com/link/slimstack.html

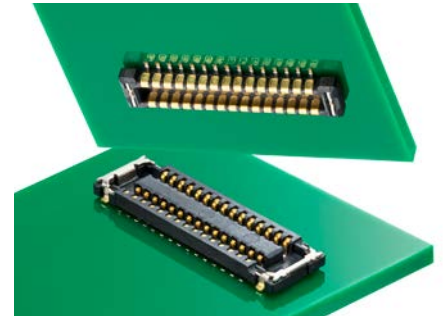
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SlimStack Board-to-Board Connectors, 0.40mm Pitch, B8 Series

molex

0.40mm pitch, 0.80mm height, SlimStack B8 connectors with CleanPoint contact design have robust features that remove contaminants and prevent damage when subjected to harsh handling.

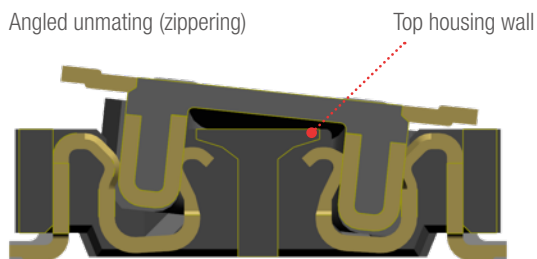
As future devices continue to increase in value and complexity, designers need to stabilize connections to avoid the need for costly rework and/or repair. Building reliability into connector designs for any devices is critical. In the production process of flex-to-board jumpers, flux or dust can sometimes settle on contacts and disrupt signal continuity. Molex's B8 series includes a CleanPoint contact design with a beveled shape that can remove flux and other contaminants to provide a more stable electrical signal.



Features and Advantages

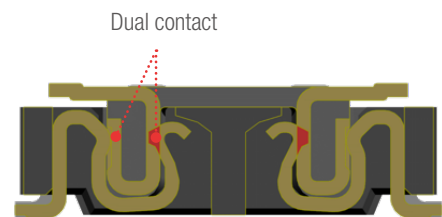
Top Housing Wall

Top housing wall (stopper) prevents the terminal from lifting up due to "zippering" or angled unmating



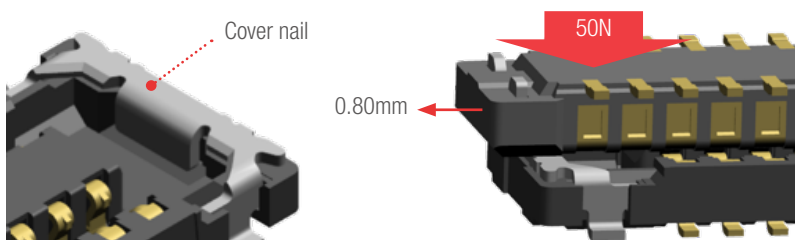
Dual-Contact Design

A dual-contact design on Molex's SlimStack B8 series absorbs drop-shock discontinuity to help guarantee that a stable signal is maintained even when the device is subjected to rough handling



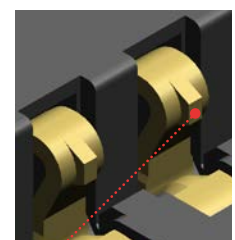
Cover Nail

Cover nail protects the housing from damage during blind mating or angled unmating (zippering). Mating tests on the outer wall of Molex's B8 connectors demonstrate no damage to housing with up to 50N of force and 0.80mm displacement



SlimStack B8 CleanPoint Contact

Molex's CleanPoint contact design provides superior electrical reliability and removes foreign materials such as flux

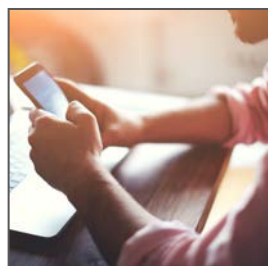


CleanPoint contact

Applications

Mobile Devices

- Smartphones
- Tablet PCs
- Wearable Devices
- Portable Audio
- Portable Navigation Equipment



Smartphone



Wearables



Portable Navigation

SlimStack Board-to-Board Connectors, 0.40mm Pitch, B8 Series

Specifications

REFERENCE INFORMATION

Packaging: Embossed Tape on Reel
Designed In: Millimeters
RoHS: Yes
Halogen Free: Low-Halogen

ELECTRICAL

Voltage (max.): 50V
Current (max.): 0.3A per circuit
Contact Resistance (max.): 80 milliohms
Dielectric Withstanding Voltage: 250V AC
Insulation Resistance (min.): 100 Megohms

MECHANICAL

Durability (max.): 30 cycles

PHYSICAL

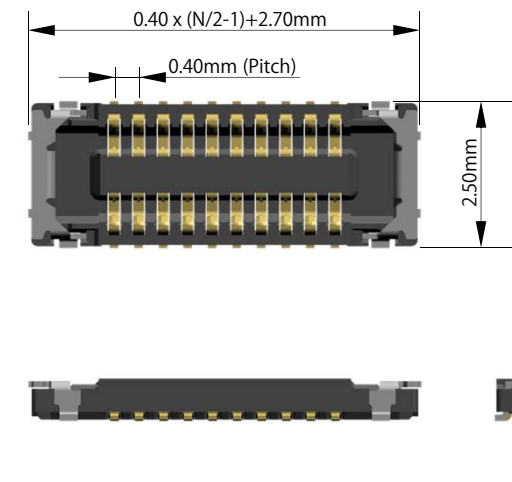
Housing: LCP, UL94V-0, Black
Contact: Copper Alloy
Plating:
 Contact Area – Gold
 Solder Tail Area – Gold
 Underplating – Nickel
Operating Temperature: -40 to +85°C

Dimensions

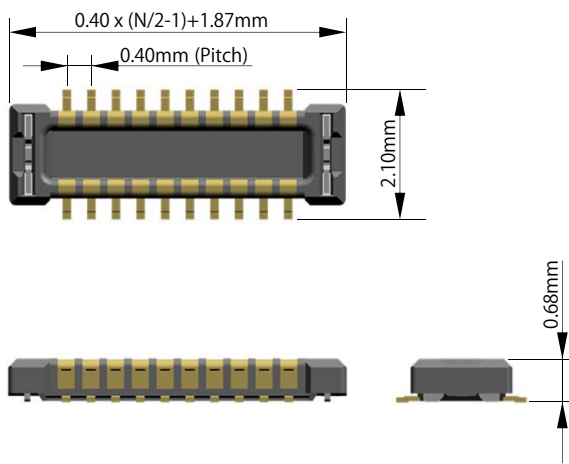
* Refer to drawing for detail dimension

N: Circuit Size

Receptacle



Plug



Ordering Information

| Order No. | | Mated Height (mm) | Mated Width (mm) | Circuits |
|--------------|--------------|-------------------|------------------|--------------------------------|
| Receptacle | Plug | | | |
| 505550-**-20 | 505551-**-20 | 0.80 | 2.50 | 10, 16, 20, 24, 30, 34, 40, 50 |

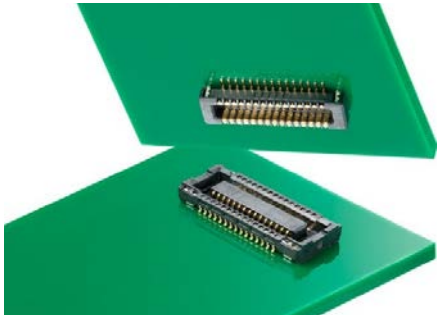
**: Circuit Size

SlimStack Board-to-Board Connectors, 0.40mm Pitch, J-Bend Series



SlimStack 0.40mm pitch high-speed board-to-board connectors offer a wide variety of circuit sizes and stack heights for space-saving and design flexibility in a diverse range of applications for consumer, datacom, home appliance, mobile and medical industries.

General market and any industry request for quick sample availability and wide variety of selection. 0.40mm pitch J-Bend series have circuit size from 10 to 100. In addition, stack heights for this series is from 1.50mm to 2.30mm with same foot pattern. Molex Micro Solution design provide any solution to solve any market requirement.



Features and Advantages

Contact terminal lock
Realizes high retention force

Audible click on mating
Provides contact assurance

Long wipe length
Delivers high contact reliability

In-house contact structure
Improved reliability against external shock. Protection from droplets of flux

J-Bend structure
Provides space saving

51338 J-Bend receptacle

55909 J-Bend plug

Applications

Consumer

- Game Machine
- Security

Home Entertainment

- DVC/DSC
- Flat Panel

Smart Phones and Mobile Devices

- Mobile
- Wearables
- POS

Data/Computing

- Tablet PC

Data Center Solution

- Network Server

Medical

- Patient monitors

Wide range of circuit sizes (10 to 100) and height variations
Offers design flexibility

- 1.50mm (Plug 55909/ Receptacle 51338)
- 1.80mm (Plug 55909/ Receptacle 500913)
- 2.00mm (Plug 501745/ Receptacle 51338)
- 2.30mm (Plug 501745/ Receptacle 500913)

| LINE UP Combination | | | | |
|---------------------|--------------|--------------|--------------|--------------|
| Series Number | Receptacle | | Plug | |
| | 51338 | 500913 | 55909 | 501745 |
| | | | | |
| Circuit | 10 to 100 | 24 to 100 | 10 to 120 | 12 to 80 |
| Mated Height (mm) | 1.50 to 2.00 | 1.80 to 2.30 | 1.50 to 1.80 | 2.00 to 2.30 |



Medical



Gaming Machine



Tablet PC



Network Server

SlimStack Board-to-Board Connectors, 0.40mm Pitch, J-Bend Series

molex

Specifications

REFERENCE INFORMATION

Packaging: Embossed Tape on Reel
Designed In: Millimeters
RoHS: Yes
Halogen: Low-Halogen

ELECTRICAL

Voltage (max.): 50V
Current (max.): 0.3A per circuit

MECHANICAL

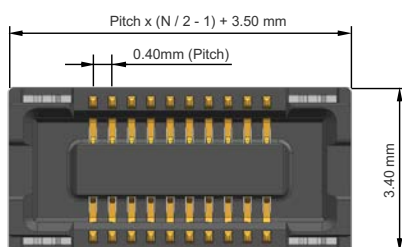
Pitch: 0.40mm
Mated Height (mm): 1.50, 1.80, 2.00, 2.30
Width: 3.40mm / 4.20mm
Length (mm): $0.40 \times (N/2 - 1) + 3.5$
Wipe Length: 0.45mm
Structure Type: Vertical type
Circuit Size: 10 to 100
Durability (max.): 30 cycles

PHYSICAL

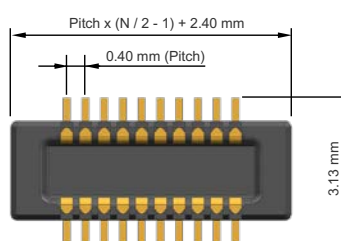
LCP, UL94V-0, Black
Contact: Copper Alloy
Plating:
Contact Area – Selective Gold
Fitting Nail Area – Selective Gold
Underplating – Nickel
Operating Temperature: -25 to +85°C

Dimensions

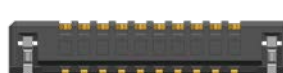
51338 Series



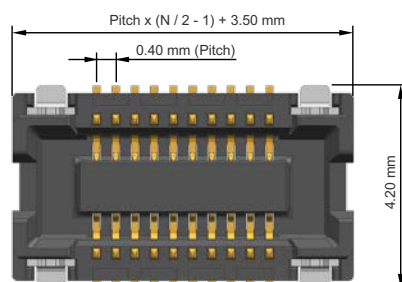
55909 Series



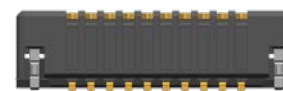
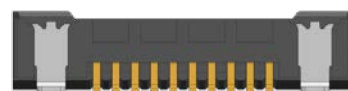
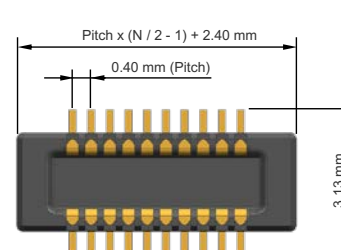
N : Circuit Size



500913 Series



501745 Series



Ordering Information

| Mated Height (mm) | Width (mm) | Series No. | | Circuit Size |
|-------------------|------------|------------|--------|--------------|
| | | Receptacle | Plug | |
| 1.50 | 3.40 | 51338 | 55909 | 10 to 100 |
| 1.80 | 4.20 | 500913 | 55909 | 24 to 100 |
| 2.00 | 3.40 | 51338 | 501745 | 12 to 80 |
| 2.30 | 4.20 | 500913 | 501745 | 40 to 70 |

www.molex.com/link/slimstack.html

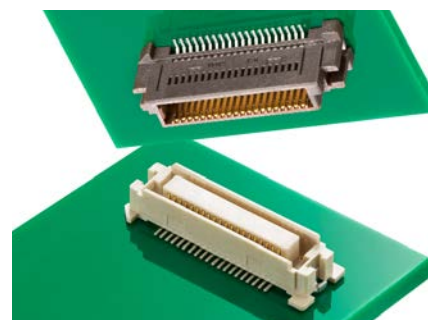
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SlimStack Board-to-Board Connectors, 0.635mm Pitch Series

molex

SlimStack Board-to-Board Connectors 0.635mm Pitch Series offers a wide variety of circuit sizes and various stack heights for space savings and design flexibility in a diverse range of applications.

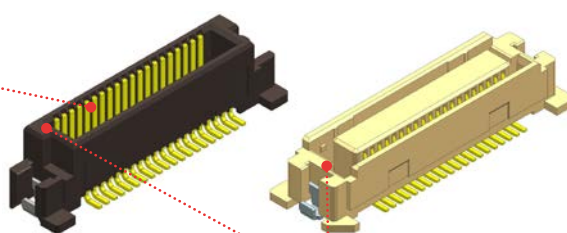
0.635mm Pitch Series has circuit sizes from 20 to 240. In addition, stack heights for this series is from 6.00mm to 16.00mm with same footprint. Molex Micro Solution design provides solutions for any market requirement.



Features and Advantages










Long Effective Mating Length

Removes foreign matter



Mating Guide Key

Accurate mating without right and left reversal

| Lineup Combination | | | | | | |
|--------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Series No. | Receptacle | Plug | | | | |
| | 52885 | 55091 | 53625 | 53647 | 53649 | 53627 |
| |  |  |  |  |  |  |
| Circuits | 20 to 240 | 20 to 200 | 20 to 240 | 20 to 160 | 30 to 140 | 20 to 200 |
| Mated Height (mm) | 6.00 to 10.00 | 6.00 | 7.00 | 8.00 | 9.00 | 10.00 |
| Series No. | Receptacle | Plug | | | | |
| | 52901 | 55091 | 53625 | 53647 | 53649 | 53627 |
| |  |  |  |  |  |  |
| Circuits | 20 to 200 | 20 to 200 | 20 to 200 | 20 to 160 | 30 to 140 | 20 to 200 |
| Mated Height (mm) | 12.00 to 16.00 | 12.00 | 13.00 | 14.00 | 15.00 | 16.00 |

Applications

Automotive

Car Radar
Car Infotainment

Datcom

Servers
Office Equipment

Industry

Automation Machines

Medical

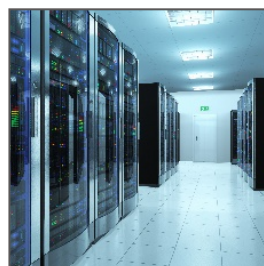
Patient Monitors
Ultrasound Monitors

Home Appliance

Digital Electronics



Car Infotainment



Servers



Automation Machine

SlimStack Board-to-Board Connectors, 0.635mm Pitch Series

molex

Specifications

REFERENCE INFORMATION

Packaging: Embossed Tape with Cover on Reel
Designed In: Millimeters
RoHS: Yes
Halogen Free: Low-Halogen
(52885/52901/55091 series only)

ELECTRICAL

Voltage (max.): 100V
Current (max.): 0.5A per circuit
Contact Resistance (max.): 40 to 70 milliohms
(varied by each part)
Dielectric Withstanding Voltage: 250V AC
Insulation Resistance (min.): 1000 Megohms

MECHANICAL

Durability (max.): 50 cycles

PHYSICAL

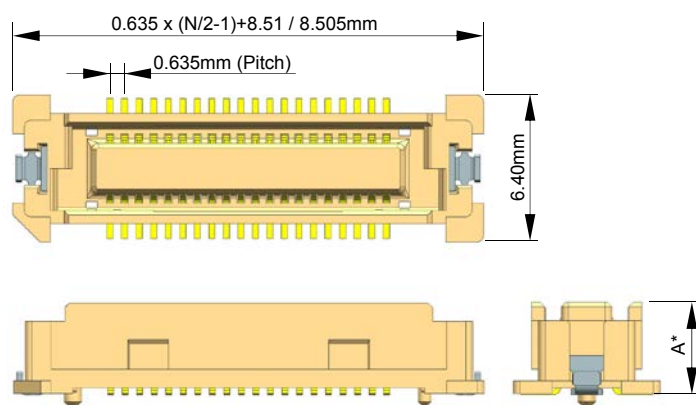
Housing:
Receptacle: LCP, UL-94V-0, White
Plug: LCP, UL-94V-0, Brown or Black
Contact: Copper Alloy
Fitting Nail: Copper Alloy
Plating:
Contact Area – Gold
Solder Tail Area – Tin
Underplating – Nickel
Operating Temperature: -55 to +105°C

Dimensions

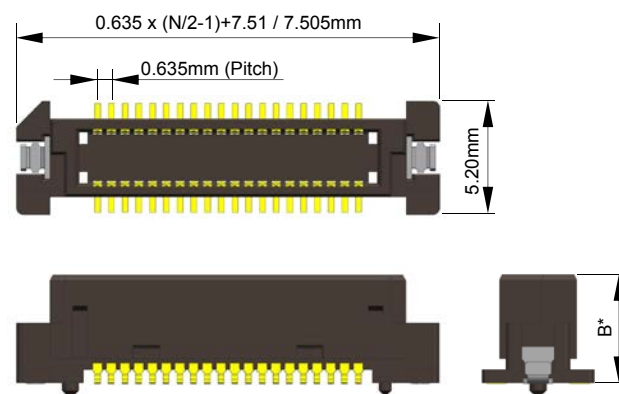
* Refer to drawing for detail dimension

N: Circuit Size

Receptacle



Plug



Ordering Information

| Order No. | | Mated Height (mm) | Mated Width (mm) | Circuits |
|-------------|-------------|-------------------|------------------|-----------|
| Receptacle | Plug | | | |
| 52885-**-74 | 55091-**-74 | 6.00 | 6.40 | 20 to 200 |
| | 53625-**-74 | 7.00 | | 20 to 240 |
| | 53647-**-74 | 8.00 | | 20 to 160 |
| | 53649-**-74 | 9.00 | | 30 to 140 |
| | 53627-**-74 | 10.00 | | 20 to 200 |
| | | | | |
| 52901-**-74 | 55091-**-74 | 12.00 | | 20 to 200 |
| | 53625-**-74 | 13.00 | | 20 to 200 |
| | 53647-**-74 | 14.00 | | 20 to 160 |
| | 53649-**-74 | 15.00 | | 30 to 140 |
| | 53627-**-74 | 16.00 | | 20 to 200 |

** : circuit size

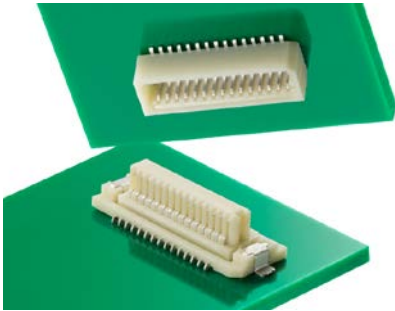
www.molex.com/link/slimstack.html

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SlimStack Board-to-Board Connectors, 0.80mm Pitch, Floating Series



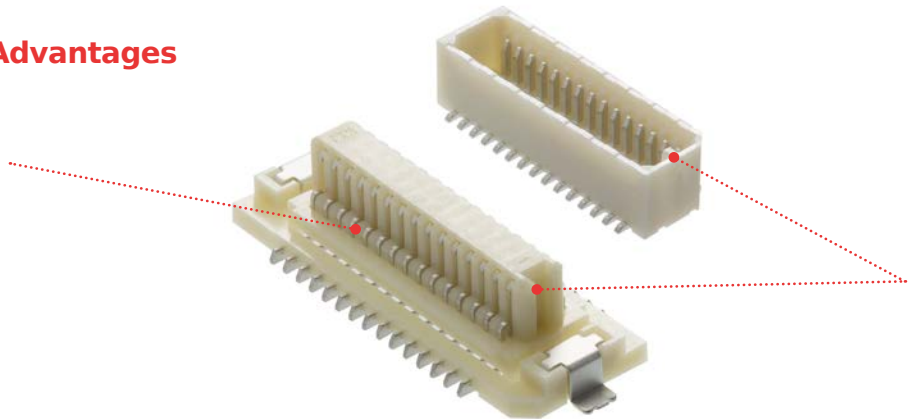
SlimStack B-to-B Connectors 0.80mm Pitch feature floating structure for user-friendliness of assembly process. The connectors have height variation and two kinds of mating directions for design flexibility. In addition, there are compatible receptacles to support many applications.



0.80mm Pitch Floating Series has a floating structure range of $\pm 0.30\text{mm}$. There are stack height variations from 5.50mm to 8.00mm with same footprint. Customers can select mating direction, and they also select floating or rigid type to meet their design. Molex Micro Solution design provides solutions to solve any market requirement.

Features and Advantages

Floating Structure
Reduces PWB gap.
Facilitates assembly in the event of misalignment or blind joining



Mating Guide Key
Accurate mating without right and left reversal

| Lineup Combination | | | | | |
|--------------------|--------------|-------|-------|-------|-------|
| Floating Type | Receptacle | Plug | | | |
| | 52588 | 53307 | 53364 | 53353 | 53309 |
| | | | | | |
| Mated Height (mm) | 5.50 to 8.00 | 5.50 | 7.00 | 8.00 | 6.65 |
| Rigid Type | Receptacle | Plug | | | |
| | 52465 | 53307 | 53364 | 53353 | 53309 |
| | | | | | |
| Mated Height (mm) | 4.50 to 7.00 | 4.50 | 6.00 | 7.00 | 5.65 |

Applications

Automotive

Car Infotainment

Consumer

Smart Speakers

Home Appliances

Datacom

Servers

Office Equipment

Industrial

Automation Machines



Car Infotainment



Smart Speaker



Office Equipment

SlimStack Board-to-Board Connectors, 0.80mm Pitch, Floating Series

molex

Specifications

REFERENCE INFORMATION

Packaging: Embossed Tape on Reel
Designed In: Millimeters
RoHS: Yes
Halogen Free: No

ELECTRICAL

Voltage (max.): 50V
Current (max.): 0.5A per circuit
Contact Resistance (max.):
40 milliohms (mate with 52588 series)
20 milliohms (mate with 52465 series)
Dielectric Withstanding Voltage (min.): 500V AC
Insulation Resistance (min.): 100 Megohms

MECHANICAL

Mating Force (max.):
refer to product specification
Un-mating Force (min.):
refer to product specification
Durability (max.): 30 cycles

PHYSICAL

Housing: PA, UL-94V-0
Contact: Copper Alloy
Plating:
Contact Area – Refer to ordering information
Solder Tail Area – Refer to ordering information
Underplating – Nickel
Operating Temperature: -40 to +105°C

Dimensions

Refer to drawing for detail dimension

Ordering Information

| Structure | Order No. | | Mated Height (mm) | Mated Width (mm) | Orientation | Boss | | Plating | Circuits |
|---------------|------------|------------|-------------------|------------------|-------------|--------------|--------------|---------|--------------------------------------------------------|
| | Receptacle | Plug | | | | Receptacle | Plug | | |
| Floating Type | 52588-**75 | 53307-**71 | 5.50 | 7.20 | Vertical | Without Boss | Without Boss | Tin | 18, 20, 30 |
| | | 53364-**70 | 7.00 | | | | With Boss | | |
| | | 53364-**71 | | | | | Without Boss | | |
| | | 53353-**71 | 8.00 | Without Boss | | | | | |
| | | 53309-**70 | 6.65 | 4.70 | Right Angle | | Without Boss | | |
| | | 53309-**71 | | | | | With Boss | | |
| Rigid Type | 52465-**70 | 53364-**70 | 6.00 | 7.20 | Vertical | With Boss | With Boss | Tin | 10, 12, 20, 28, 30, 36, 40 |
| | | 53309-**71 | 5.65 | 4.70 | Right Angle | | | | 20, 24, 26, 28, 30, 40 |
| | 52465-**71 | 53307-**71 | 4.50 | 7.20 | Vertical | Without Boss | Without Boss | | 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 36, 40 |
| | | 53364-**71 | 6.00 | | | | | | 18, 20, 30, 36 |
| | | 53353-**71 | 7.00 | | | | | | 10, 16, 18, 20, 28, 30, 40 |
| | | 53309-**70 | 5.65 | 4.70 | Right Angle | | | | 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 36, 40 |
| | 52465-**62 | 53309-**62 | 5.65 | | | Gold | 20, 30, 32 | | |

** : circuit size

www.molex.com/link/slimstack.html

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www.molex.com/link/microconnectors.html



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Order No. 987652-0257

APN/0.5k/GF/2019.03

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