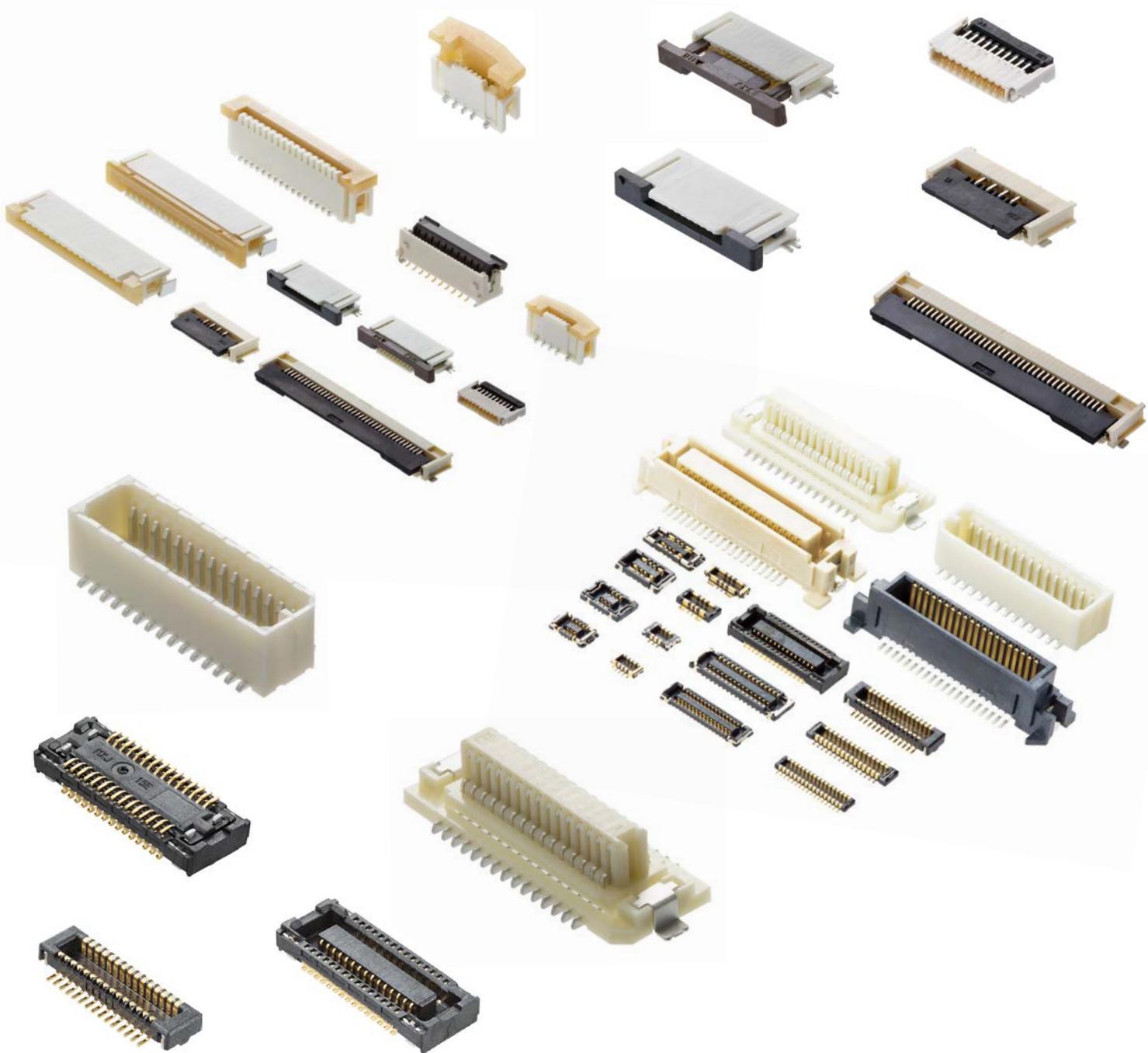


# Micro Products

## 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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List of Easy-On FFC/FPC Connectors Core Products .....	4
Product Schematic Diagrams and Application Examples of Easy-On FFC/FPC Connectors Core Products .....	5
Easy-On FFC/FPC Connectors FBH1 Series .....	6 · 7
Easy-On FFC/FPC Connectors FD19 Series .....	8 · 9
Easy-On FFC/FPC Connectors Slider Series .....	10 · 11
Easy-On FFC/FPC Connectors V-Flip Series .....	12 · 13



# **SlimStack Board-to-Board Connectors Core Products**

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List of SlimStack Board-to-Board Connectors Core Products.....	14
Product Schematic Diagrams and Application Examples of SlimStack Board-to-Board Connectors Core .....	15
SlimStack Board-to-Board Connector 0.35 mm SSB6 Standard Series .....	16 · 17
SlimStack Board-to-Board Connector 0.35 mm SSB RP Series.....	18 · 19
SlimStack Board-to-Board Connector 0.40 mm & 0.80 mm Battery Series .....	20 · 21
SlimStack Board-to-Board Connector 0.40 mm HRF Series .....	22 · 23
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

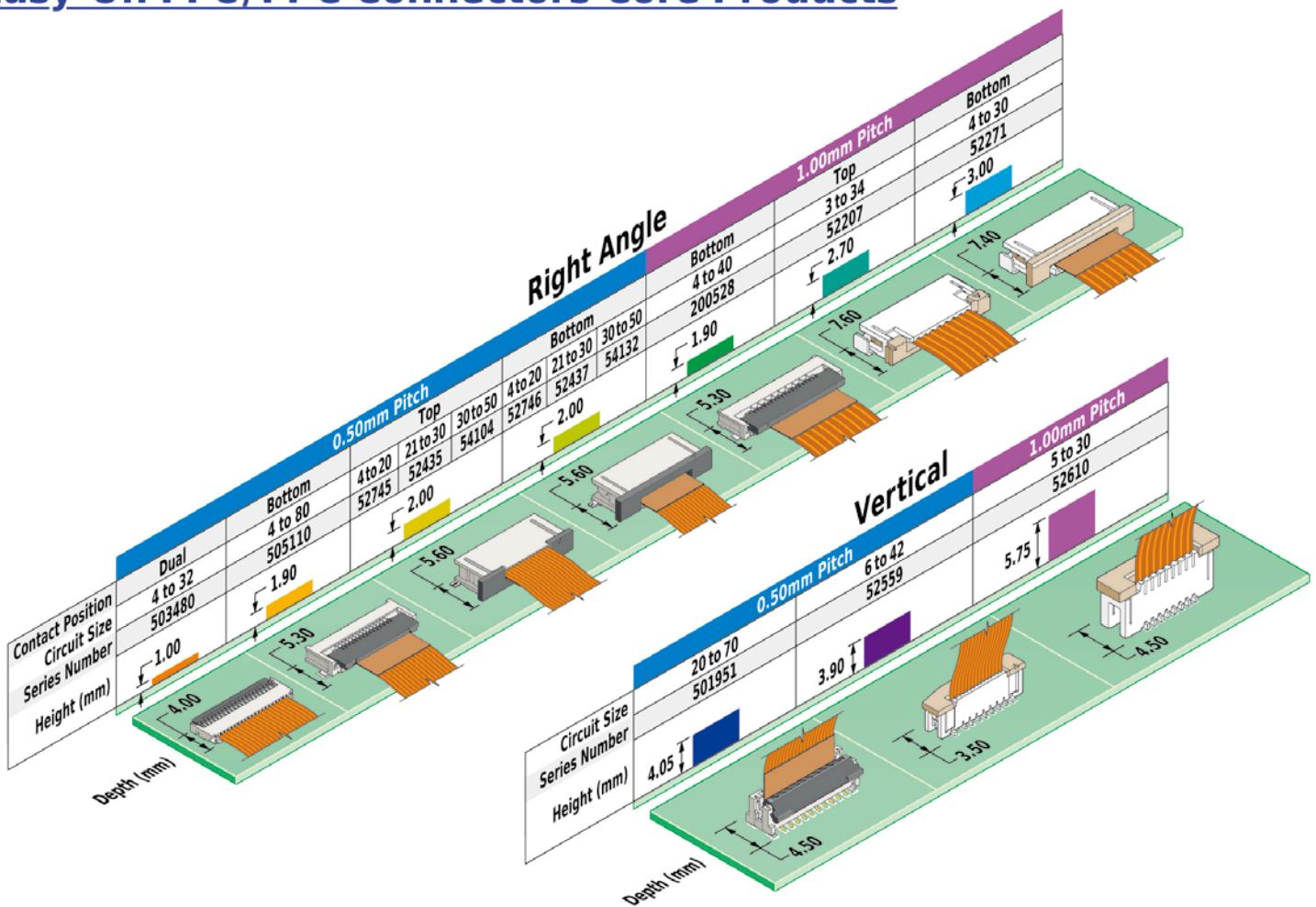
Pitch (mm)	Orientation	Contact Position	Circuit Size	Series Number	Image
0.50	Right Angle	Dual	4 to 32	503480	
		Bottom	4 to 80	505110	
		Top	4 to 20	52745	
			21 to 30	52435	
			30 to 50	54104	
		Bottom	4 to 20	52746	
			21 to 30	52437	
			30 to 50	54132	
	Vertical		20 to 70	501951	
			6 to 42	52559	
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](http://www.molex.com/link/easyon.html)

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## 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

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

**molex**

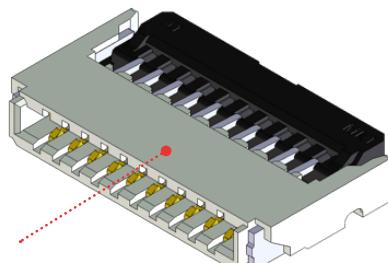


## Features and Advantages

503480-\*\*00

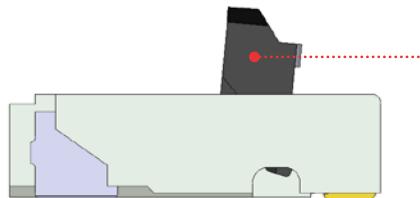
### Back Flip actuator

Eases cable insertion and allows for a high upward pull force



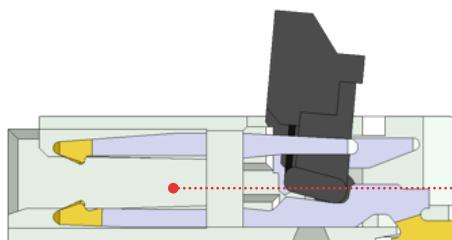
Low profile height of 1.00mm and width of 4.00mm

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

**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.): 100 milliohms  
Dielectric Withstanding Voltage: 200V AC  
Insulation Resistance (min.): 50 Megaohms

### MECHANICAL

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

### CIRCUIT SIZES

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

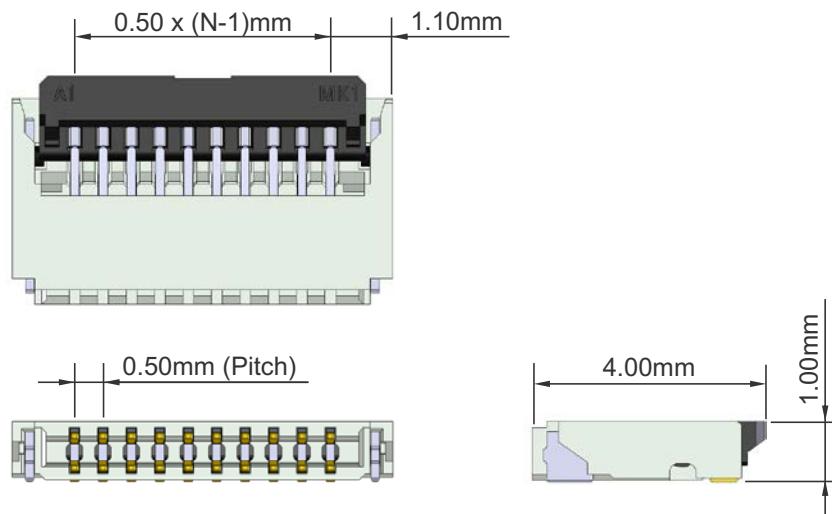
### PHYSICAL

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

## Dimensions

Refer to [molex.com](http://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](http://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**

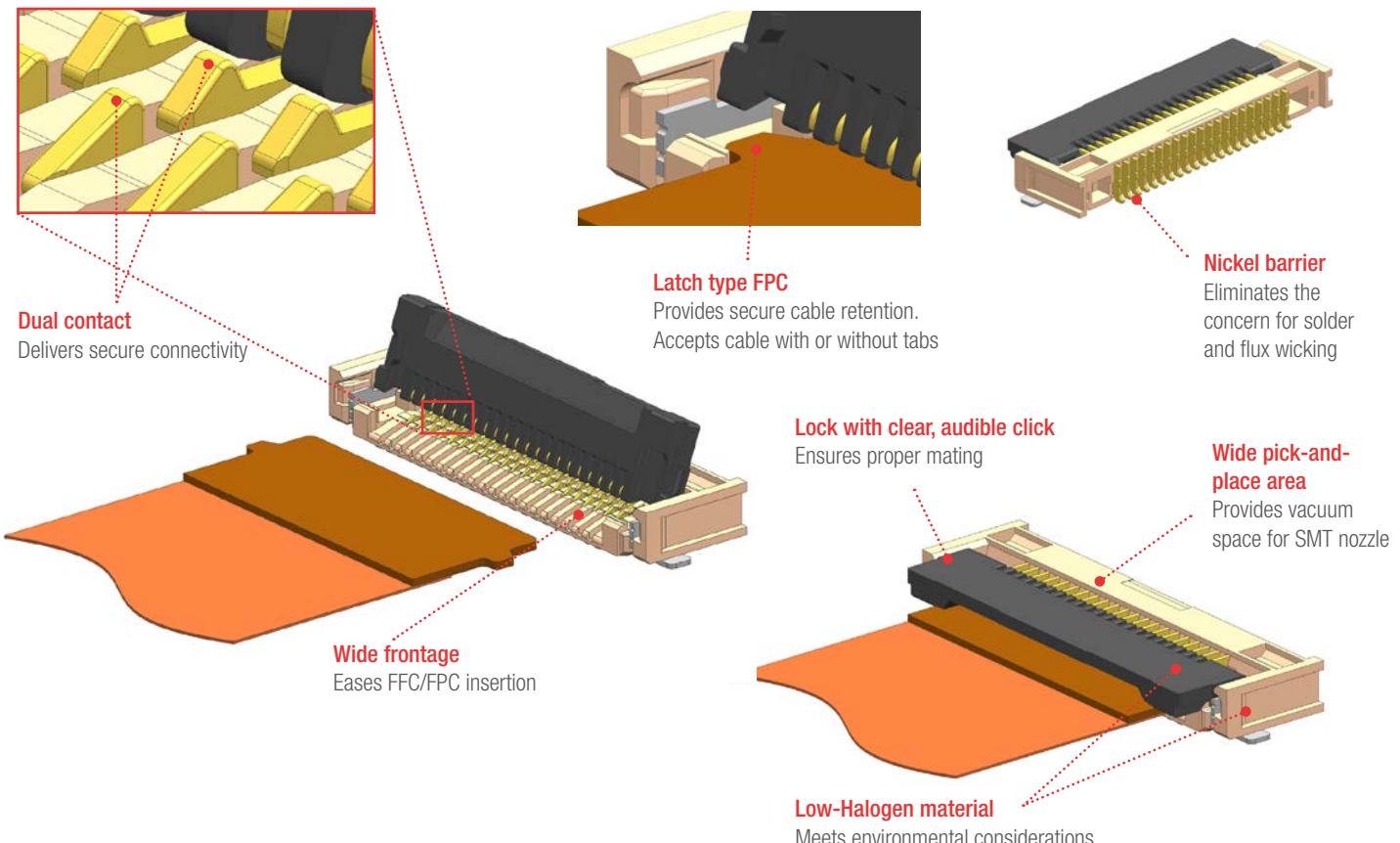
Versatile dual-contact FD19 Series FFC/FPC Connectors meet temperature requirements up to 125°C and come in a wide range of circuit sizes for maximum design flexibility across multiple markets and applications



505110-\*\*\*\*  
(0.50mm pitch)

200528-\*\*\*\*  
(1.00mm pitch)

## Features and Advantages



## Applications

### Automotive

- Car navigation
- Instrument panels
- Car infotainment



Car Infotainment

### Home Appliance

- Flat panel TVs
- Refrigerators
- Vacuuming machines



Home Appliance

### Industrial

- UAV (drone)
- Robotics



UAV (Drone)

### Consumer

- Game units
- VR/AR
- Printers

# 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

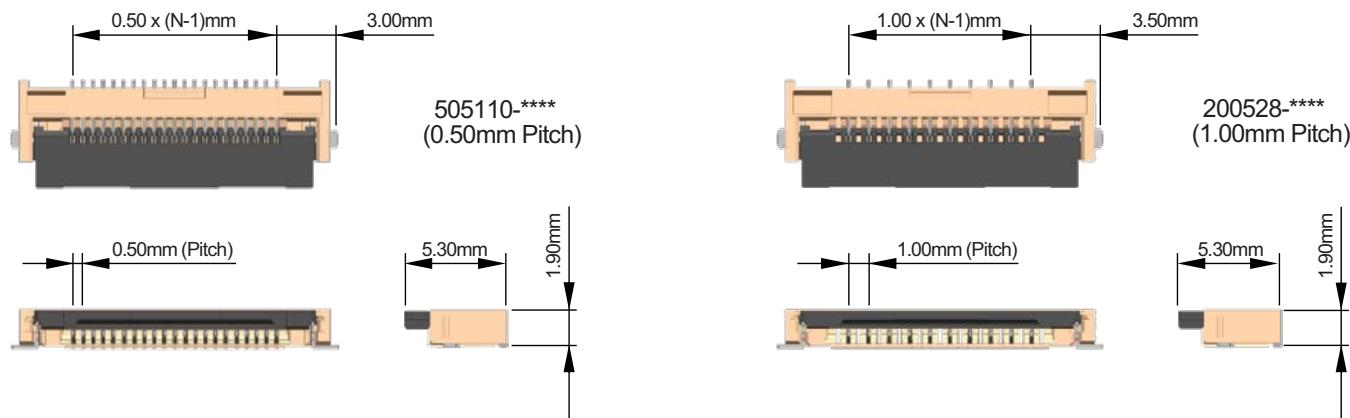
### CIRCUIT SIZE (1.00MM PITCH)

4 to 30

## Dimensions

Refer to [molex.com](http://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				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](http://www.molex.com/link/easyon.html)

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

**molex**

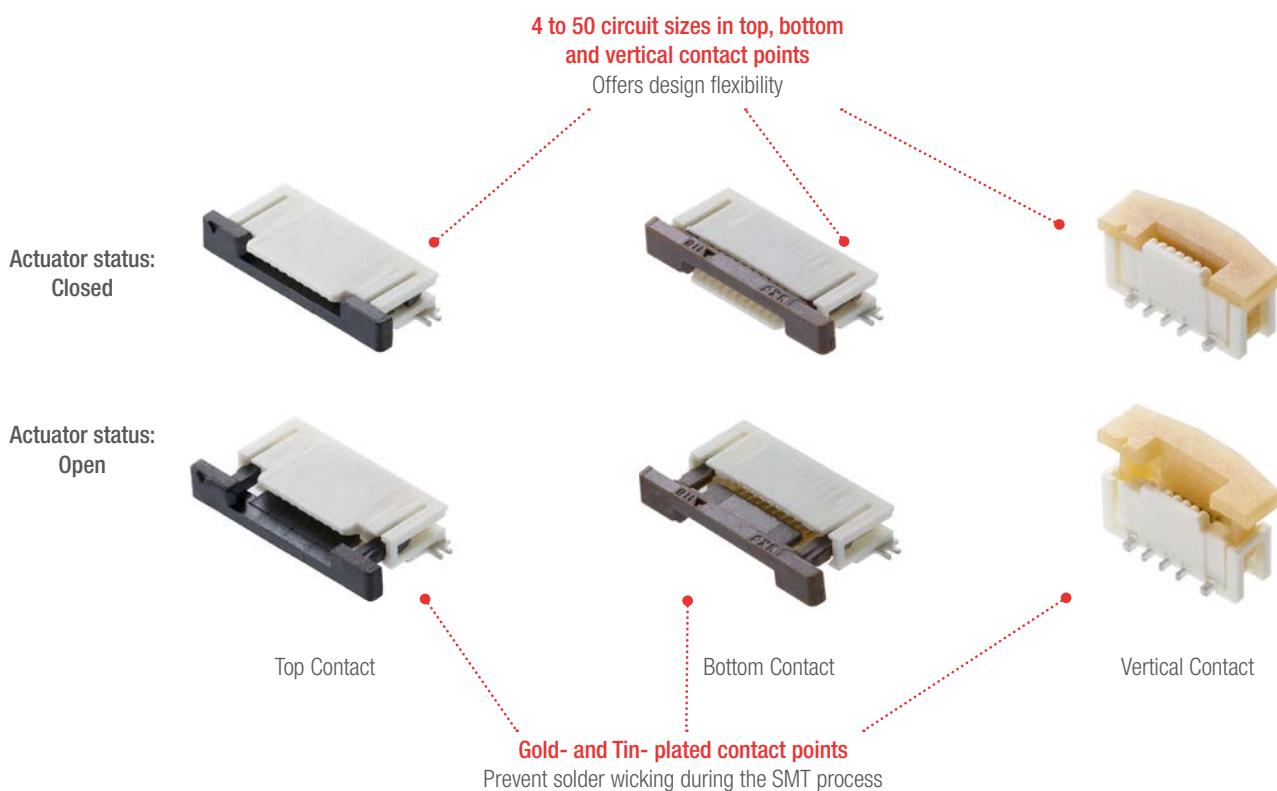
The Easy-On FFC/FPC Connectors, 0.50/1.00mm Pitch, Slider Series, with their market proven 'Slider' locking mechanism and wide circuit options in top, bottom and vertical contact variations, offer design flexibility for FFC/FPC cable routing applications



Right-Angle

Vertical

## Features and Advantages



## Applications

### Industry

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



POS terminal



Medical



IoT device

### Mobile

- POS terminals

### Consumers

- Home appliances

### Medical

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

# 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](http://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](http://www.molex.com/link/easyon.html)

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

Product 501951

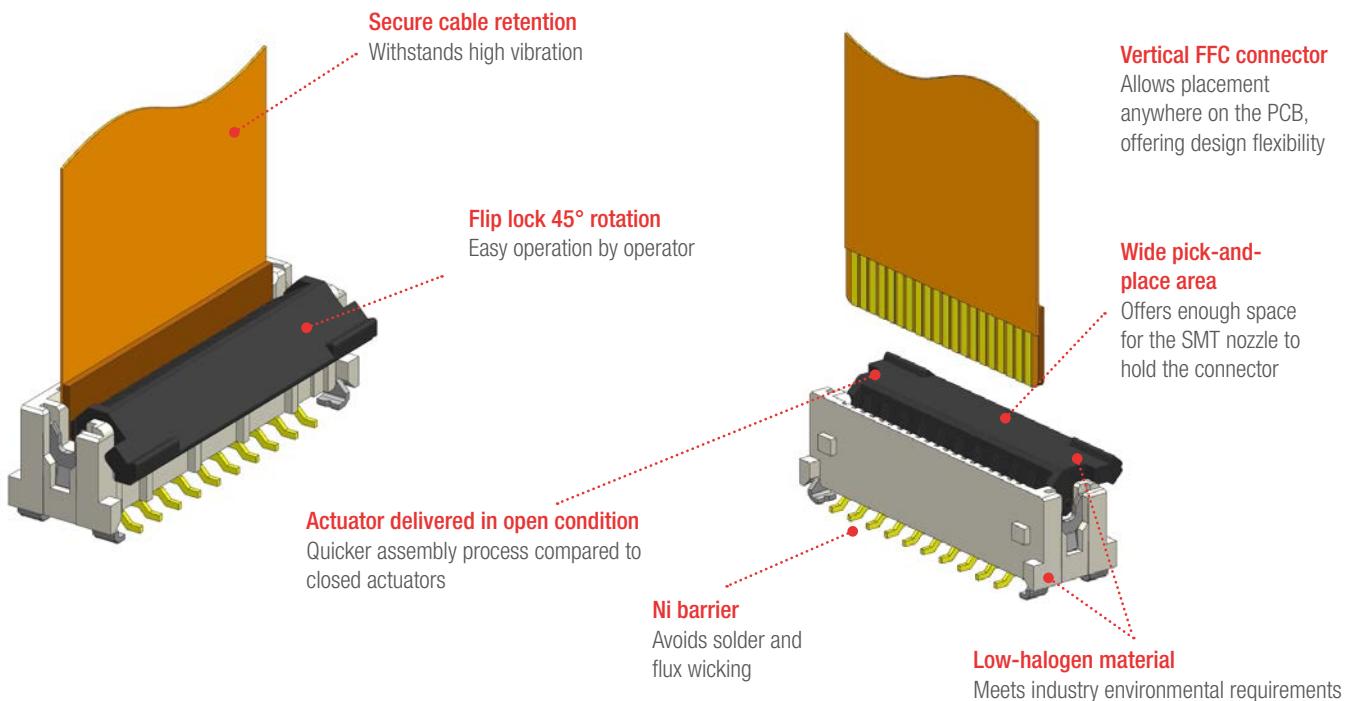
**molex**

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



Car Infotainment

### Office Equipment

- Printer



Office Equipment

### Consumer

- Home appliances
- Flat TVs



Servers

### Industry

- UAVs (drones)
- IoT interconnection devices

### Datacom

- Servers

### Medical

- Patient-monitoring systems

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

Product 501951

**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: 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

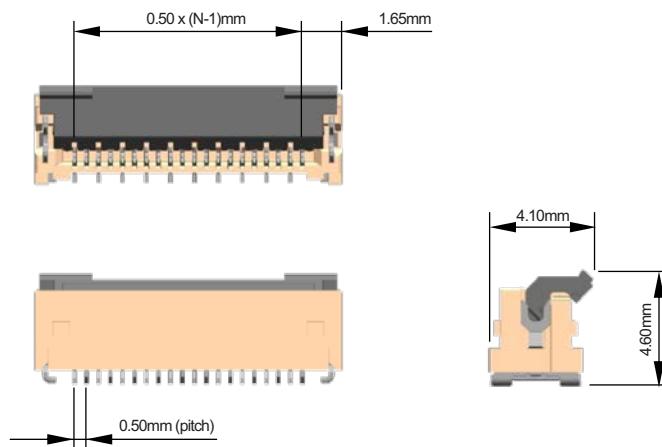
4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18,  
19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31,  
32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44,  
45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57,  
58, 59, 60, 70

## Dimensions

Refer to [molex.com](http://molex.com) for detail dimension

### CIRCUIT SIZE

N = Circuit size



## Ordering Information

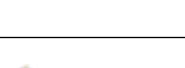
Series No.	Pitch (mm)	Orientation	Contact Position	Circuits	Operating Temperature	Plating
501951-**30	0.50	Vertical	Vertical	4 to 70	-40 to +85°C	Gold
501951-**50	0.50	Vertical	Vertical	4 to 70	-40 to +125°C	Gold

Replace \*\* with circuit size

[www.molex.com/link/easyon.html](http://www.molex.com/link/easyon.html)

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# SlimStack Board-to-Board Connectors Core Products

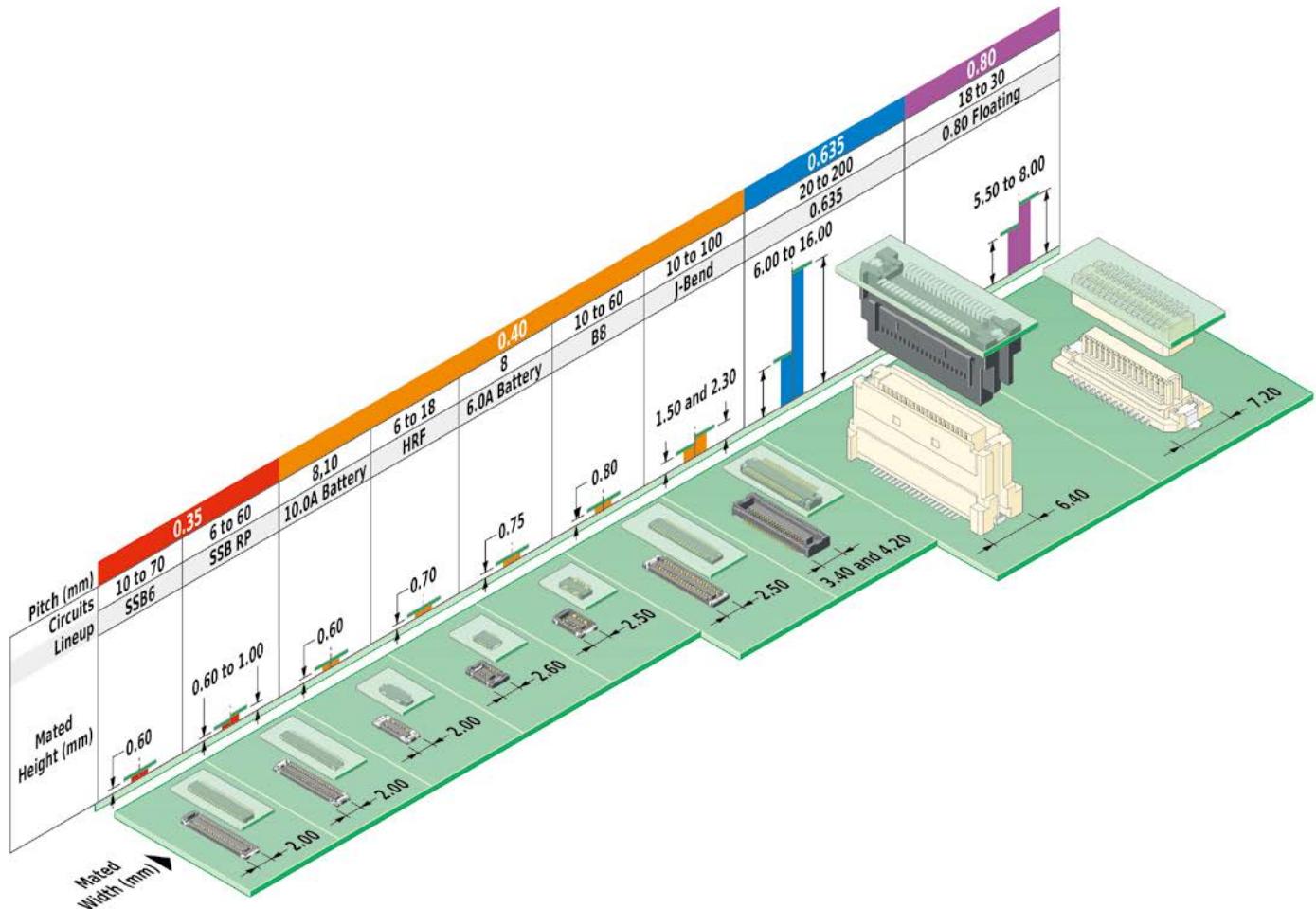
Pitch (mm)	Mated Height (mm)	Mated Width (mm)	Circuits	Lineup	Series Number		Image		
					Receptacle	Plug			
0.35	0.60	2.00	10 to 70	SSB6 SSB RP	504618	504622			
	0.60	2.00	6 to 60		505066	505070			
	0.70				505270				
	0.80				505274				
	0.90							505413	
	1.00				505417				
0.40	0.60	2.00	8, 10	10.0A Battery	505473	505476			
	0.70	2.60	6 to 18	HRF	503548	503552			
	0.75	2.50	8	6.0A Battery	505004	505006			
	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		18 to 30	0.80 Floating	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](http://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

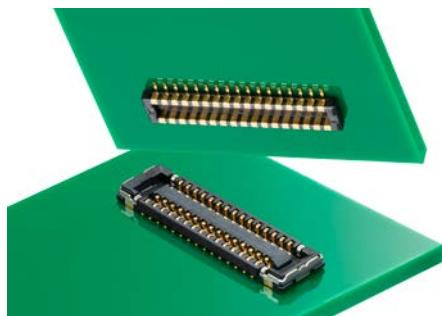
# SlimStack Board-to-Board Connectors, 0.35mm Pitch, SSB6 Standard Series

**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.

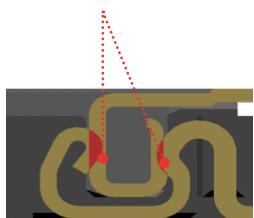
As consumers continue to demand smaller devices, the need for microminiature designs grows. We can meet these low-profile needs with pitch sizes as small as 0.35mm, mated heights as low as 0.60mm and widths as narrow as 2.00mm.



## Features and Advantages

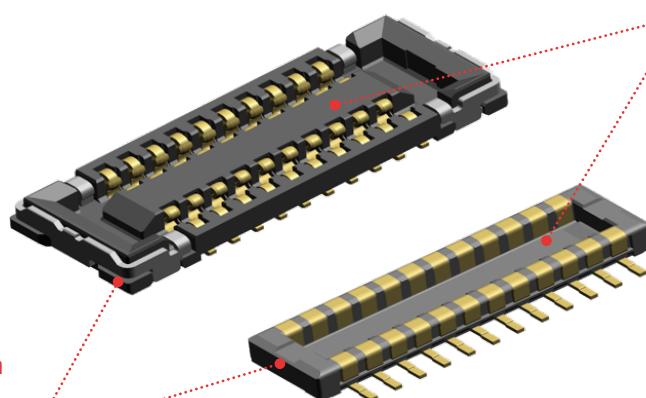
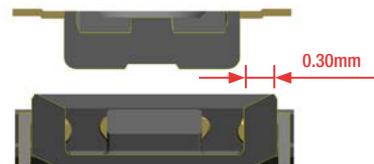
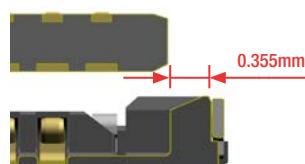
### Dual-Contact Design

Provides secure reliability



### Wide Alignment Area

Provides easy and secure mating



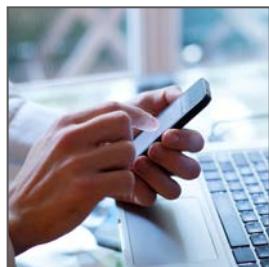
### Low-Halogen

Best material selection for environmental considerations

## Applications

### Mobile Devices

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



Smartphone



Wearable Watch

### Medical Devices

- Patient Monitoring
- Therapeutic and Surgical



Patient Monitoring

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

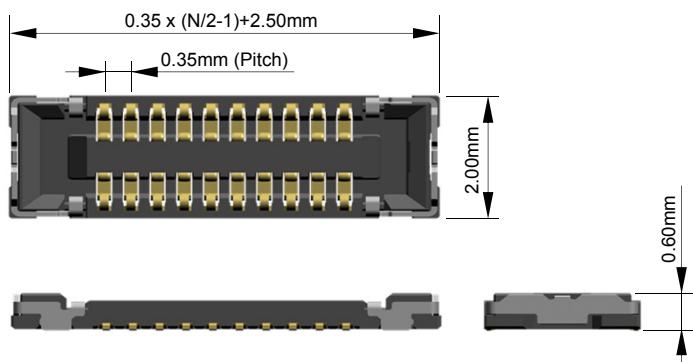
Housing: LCP, UL 94V-0, Black  
Contact: Copper Alloy  
Plating:  
    Contact Area – Gold  
    Solder Tail Area – Gold  
    Underplating – Nickel  
Operating Temperature: -40 to +85°C

## Dimensions

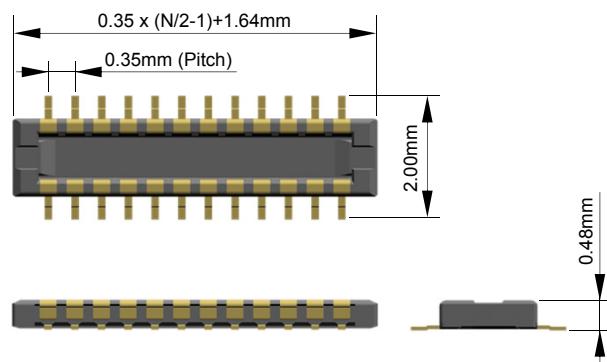
\* Refer to drawing for detail dimension

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

[www.molex.com/link/slimstack.html](http://www.molex.com/link/slimstack.html)

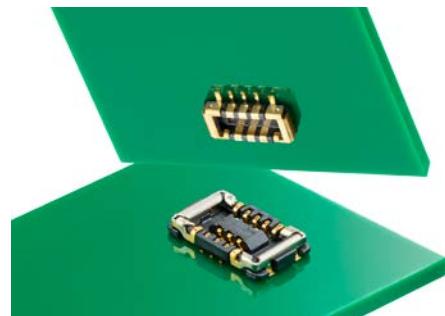
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# SlimStack Board-to-Board Connectors, 0.35mm Pitch, SSB RP Series

**molex**

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

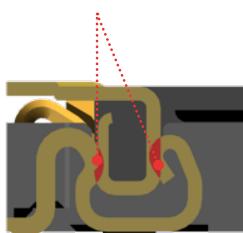
SSB RP Series delivers design flexibility while meeting tight-packaging needs with mated height variation, 0.60mm to 1.00mm, without having to redesign the PCB layout. As consumers continue to demand smaller devices, the need for microminiature designs grows.



## Features and Advantages

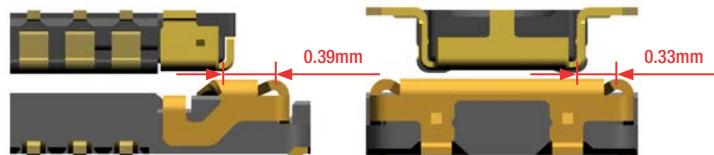
### Dual-Contact Design

Provides secure reliability



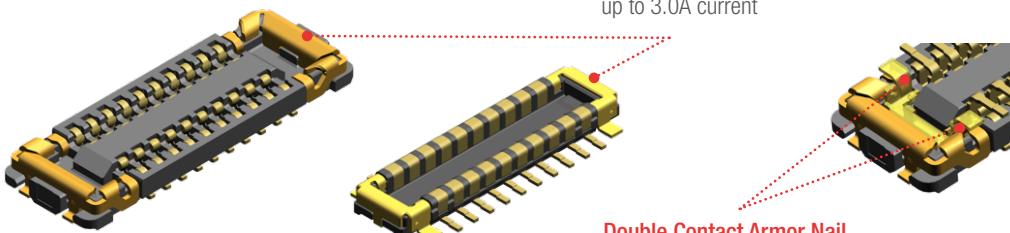
### Wide Alignment Area

Provides easy and secure mating



### Metal Power Armor Nail Feature

Provides housing protection with up to 3.0A current



### Double Contact Armor Nail

Provides reliable contact interface with flexible arm springs and two-point contact

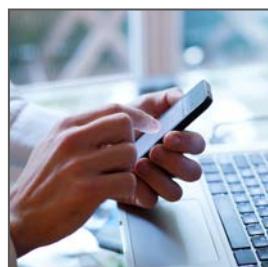
Customer can select stack height without having to redesign the PCB layout.

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

## Applications

### Mobile Devices

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



Smartphone



Wearable Watch

### Medical Devices

- Patient Monitoring
- Therapeutic and Surgical



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

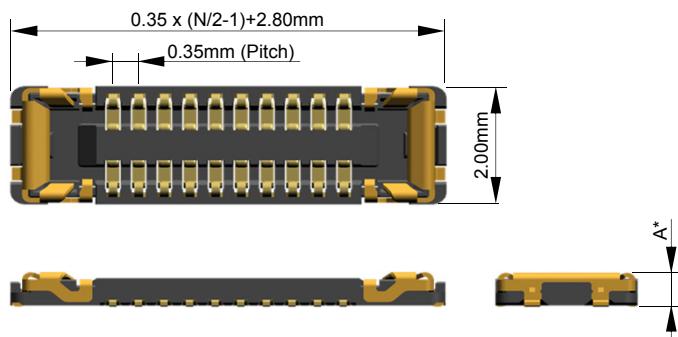
Housing: LCP, UL94V-0, Black  
Contact: Copper Alloy  
Plating:  
    Contact Area – Gold  
    Solder Tail Area – Gold  
    Underplating – Nickel  
Operating Temperature: -40 to +85°C

## Dimensions

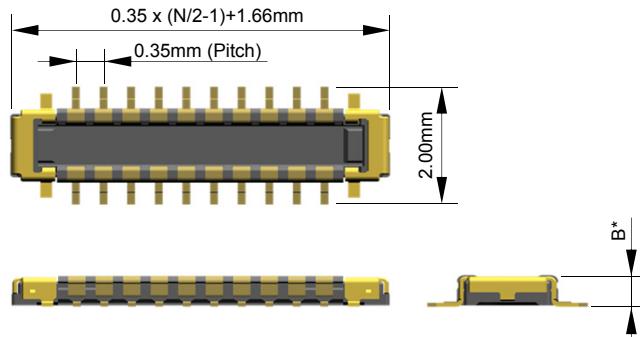
\* Refer to drawing for detail dimension

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
505413-**10	505274-**12	0.80		6, 10, 16, 20, 24, 30, 34, 40, 54
		0.90		6, 30, 34, 40
	505417-**10	1.00		6, 30, 34, 40, 60

\*\*: circuit size

[www.molex.com/link/slimstack.html](http://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

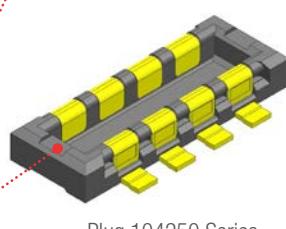
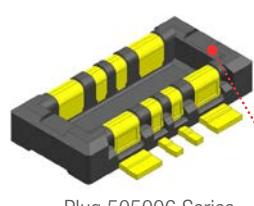
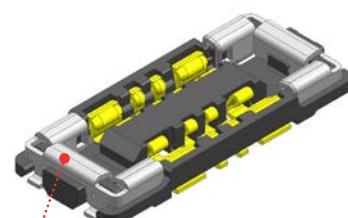
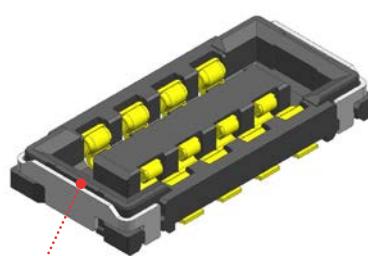
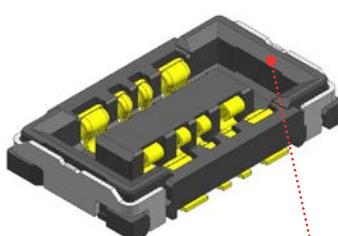
Receptacle 505004 Series

#### Delivers up to 9.0A

Receptacle 104249 Series

#### Delivers up to 10.0A

Receptacle 505473 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



Smartphone



Wearable Watch

### Medical Devices

- Patient Monitoring
- Therapeutic and Surgical



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](http://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

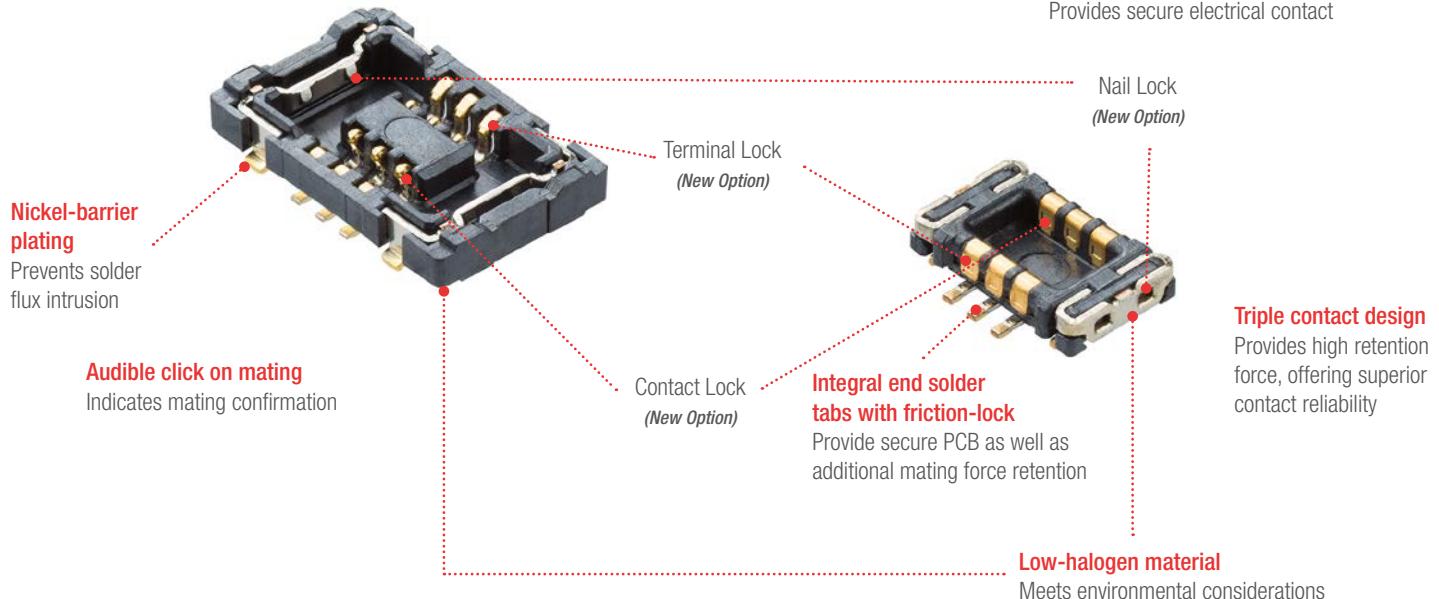
### Narrow width, low profile and small pitch

Yields space savings for mobile and compact applications



### Dual-contact terminal design

Provides secure electrical contact



## 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

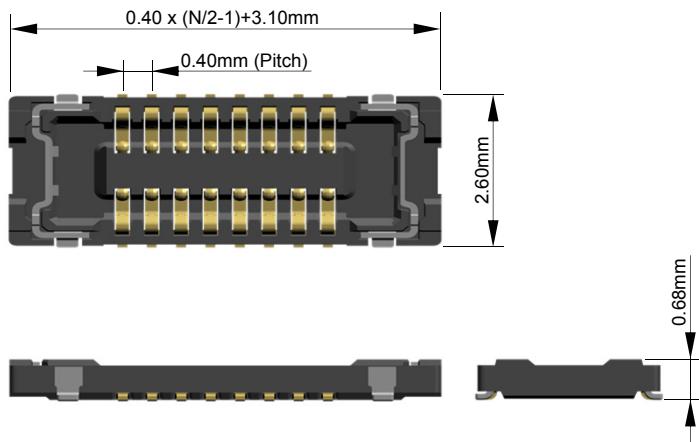
Housing: LCP, UL94V-0, Black  
Contact: Copper Alloy  
Plating:  
Contact Area – Gold  
Solder Tail Area – Gold  
Underplating – Nickel  
Operating Temperature: -40 to +85°C

## Dimensions

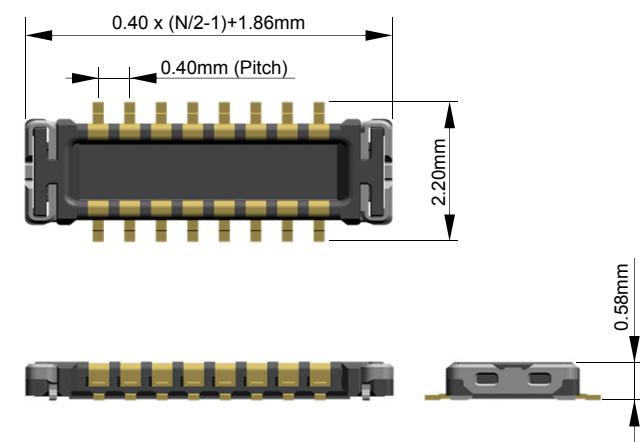
\* Refer to drawing for detail dimension

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

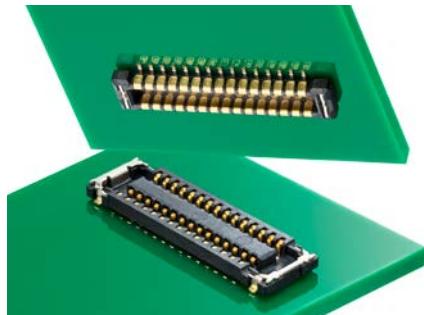
\*\*: Circuit Size

# 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.



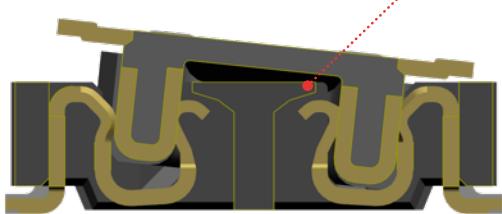
## Features and Advantages

### Top Housing Wall

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

Angled unmating (zippering)

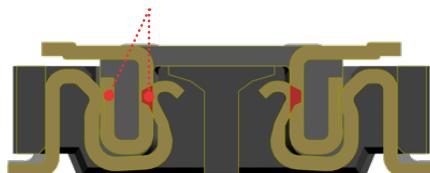
Top housing wall



### 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

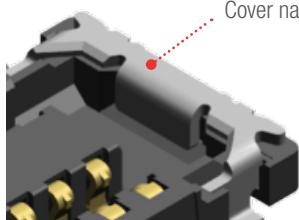
Dual contact



### 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

Cover nail

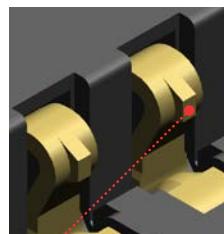
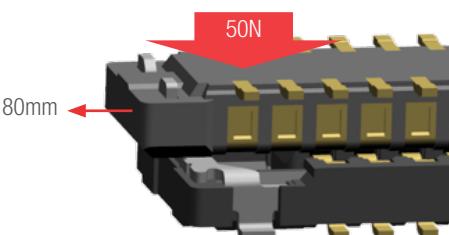


0.80mm

### SlimStack B8 CleanPoint Contact

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

50N



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

**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

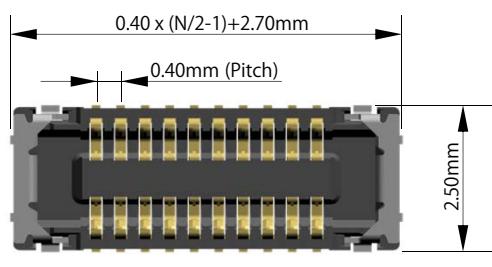
Housing: LCP, UL94V-0, Black  
Contact: Copper Alloy  
Plating:  
    Contact Area – Gold  
    Solder Tail Area – Gold  
    Underplating – Nickel  
Operating Temperature: -40 to +85°C

## Dimensions

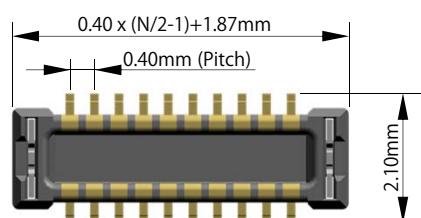
\* Refer to drawing for detail dimension

N: Circuit Size

### Receptacle



### Plug



0.66mm

0.68mm

## 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

[www.molex.com/link/slimstack.html](http://www.molex.com/link/slimstack.html)

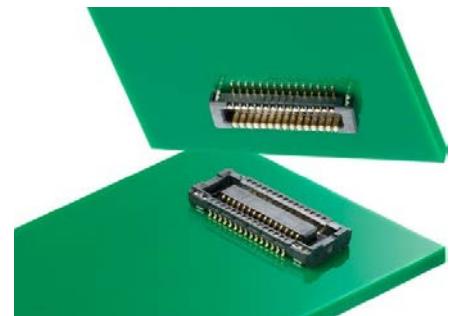
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# SlimStack Board-to-Board Connectors, 0.40mm Pitch, J-Bend Series

**molex**

**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

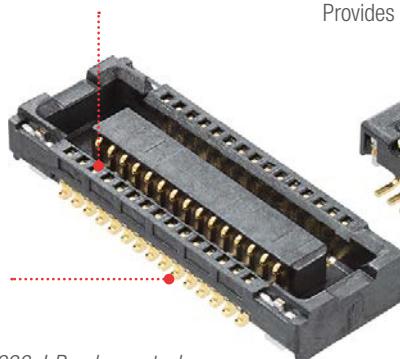
Realizes high retention force

### Audible click on mating

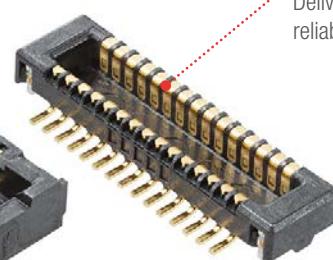
Provides contact assurance

### Long wipe length

Delivers high contact reliability



51338 J-Bend receptacle



55909 J-Bend plug

### SlimStack 0.40mm Pitch J-Bend Connectors

### In-house contact structure

Improved reliability against external shock. Protection from droplets of flux



## Wide range of circuit sizes (10 to 100) and height variations

Offers design flexibility

## Applications

### Consumer

- Game Machine
- Security

### Home Entertainment

- DVC/DSC
- Flat Panel

### Smart Phones and Mobile Devices

- Mobile
- Wearables
- POS

### Data/Computing

- Tablet PC

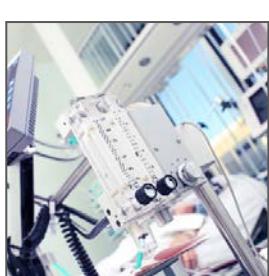
### Data Center Solution

- Network Server

### Medical

- Patient monitors

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

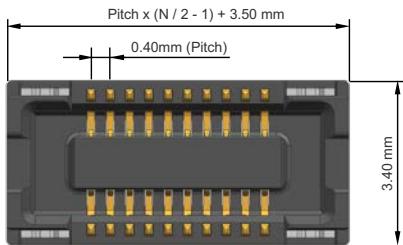
Pitch: 0.40mm  
Mated Height (mm): 1.50, 1.80, 2.00, 2.30  
Width: 3.40mm / 4.20mm  
Length (mm):  $0.40 \times (N/2 - 1) + 3.5$   
Wipe Length: 0.45mm  
Structure Type: Vertical type  
Circuit Size: 10 to 100  
Durability (max.): 30 cycles

### PHYSICAL

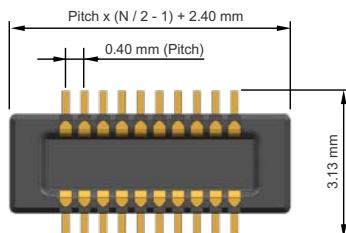
LCP, UL94V-0, Black  
Contact: Copper Alloy  
Plating:  
    Contact Area – Selective Gold  
    Fitting Nail Area – Selective Gold  
    Underplating – Nickel  
Operating Temperature: -25 to +85°C

## Dimensions

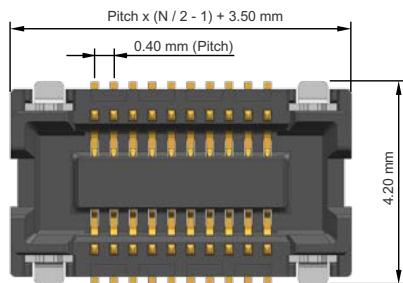
### 51338 Series



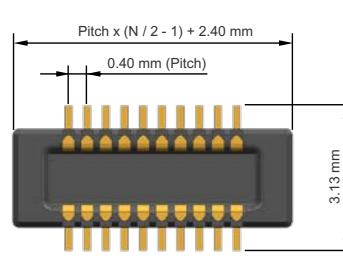
### 55909 Series



### 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](http://www.molex.com/link/slimstack.html)

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

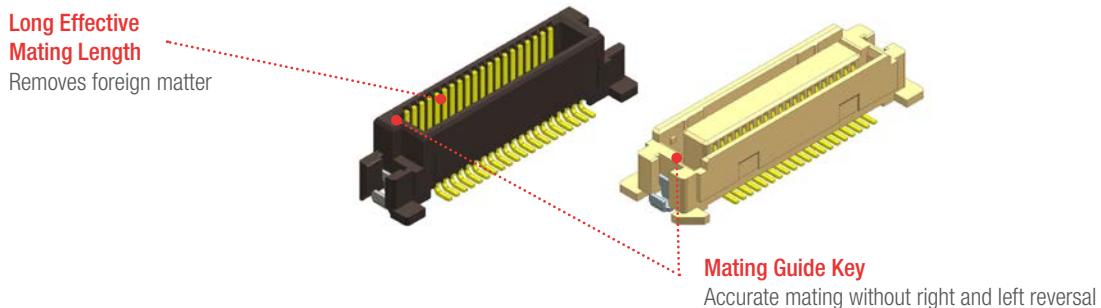
**molex**

**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



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

### Datacom

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

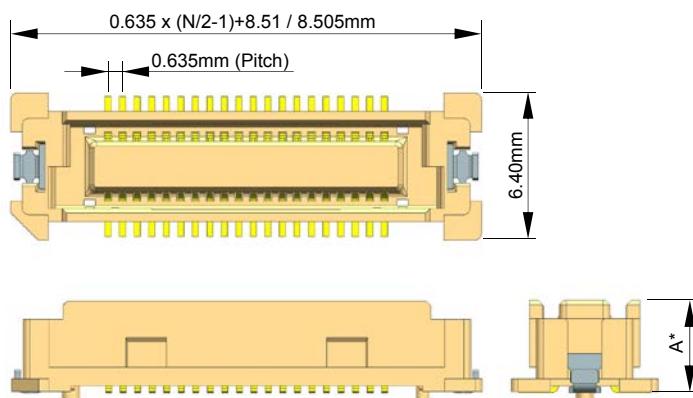
### PHYSICAL

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

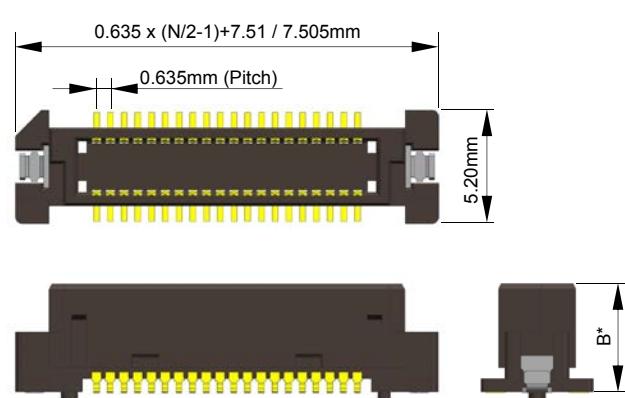
## Dimensions

\* Refer to drawing for detail dimension

### Receptacle



### Plug



N: Circuit Size

## 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	6.40	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](http://www.molex.com/link/slimstack.html)

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

**molex**

**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.

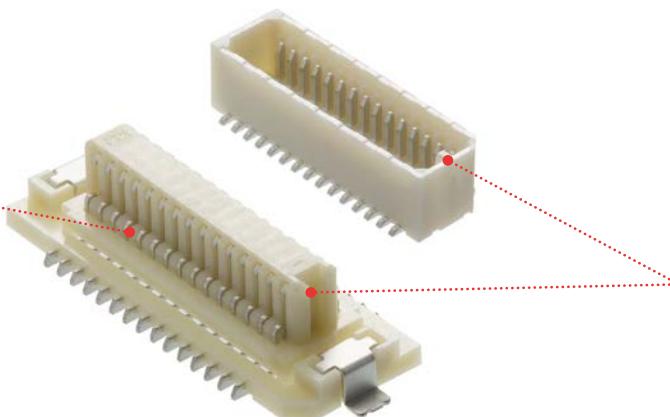
0.80mm Pitch Floating Series has a floating structure range of  $\pm 0.30\text{mm}$ . There are stack height variations from 5.50mm to 8.00mm with same footprint. Customers can select mating direction, and they also select floating or rigid type to meet their design. Molex Micro Solution design provides 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
	A small, rectangular receptacle with a floating structure.	A larger, rectangular receptacle with a floating structure.	A rectangular receptacle with a floating structure.	A rectangular receptacle with a floating structure.	A rectangular receptacle with a floating structure.
Mated Height (mm)					
Rigid Type	Receptacle	Plug			
	52465	53307	53364	53353	53309
	A small, rectangular receptacle with a rigid structure.	A larger, rectangular receptacle with a rigid structure.	A rectangular receptacle with a rigid structure.	A rectangular receptacle with a rigid structure.	A rectangular receptacle with a rigid structure.
Mated Height (mm)					
	4.50 to 7.00	4.50	6.00	7.00	5.65

## Applications

### Automotive

Car Infotainment



Car Infotainment

### Consumer

Smart Speakers

Home Appliances

### Datacom

Servers

Office Equipment



Smart Speaker



Office Equipment

### Industrial

Automation Machines

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

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## 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

### 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

### MECHANICAL

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

## 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	Tin	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		Gold			20, 30, 32			

\*\*: circuit size

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Order No. 987652-0257

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