

# EASY-ON FFC/FPC FS19 TIN-BISMUTH CONNECTORS

Offers an extensive range of circuit counts to meet the diverse needs of several applications.

NPI EXTENSION

MARCH 2025



# Easy-On FFC/FPC FS19 Tin-Bismuth Series

Various applications require connectors to accommodate different types of cables and a wide variety of circuit sizes. Engineered to integrate seamlessly with a variety of cable types, the Easy-On FFC/FPC FS19 series with Tin-Bismuth plating offers an extensive range of circuit counts to meet the diverse needs of several applications. The FS19 series features a generously sized actuator that ensures effortless operation, making it the perfect choice for enhancing productivity and reducing strain on operators.

## Key Product Information

Category: Easy-On FFC/FPC Connectors

Current (max): 1.0A

Voltage (max.):  
0.50mm pitch: 50V  
1.00mm pitch: 125V

Plating: Tin-Bismuth

Mated Height: 1.90mm

Durability (max.): 20 cycles

Operating

Temperatures: © Molex, LLC -40 to +85°C



[View Product  
Landing Page](#)

[Download Datasheet](#)

## Series

505278 0.5 FFC ZIF BTM CONT EMBT PKG  
200529 0.5 FFC ZIF BTM CONT EMBT PKG

# Vital Product Information

## Easy-On FFC/FPC FS19 Tin-Bismuth Series

### What makes this product different from the competition?

The actuation method for the majority of tin-plated FFC/FPC connectors is a traditional slider. Molex Easy-On FFC/FPC Tin-Bismuth plated FS19 Connector features a front-flip actuator and has a lower height than tin-plated FFC/FPC front-flip connectors. The FS19 Connectors work with both eared and non-eared cables.

### How does this product/solution create value for our customers?

The Easy-On FFC/FPC FS19 Tin-Bismuth Connectors provide significant value through their compatibility with different FPC types, compact size for saving space, user-friendly design and overall reliability. These features collectively contribute to more efficient and reliable electronic product designs.

### What is the Molex advantage?

Molex boasts a robust global footprint with the capability to manufacture this series at multiple plants while minimizing BCP risk. Excellent quality control in high-volume production, unparalleled reliability and outstanding performance make Molex a unique partner in finding capability solutions.



# Product Overview

## Easy-On FFC/FPC FS19 Tin-Bismuth series

### Easy assembly

Easy-On FFC/FPC FS19 Tin-Bismuth Connectors have a large actuator, which allows easy FPC insertion during assembly for operators.

### Reliable and flexible design

FS19 features highly reliable terminal design. In addition, the product adds the Tin-Bismuth variety to the existing gold-plated FD19 and can mate with both eared and non-eared FFC/FPC. Along with the wide number of circuit counts available, FS19 is a versatile product that will meet with customers' various design needs.

### Supply Stability

The manufacturing line of Easy-On FFC/FPC FS19 Tin-Bismuth Connectors shows improved supply stability, excellent quality assurance, and increasing flexibility and responsiveness in the manufacturing process.



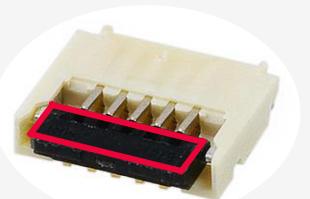
FS19 7pin



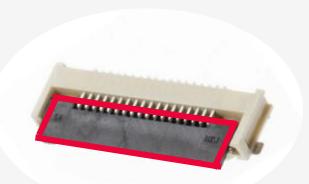
LA75 7pin



FS19 5pin



FBH1 5pin



FS19 17pin



503300 17pin

### FS19 Actuator Size Comparison with Other Molex Products

# Markets and Applications

## Easy-On FFC/FPC FS19 Tin-Bismuth Series



*Robots*



*Smartphones*



*Washing Machines*

### INDUSTRIAL AUTOMATION

- Industrial controls
- Robots

### CONSUMERS

- Smartphones with multimedia/computing/connection functionality
- Gaming devices

### APPLIANCES

- LCD devices
- Washing machines
- Dryers
- Dishwashers
- Refrigerators
- Microwaves
- Ovens
- Induction stoves

# Frequently Asked Questions

## Easy-On FFC/FPC FS19 Tin-Bismuth Series

What is the difference between the obsolete Tin-Silver-Bismuth plated FS19 and the Tin-Bismuth plated FS19?

The only difference is the type of plating used. All the other specifications, including the PCB pattern, remain unchanged.

Has the Tin whisker test been done on the Tin-Bismuth plated FS19?

FS19 has passed the tin whisker test. Test report is available upon request.

Which circuit sizes are available for the FS19?

Kindly refer to the table on the right.



circuit	FS19		FS19		FS19	
	0.5	1.0	0.5	1.0	0.5	1.0
4	•	•	20	•	-	-
5	•	•	21	-	-	-
6	•	•	22	•	•	-
7	•	•	23	-	-	-
8	•	•	24	•	-	-
9	•	-	25	-	-	-
10	•	-	26	•	-	-
11	•	-	27	-	-	-
12	•	•	28	•	-	-
13	•	-	29	-	-	-
14	•	-	30	•	-	-
15	•	-	31	-	-	-
16	•	-	32	-	-	-
17	•	•	33	-	-	-
18	•	-	34	-	-	-
19	•	-	35	•	-	-
36	-	-	51	-	-	-
37	-	-				
38	-	-				
39	-	-				
40	•	-				
41	-	-				
42	-	-				
43	-	-				
44	-	-				
45	•	-				
46	-	-				
47	-	-				
48	-	-				
49	-	-				
50	•	-				
51	-	-				

# Solving Industry Challenges

## Easy-On FFC/FPC FS19 Tin-Bismuth Series



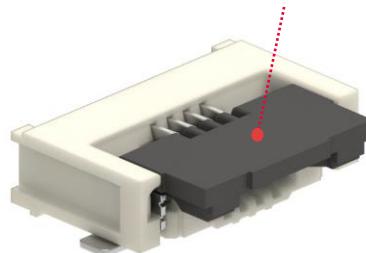
Industry Need	Industry Challenge	Industry Solution	Anticipated Results
Design flexibility	Different applications require connectors to accommodate different types of cables and a wide variety of circuit sizes.	FS19 series adds Tin-Bismuth plating to the existing Gold-plated FD19 series. FS19 can mate with both eared and non-earred FFC/FPC cables in a wide range of circuit sizes.	Customers can use different kinds of cable on FS19 that meet their needs.
Easy operability	Customers want to avoid the risk of operator fatigue during assembly.	FS19 connector has a wide actuator that offers easy cable-insertion operation for the operator.	It will reduce the operator stress on the production line.

# Product Advantages and Features

## Easy-On FFC/FPC FS19 Tin-Bismuth Series

### Facilitates Easy Operation

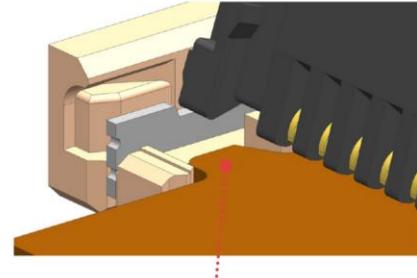
Easy-On FFC/FPC FS19 Tin-Bismuth Connectors have a large actuator, which provides ample space for the finger to open or close the actuator, allowing easier operation.



Large Actuator  
Allows easy operation

### Enhances Design Flexibility

The connectors are designed to seamlessly mate with both eared and non-eared cables. Along with an extensive circuit range, these connectors effortlessly cater to a wide array of customer needs, ensuring maximum versatility and satisfaction.



Latch-type FPC  
Provides secure cable retention and accepts cable with or without tabs



### Key Specifications

Current (max.)	1.0A
Voltage (max.)	125V
Plating	Tin-Bismuth
Mated Height	1.90mm
Durability (max.)	20 cycles
Operating Temperatures	-40 to +85°C

# Product Specifications

## Easy-On FFC/FPC FS19 Tin-Bismuth Series (505278)



### Reference Information

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

### Electrical

Voltage (max.): 50V  
Current (max.): 0.5A  
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 94 V-0, Beige  
Actuator: PA, UL 94 V-0, Black  
Plating:  
    Contact Area: Tin-Bismuth  
    Underplating: Nickel  
    Fitting Nail Area: Tin  
Terminal and fitting nail material: Phosphor Bronze  
PCB Mounting: Surface mount  
Operating Temperatures: -40 to +85°C

### Additional Resources

Web Overview Page	<a href="#">FFC / FPC Connectors   Molex</a>
Datasheet	<a href="#">987651-8732.pdf</a>
Global Product Manager	Truc Anh Truong, CCS, MSBU

# Product Specifications

## Easy-On FFC/FPC FS19 Tin-Bismuth Series (200529)



### Reference Information

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

### Electrical

Voltage (max.): 125V  
Current (max.): 1.0A  
Contact Resistance (max.): 40 milliohms  
Dielectric Withstanding Voltage: 500V AC  
Insulation Resistance (min.): 50 Megohms

### Mechanical

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

### Physical

Housing: LCP, UL 94 V-0, Beige  
Actuator: PA, UL 94 V-0, Black  
Plating:  
    Contact Area: Tin-Bismuth  
    Underplating: Nickel  
    Fitting Nail Area: Tin  
Terminal and fitting nail material: Phosphor Bronze  
PCB Mounting: Surface mount  
Operating Temperatures: -40 to +85°C



THANK YOU

*creating connections for life*

**molex**