

# AX01Series

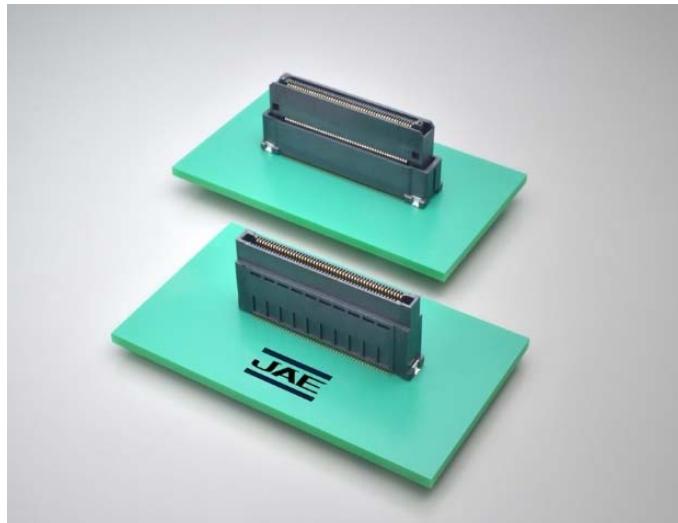
## High-speed Transmission, Floating Board-to-board Connector

CONNECTOR

MB-0348-1

September 2019

### RoHS Compliant



The AX01 Series is the next generation floating board-to-board connector. This product features a highly reliable two-point contact structure, achieving high-speed transmission exceeding 8 Gbps.

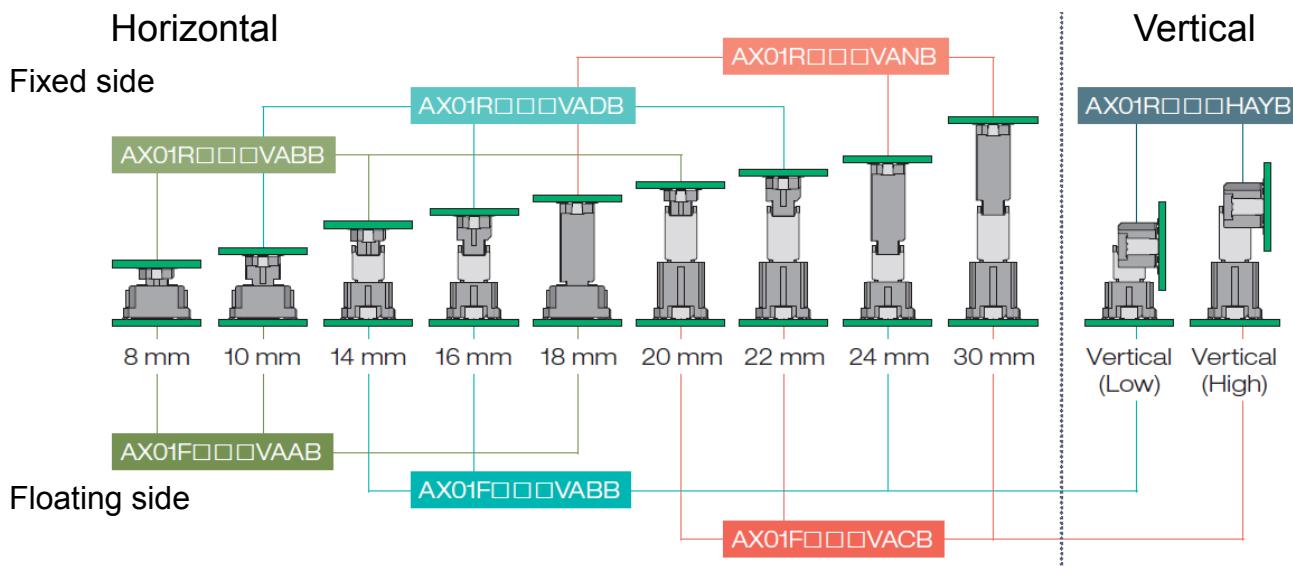
### Applicable Markets

FA equipment, semiconductor manufacturing equipment, office machines, communication equipment, measuring equipment, broadcasting equipment, amusement equipment, and other various applications

### Features

- Floating tolerance:  $\pm 0.5$  mm in both X & Y directions
- Stacking height tolerance between boards:  $\pm 0.5$  mm in Z-axis direction
- Two-point contact structure ensures high contact reliability
- Low insertion and removal forces achieved by roll surface contact structure
- 8 Gbps+ high-speed transmission (10 GBASE-KR and PCIe Gen3)
- Excellent mating workability with large size guide shape, supports automatic assembly and mating (mating guide length:  $\pm 1.0$  mm)
- Supports automatic mounting
- Allows for multiple connectors to be used on a single board
- Keyed to prevent mis-mating

## AX01 Series Variations



Internal board-to-board connection, tolerance in Z direction:  $\pm 0.5$  mm

Floating Side Connector Part Number	Fixed Side Connector Part Number	Mating Height (mm)	Number of Contacts							
			30	40	60	80	90	100	120	140
AX01F□□□VAAB	AX01R□□□VABB	8								
AX01F□□□VAAB	AX01R□□□VADB	10								
AX01F□□□VABB	AX01R□□□VABB	14	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
AX01F□□□VABB	AX01R□□□VADB	16								
AX01F□□□VAAB	AX01R□□□VANB	18								
AX01F□□□VACB	AX01R□□□VABB	20	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
AX01F□□□VACB	AX01R□□□VADB	22								
AX01F□□□VABB	AX01R□□□VANB	24	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
AX01F□□□VACB	AX01R□□□VANB	30	Sample	Sample	Sample	Sample	Sample	Yes	Sample	Sample
AX01F□□□VABB	AX01R□□□HAYB	Vertical (L)	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample
AX01F□□□VACB	AX01R□□□HAYB	Vertical (H)	Sample	Sample	Sample	Sample	Sample	Sample	Sample	Sample

□□□ Number of Contacts  
(The squares in the Part Number represent pin count)

Yes

Launched

Sample

Samples available

Future development

Note) Please contact us for details.

## General Specifications

Pitch	0.635 mm pitch
Number of Contacts	30 to 140 position
Stacking Height	8 to 30mm
Floating Movable Amount	X direction: $\pm 0.5$ mm, Y direction: $\pm 0.5$ mm
Operating Temperature Range	-40°C to +105°C (including conduction temperature rise)
Rated Current	0.5A
Rated Voltage	AC50V rms.
Contact Resistance	Initial: 50mΩ max. / After test: 100mΩ max.
Dielectric Withstanding Voltage	AC250V rms., conduction for 1 minute
Insulation Resistance	100MΩ min.
Durability	100 mating cycles

## Materials and Finishes

### Floating Connector

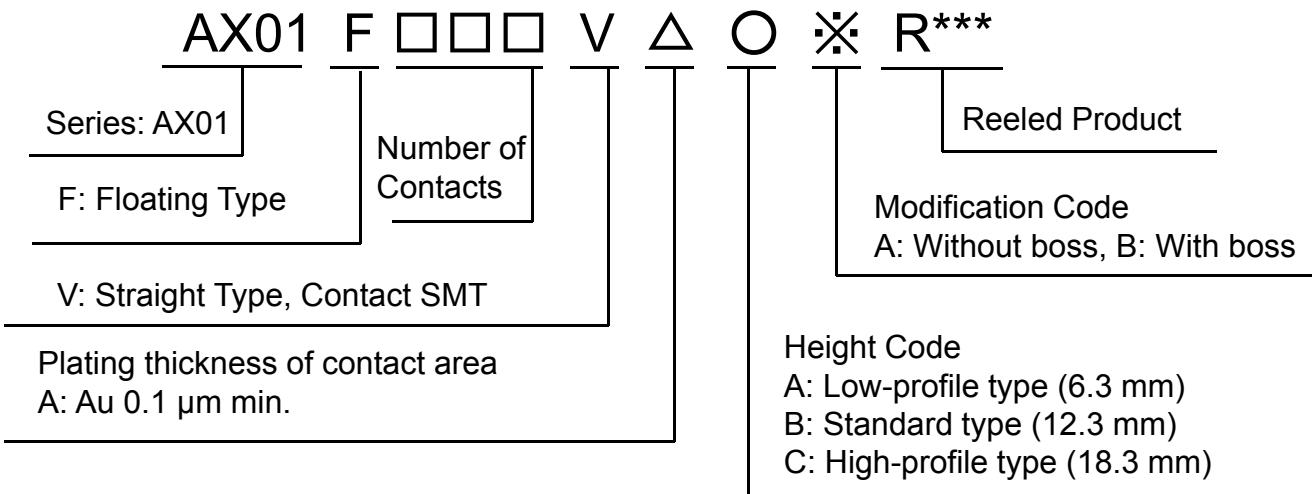
Component	Materials	Finishes
Fixed Insulator	LCP	
Floating Insulator	LCP	
Contact	Copper alloy	Au plating
Hold-down	Copper alloy	Sn plating
Cap	Stainless steel	

### Fixed Connector

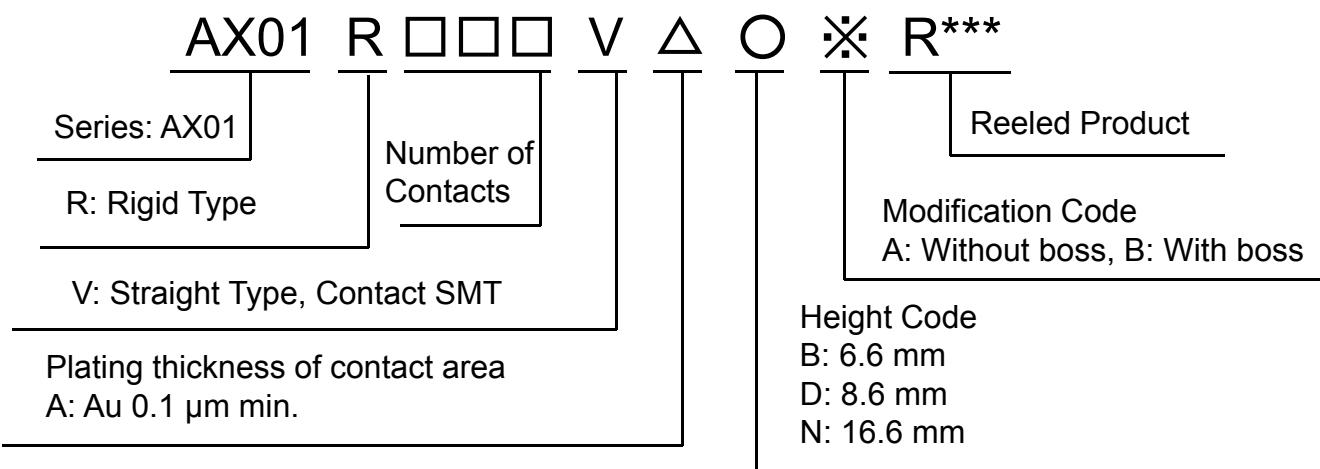
Component	Materials	Finishes
Insulator	LCP	
Contact	Copper alloy	Au plating
Hold-down	Copper alloy	Sn plating
Cap	Stainless steel	

## Ordering Information

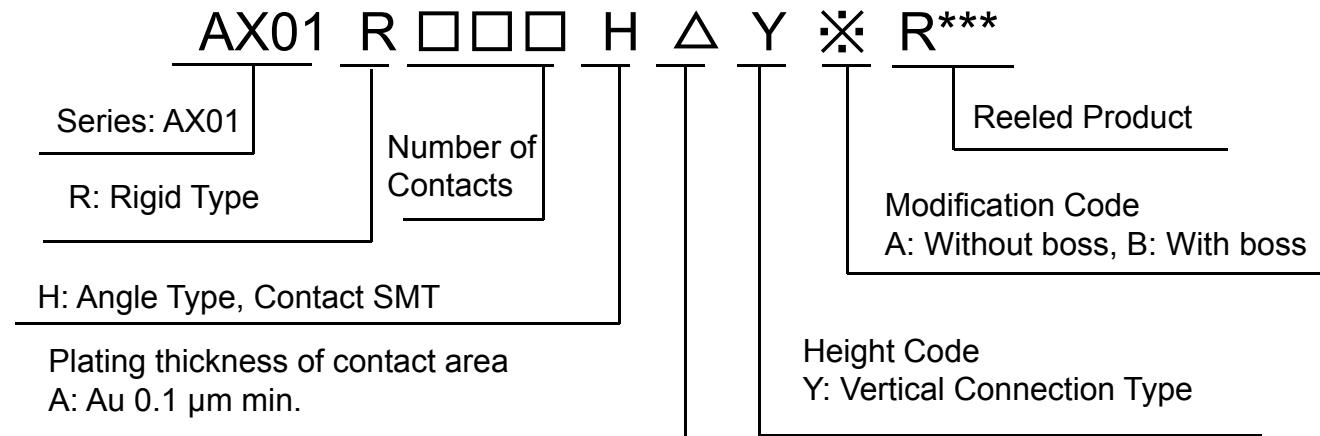
### Floating Connector



### Fixed Straight Type Connector



### Fixed Angle Type Connector

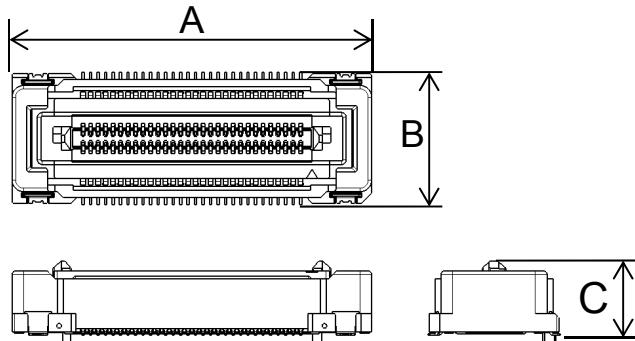


Note) Please contact us concerning products without boss.

## Outer Dimensions

### Floating Connector (Low-profile type)

[AX01F□□□VAAB]

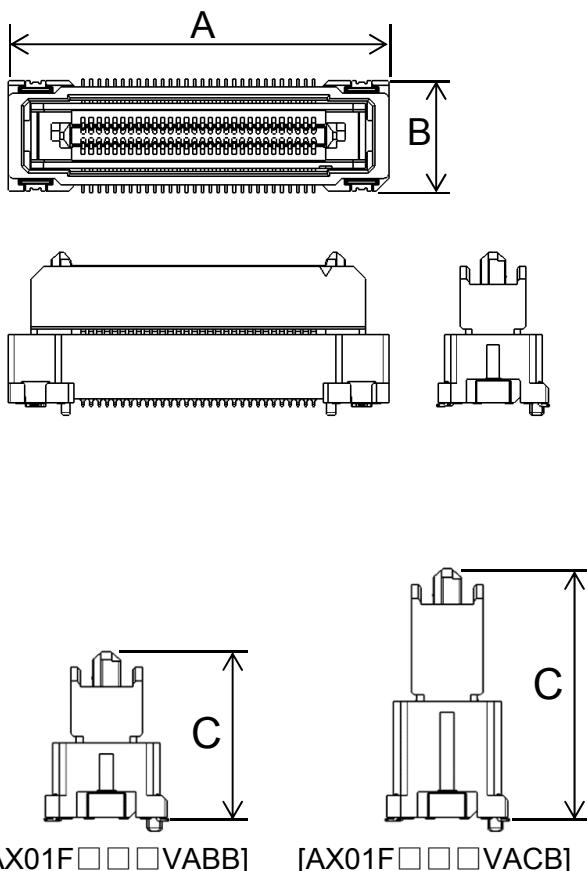


Number of Contacts	A	B	C
30	20.925	11.2	6.3
40	24.1		
60	30.45		
80	36.8		
90	39.975		
100	43.15		
120	49.5		
140	55.85		

### Floating Connector (Standard, High-profile type)

[AX01F□□□VABB] [AX01F□□□VACB]

Unit: mm



Number of Contacts	A	B
30	20.925	8.8
40	24.1	
60	30.45	
80	36.8	
90	39.975	
100	43.15	
120	49.5	
140	55.85	

Unit: mm

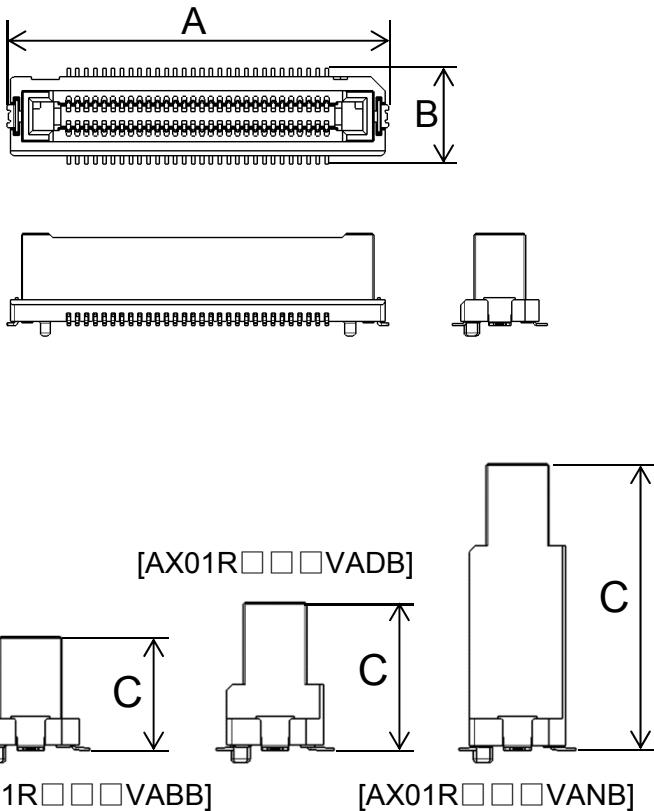
Part Number	C
AX01F□□□VABB	12.3
AX01F□□□VACB	18.3

## Outer Dimensions

### Fixed Straight Type Connector

[AX01R□□□VABB] [AX01R□□□VADB] [AX01R□□□VANB]

Unit: mm



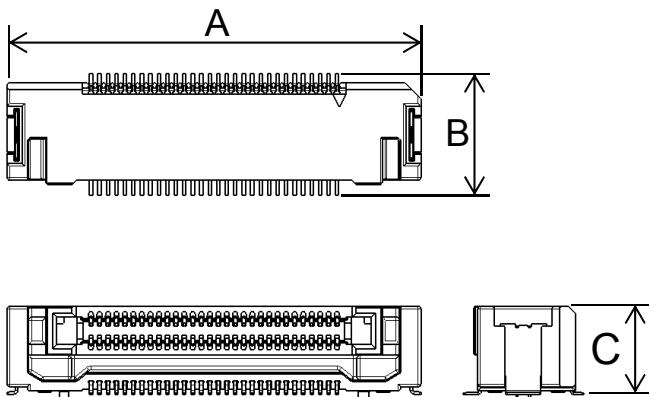
Number of Contacts	A	B
30	17.745	6.8
40	20.92	
60	27.27	
80	33.62	
90	36.795	
100	39.97	
120	46.32	
140	52.67	

Unit: mm

Part Number	C
AX01R□□□VABB	6.6
AX01R□□□VADB	8.6
AX01R□□□VANB	16.6

### Fixed Angle Type Connector

[AX01R□□□HAYB]



Unit: mm

Number of Contacts	A	B	C
30	21.425	9.0	6.6
40	24.6		
60	30.95		
80	37.3		
90	40.475		
100	43.65		
120	50.0		
140	56.35		

## Part Numbers and Drawing Numbers

Part Numbers	Drawing Numbers	Specifications	Handling Instructions
AX01F□□□VABB	SJ119086 (Individual product)		
AX01F□□□VABBR300	SJ121027 (Reeled product)		
AX01F□□□VACB	SJ120865 (Individual product)		
AX01F□□□VACBR150	SJ121326 (Reeled product)		
AX01R□□□VABB	SJ119087 (Individual product)	JACS-11221	JAHL-11221
AX01R□□□VABBR600	SJ121028 (Reeled product)		
AX01R□□□VANB	SJ120866 (Individual product)		
AX01R□□□VANBR200	SJ121327 (Reeled product)		
AX01R□□□HAYB	SJ120449 (Individual product)		
AX01R□□□HAYBR600	SJ121029 (Reeled product)		

□□□ : Number of Contacts (030,040,060,080,090,100,120,140 positions)

### Notice:

1. The values specified in this brochure are only for reference. The products and their specifications are subject to change without notice. Contact our sales staff for further information before considering or ordering any of our products. For purchase, a product specification must be agreed upon.
2. Users are requested to provide protection circuits and redundancy circuits to ensure safety of the equipment, and sufficiently review the suitability of JAE's products to the equipment.
3. The products presented in this brochure are designed for the uses recommended below. We strongly suggest you contact our sales staff when considering use of any of the products in any other way than the recommended applications or for a specific use that requires an extremely high reliability.

(1) Applications that require consultation:

(i) Please contact us if you are considering use involving a quality assurance program that you specify or that is peculiar to the industry, such as:  
Automotive electrical components, train control, telecommunications devices (mainline), traffic light control, electric power, combustion control, fire prevention or security systems, disaster prevention equipment, etc.  
(ii) We may separately give you our support with a quality assurance program that you specify, when you think of a use such as:  
Aviation or space equipment, submarine repeaters, nuclear power control systems, medical equipment for life support, etc.

(2) Recommended applications include:

Computers, office appliances, telecommunications devices (terminals, mobile units), measuring equipment, audiovisual equipment, home electric appliances, factory automation equipment, etc.

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\* The specifications in this brochure are subject to change without notice. Please contact JAE for information.