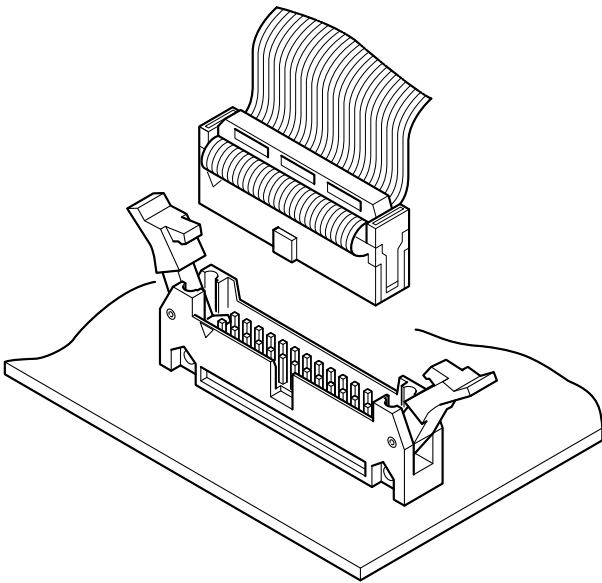


RA CONNECTOR (IDC Type)

1.27 mm pitch ribbon cables for PC board/Mating type

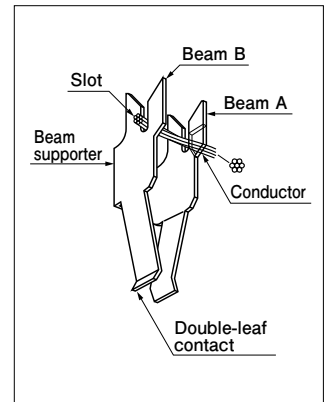


To keep pace with the rapid developments in electronics, internal and external connection systems are naturally increasing in density. At the same time, labor requirements and overall costs must be minimized. RA connectors meet all of these requirements, while providing increased reliability. These connectors, whose materials, shapes, dimensions, and surface treatments have been carefully selected, are based on the latest technological information that has been accumulated and improved over years of experience in crimping connection technology.

■ Features

• Twin U-slot ID section

The twin U-slot is the most important IDC element in JST's RA connectors. As shown in the figure, wire conductors are connected between the slots of U-shaped parallel beams, and the distance between each adjacent pair of beams is designed to be one third of the pitch of wire strands.



• Two-die processing and selective gold plating

Two precision dies are used to blank and form the contacts. After the first die blanks the contacts, they are gold plated at crucial points. Then, the contacts are formed by the second die. This eliminates unnecessary gold-plating and overall costs are minimized. This innovation is another example of our industry-leading technology.

• Selective gold-plated posts

Header posts are also selectively gold-plated. While square wire material is used for production of conventional posts in loose pieces, continuous flat strip is used for production of our post in chain form. This allows selective gold-plating and provides cost reduction.

• Cost-efficient

JST's unique technology allows it to produce connectors that are extremely reliable and cost-efficient.

• Interchangeable cables and connectors

RA connectors fit commercially available 1.27 mm pitch flat ribbon cables. A variety of ribbon cables are offered according to the purpose. Moreover, the RA series receptacles and header are interchangeable with the similar type of connectors commercially available. Contact JST before procuring cables and other manufacturer's mating connectors.

■ Standards

Ⓜ: Recognized E 60389

Ⓢ: Certified LR 20812

* In using the products, refer to "Handling Precautions for Terminals and Connectors" described on our website (Technical documents of Product information page).

* RoHS2 compliance

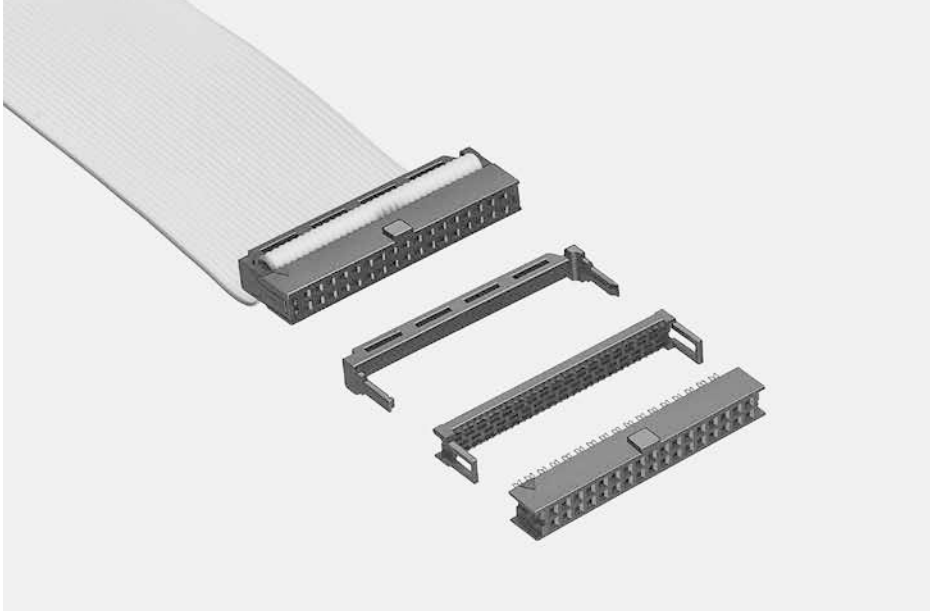
* Dimensional unit: mm

* Contact JST for details.

RA CONNECTOR

Receptacle

■ Appearance



■ Specifications

Performances

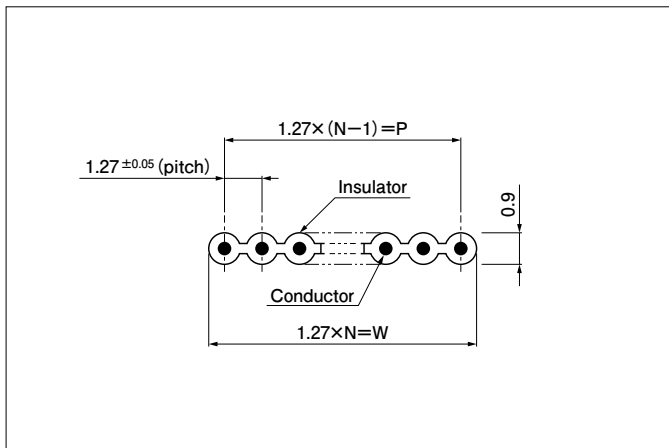
Current rating	1.0 A AC/DC
Voltage rating	300 V AC/DC
Temperature range	(including temperature rise in applying electrical current) -55°C to +125°C (gold-plated) -55°C to +105°C (tin-plated)
Contact resistance	Initial value/ 10 mΩ max. (gold-plated) 40 mΩ max. (tin-plated) After environmental tests/ 15 mΩ max. (gold-plated) 50 mΩ max. (tin-plated)
Insulation resistance	5,000 MΩ min.
Withstanding voltage	500 VAC/5 seconds
Applicable wire	AWG #28, 1.27 mm pitch ribbon cable

Materials

Contact	Phosphor bronze • Nickel-undercoated, selective gold-plated • Copper-undercoated, tin-plated
Receptacle housing	Glass-filled PBT, UL94V-0, black
Cover housing	Glass-filled PBT, UL94V-0, black
Strain relief	Glass-filled PBT, UL94V-0, black

* Contact JST for details.

■ Applicable cables



Note: N — Number of circuits

No. of conductors (n)	Dimensional tolerance (mm)	
	P (Between conductors at both ends)	W (total width)
10 to 14	±0.18	±0.3
16 to 26	±0.28	
34 to 60	±0.38	

* Contact JST for details.

Conductor	AWG # 28 stranded wire Configuration: 7/0.127 mm dia. Material: Tin-plated annealed copper wire
	AWG # 28 solid wire Configuration: 0.32 mm dia. Material: Tin-plated annealed copper wire
Insulator	Soft vinyl chloride

Receptacle

Model number allocation

	RA - S 50 1 T - 1 2 00	Note)
Series name		
Product name: Receptacle		
No. of circuits: 10, 14, 16, 20, 26, 34, 40, 50, 60		
No. of guide ribs: 10 to 40 circuits...1 50 and 60 circuits...1, 2		
Connection method: T...Through type		
With/Without strain relief: 0...Without strain relief 1...With strain relief		
Contact material: 2...Phosphor bronze		
Surface finish: 00...Gold-plated (flash) 02...0.2 μm gold-plated, 03...0.4 μm gold-plated, 04...0.76 μm gold-plated, 90...Tin-plated		

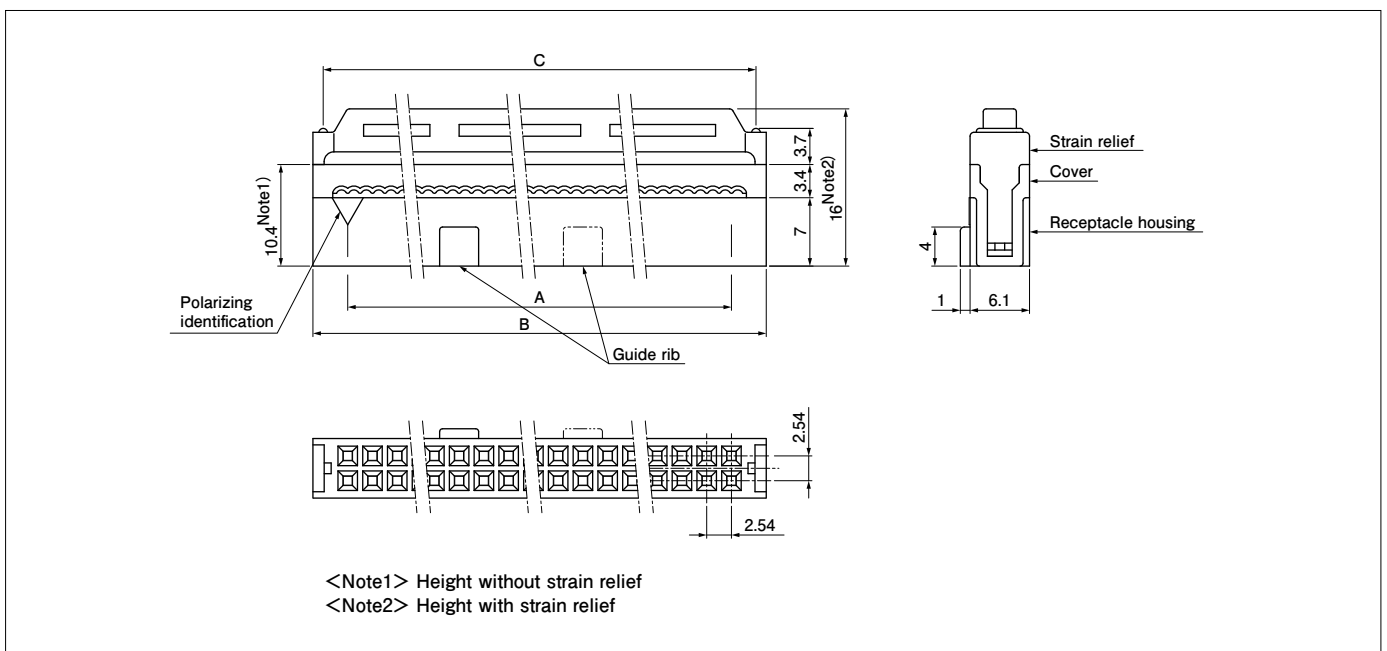
Note:

The standard gold-plated type is identified by the suffix number [-1200], but this suffix number is not indicated.

The gold-plated type identified by [-0200] is indicated by [-0] for short. Other types must be identified by the full code number.

Special types do not conform to the coding system in the left.

Dimensions of assembly products

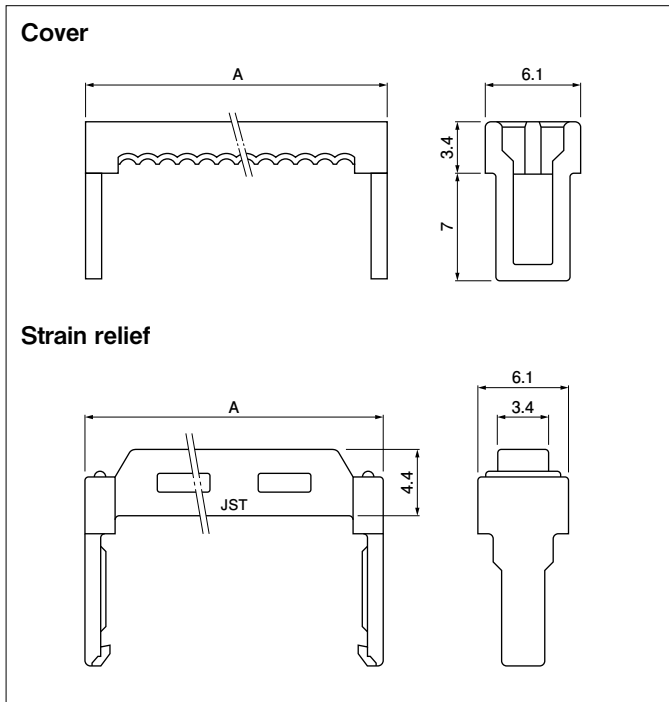


No. of circuits	No. of guide ribs	Model No.			Dimensions (mm)			Q'ty/box
		Gold-plated receptacles		Tin-plated receptacles	A	B	C	
		With strain relief	Without strain relief	With strain relief				
10	1	RA-S101T	RA-S101T-0	RA-S101T-1290	10.16	17.30	13.00	300
14	1	RA-S141T	RA-S141T-0	RA-S141T-1290	15.24	22.38	18.08	200
16	1	RA-S161T	RA-S161T-0	RA-S161T-1290	17.78	24.92	20.62	200
20	1	RA-S201T	RA-S201T-0	RA-S201T-1290	22.86	30.00	25.70	150
26	1	RA-S261T	RA-S261T-0	RA-S261T-1290	30.48	37.62	33.32	150
34	1	RA-S341T	RA-S341T-0	RA-S341T-1290	40.64	47.78	43.48	100
40	1	RA-S401T	RA-S401T-0	RA-S401T-1290	48.26	55.40	51.10	100
50	1	RA-S501T	RA-S501T-0	RA-S501T-1290	60.96	68.10	63.80	75
	2	RA-S502T	RA-S502T-0	RA-S502T-1290				
60	1	RA-S601T	RA-S601T-0	RA-S601T-1290	73.66	80.80	76.50	75
	2	RA-S602T	RA-S602T-0	RA-S602T-1290				

RoHS2 compliance Tin-plated products display (LF)(SN) on a label.

RA CONNECTOR

Cover and Strain relief



No. of circuits	Model No.		Dimensions (mm)
	Cover	Strain relief	
10	RA-CH10T	RA-SR10T-1	17.30
14	RA-CH14T	RA-SR14T-1	22.38
16	RA-CH16T	RA-SR16T-1	24.92
20	RA-CH20T	RA-SR20T-3	30.00
26	RA-CH26T	RA-SR26T-3	37.62
34	RA-CH34T	RA-SR34T-3	47.78
40	RA-CH40T	RA-SR40T-3	55.40
50	RA-CH50T	RA-SR50T-3	68.10
60	RA-CH60T	RA-SR60T-1	80.80

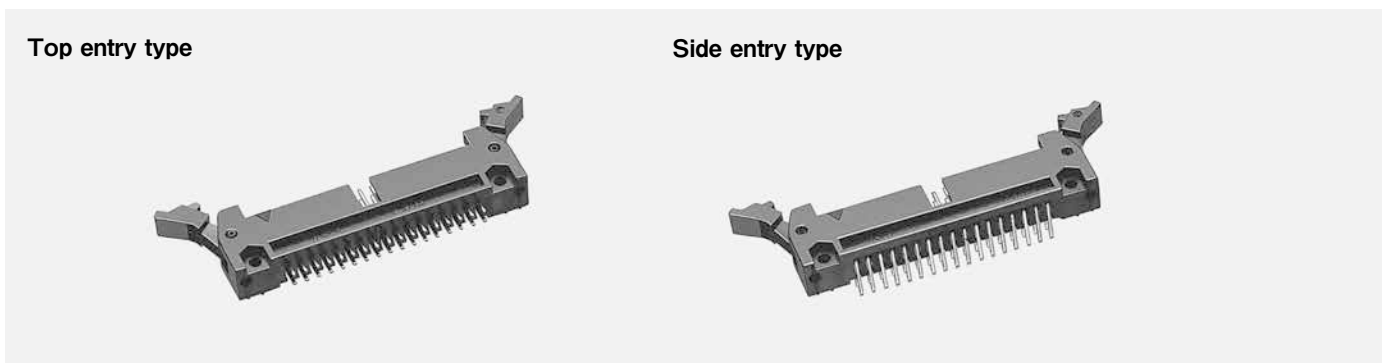
RoHS2 compliance

Note) The products listed in the above table are standard specifications.

1. Color: Black
2. When ordering Cover or Strain relief only, refer to the above table.

Header

Appearance



Specifications

Performances

Current rating	1.0 A AC/DC
Voltage rating	300 V AC/DC
Temperature range	(including temperature rise in applying electrical current) -55°C to +125°C (gold-plated) -55°C to +105°C (tin-plated)
Insulation resistance	5,000 MΩ min.
Withstanding voltage	500 VAC/5 seconds
Applicable PC board thickness	1.6 mm

Note: Contact JST for details.

Materials and Finish

Post	Brass • Nickel-undercoated Mating part: gold-plated Solder tail: tin-plated • Copper-undercoated, tin-plated
Housing	Glass-filled PBT, UL94V-0, black

Header

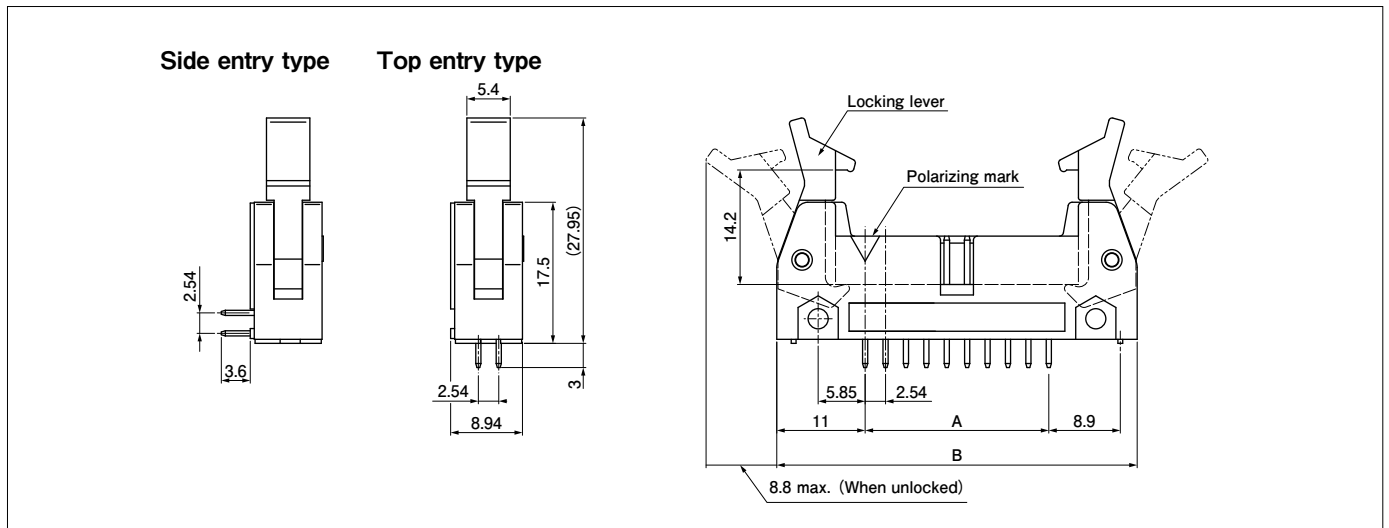
Model number allocation

	RA - H 50 1 TD - 1 1 10	Note)
Series name		
Product name: Header		
No. of circuits: 10, 14, 16, 20, 26, 34, 40, 50, 60		
No. of guide grooves: 10 to 40 circuits...1 50 and 60 circuits...1, 2		
PC board mounting method: TD...Top entry type Dip SD...Side entry type Dip		
With/Without locking lever: 0...Without locking lever 1...With locking lever		
Post material: 1...Brass		
Surface finish: 10...Gold-plated (flash), 12...0.2 μm gold-plated 13...0.4 μm gold-plated, 14...0.76 μm gold-plated, 90...Tin-plated		

Note:

The standard gold-plated type is identified by the suffix number [-1110], but this suffix number is not indicated. Other types must be identified by the full code number. Special types do not conform to the coding system in the left.

Dimensions of assembly products



No. of circuits	No. of guide grooves	Model No.				Dimensions (mm)		Q'ty/box
		Gold-plated header		Tin-plated header (With locking lever)		A	B	
		Top entry type	Side entry type	Top entry type	Side entry type			
10	1	RA-H101TD	RA-H101SD	RA-H101TD-1190	RA-H101SD-1190	10.16	32.16	50
14	1	RA-H141TD	RA-H141SD	RA-H141TD-1190	RA-H141SD-1190	15.24	37.26	50
16	1	RA-H161TD	RA-H161SD	RA-H161TD-1190	RA-H161SD-1190	17.78	39.78	50
20	1	RA-H201TD	RA-H201SD	RA-H201TD-1190	RA-H201SD-1190	22.86	44.86	50
26	1	RA-H261TD	RA-H261SD	RA-H261TD-1190	RA-H261SD-1190	30.48	52.48	25
34	1	RA-H341TD	RA-H341SD	RA-H341TD-1190	RA-H341SD-1190	40.64	62.64	25
40	1	RA-H401TD	RA-H401SD	RA-H401TD-1190	RA-H401SD-1190	48.26	70.26	25
50	1	*RA-H501TD	RA-H501SD	RA-H501TD-1190	RA-H501SD-1190	60.96	82.96	25
	2	*RA-H502TD	*RA-H502SD	*RA-H502TD-1190	*RA-H502SD-1190			
60	1	*RA-H601TD	RA-H601SD	RA-H601TD-1190	RA-H601SD-1190	73.66	95.66	25
	2	*RA-H602TD	*RA-H602SD	*RA-H602TD-1190	*RA-H602SD-1190			

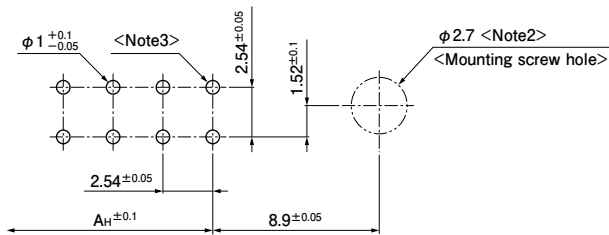
RoHS2 compliance This product displays (LF)(SN) on a label.

Note: *Marked products are unlisted in CSA.

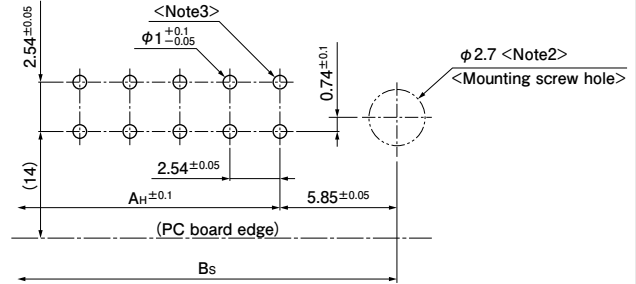
RA CONNECTOR

PC board layout

Top entry type



Side entry type



* The above figure is the figure viewed from the header mounting side.

No. of circuits	Dimensions (mm)	
	A_H	B_s
10	10.16	21.86
14	15.24	26.94
16	17.78	29.48
20	22.86	34.56
26	30.48	42.18
34	40.64	52.34
40	48.26	59.96
50	60.96	72.66
60	73.66	85.36

Note:

1. Tolerance for the drilling hole pitch on PCB is ± 0.05 throughout, and shall not be cumulative over than ± 0.1 .
Hole dimensions differ according to the type of PC board and piercing method.
Please contact JST for details as the dimensions shown in the above figure are reference values.
2. The mounting screw holes are not required for standard headers.
3. This is normally circuit No.1 position.