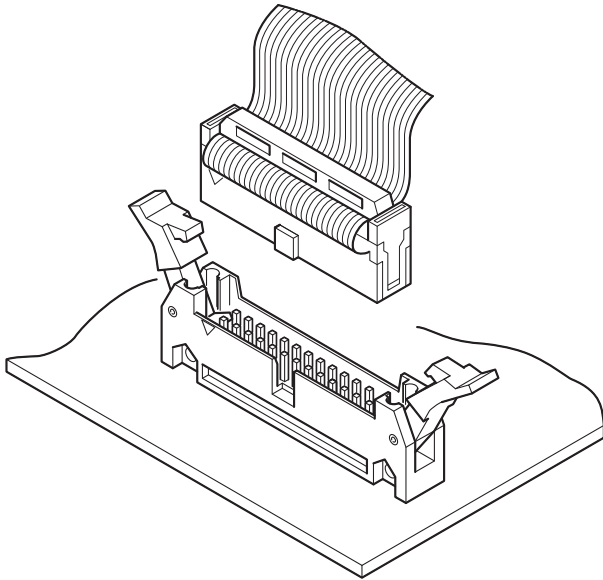


# RA CONNECTOR IDC Type

2.54 mm pitch/ 1.27 mm pitch ribbon cables/ IDC style (Insulation displacement connector) and Mating style

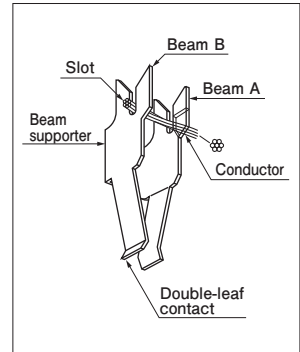


To keep pace with the rapid developments in electronics, internal and external connection systems are naturally increasing in density. At the same time, labor requirements and overall costs must be minimized. RA connectors meet all of these requirements, while providing increased reliability. These connectors, 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.

### • MIL-Spec (MIL-C-83503) compliant

RA connectors are MIL-Spec (MIL-C-83503) compliant. 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.

## ■ 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).

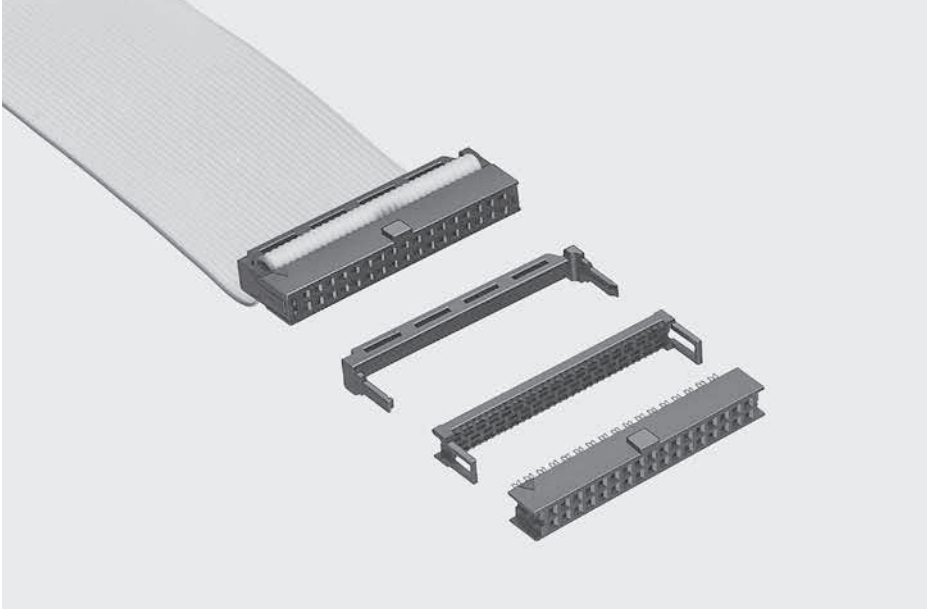
\* RoHS2 compliance

\* Dimensional unit: mm

\* Contact JST for details.

## Socket

### Appearance



### Specifications

#### Performances

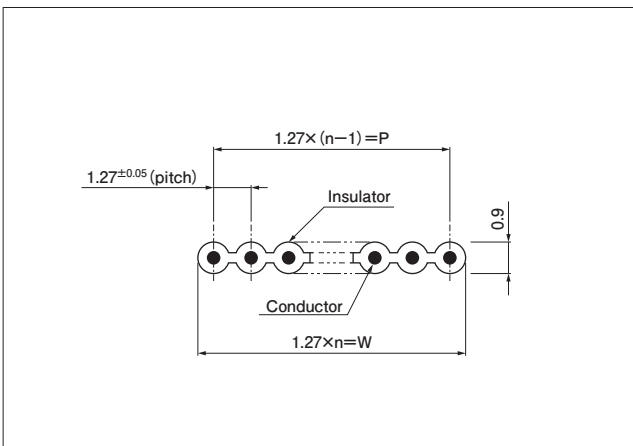
Current rating	1.0 A AC/DC
Voltage rating	300 V AC/DC
Temperature range	-55°C to +125°C (including temperature rise in applying electrical current) (Tin-plated product: -55°C to +105°C)
Contact resistance	Initial value/ 10 mΩ max. (Tin-plated product: 40 mΩ max.) After environmental tests/ 15 mΩ max. (Tin-plated product: 50 mΩ max.)
Insulation resistance	5,000 MΩ min.
Withstanding voltage	There shall be no breakdown or flashover while applying 500 VAC for 5 seconds.
Applicable wire	AWG #28, 1.27 mm pitch ribbon cable

#### Material and Surface finish, etc.

Contact	Copper alloy Gold-plated product: Nickel-undercoated, selective gold-plated (flash) Tin-plated product: Copper-undercoated, tin-plated
Receptacle housing	Thermoplastic resin, UL94V-0, black
Cover	Thermoplastic resin, UL94V-0, black
Strain relief	Thermoplastic resin, UL94V-0, black

Note: Contact JST for details.

### Applicable cables



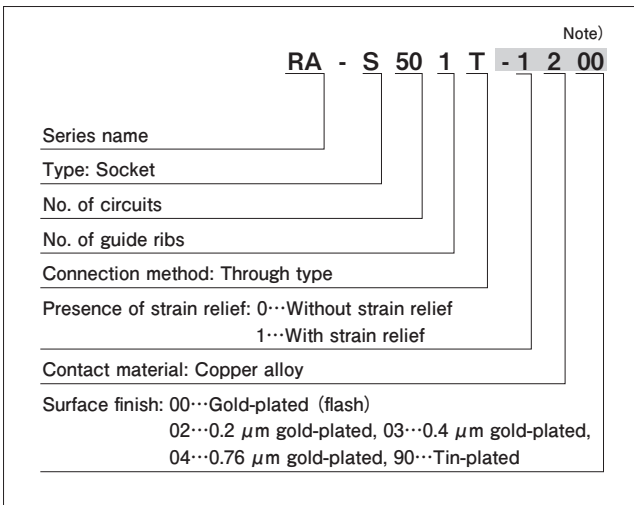
No. of conductors (n)	Dimensional tolerance (mm)	
	P (Between conductors at both ends)	W (total width)
10 to 14	±0.18	±0.3
16 to 26	±0.28	
34 to 60	±0.38	

Note: Contact JST for details.

Conductor	AWG # 28 stranded wire Composition: 7 conductors/ $\phi$ 0.127 mm Material: Annealed copper wire with tin coating
	AWG # 28 solid wire Composition: $\phi$ 0.32 mm Material: Annealed copper wire with tin coating
Insulator	Soft vinyl chloride

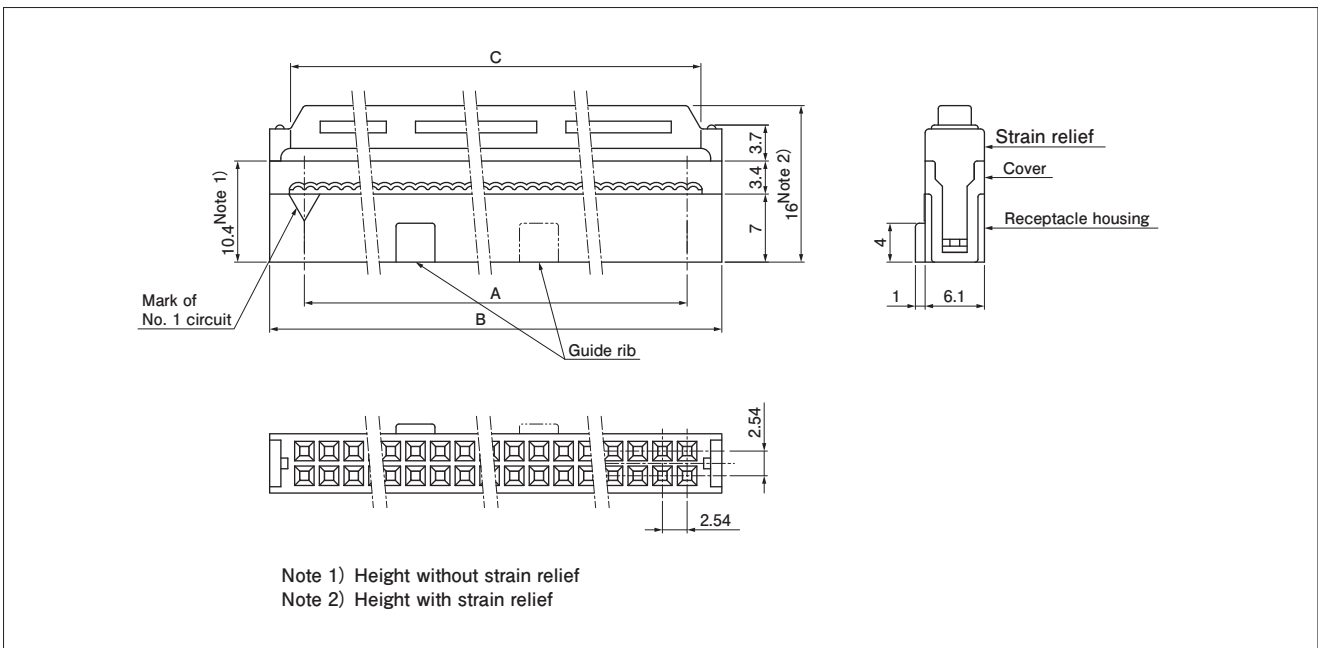
## Socket

### Model number allocation



Note: The code -1200 is not shown for partially gold-plated flush with strain relief. For gold-plated flash products without strain relief, -0200 is indicated as -0.  
For other specifications, the codes specified on the left will be displayed.  
Please contact JST for the indication of special specifications not specified in the left column.

### Dimensions of assembly products

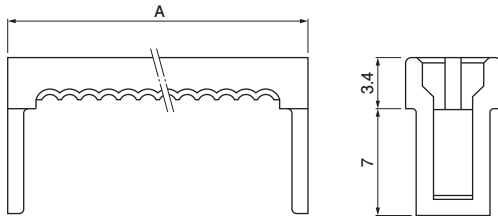


No. of circuits	No. of guide ribs	Model No.			Dimensions (mm)			Q'ty/box
		Gold-plated product		Tin-plated product	A	B	C	
		With strain relief	Without strain relief	With strain relief				
10	1	RA-S101T	RA-S101T-0	RA-S101T-1290	10.16	17.30	13.00	300
14	1	RA-S141T	RA-S141T-0	RA-S141T-1290	15.24	22.38	18.08	200
16	1	RA-S161T	—	—	17.78	24.92	20.62	200
20	1	RA-S201T	—	RA-S201T-1290	22.86	30.00	25.70	150
26	1	RA-S261T	—	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	—	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-0	RA-S602T-1290				

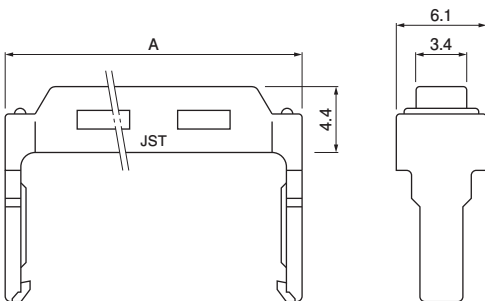
Note: Tin-plated products display (LF)(SN) on a label.

## Cover and Strain relief

### Cover



### Strain relief



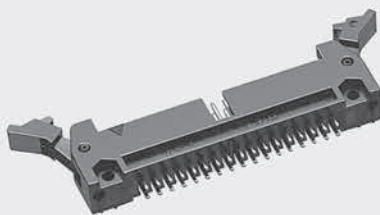
No. of circuits	Model No.		Dimensions (mm)
	Cover	Strain relief	
10	RA-CH10T	RA-SR10T-1	17.30
14	RA-CH14T	—	22.38
16	RA-CH16T	RA-SR16T-1	24.92
20	—	RA-SR20T-3	30.00
26	RA-CH26T	RA-SR26T-3	37.62
34	RA-CH34T	RA-SR34T-3	47.78
40	RA-CH40T	RA-SR40T-3	55.40

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.

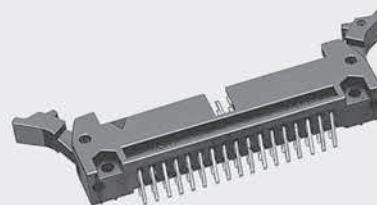
## Header

### Appearance

Top entry type



Side entry type



### Specifications

#### Performances

Current rating	1.0 A AC/DC
Voltage rating	300 V AC/DC
Temperature range	-55°C to +125°C (including temperature rise in applying electrical current) (Tin-plated product: -55°C to +105°C)
Insulation resistance	5,000 MΩ min.
Withstanding voltage	There shall be no breakdown or flashover while applying 500 VAC for 5 seconds.
Applicable PC board thickness	1.6 mm

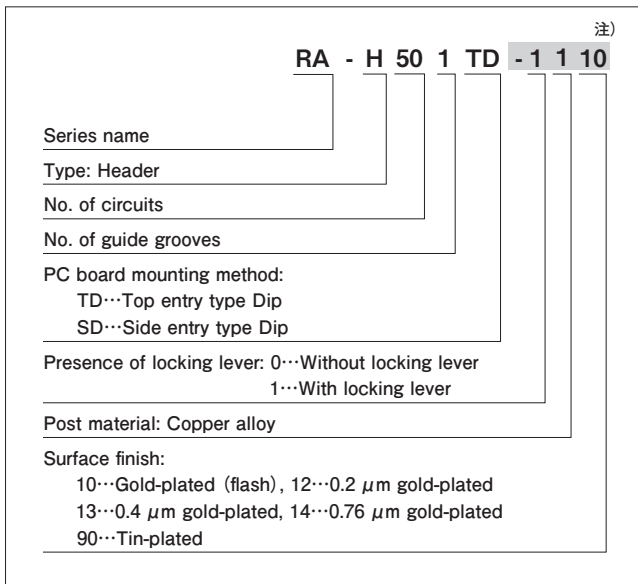
Note: Contact JST for details.

#### Material and Surface finish, etc.

Post	Copper alloy Gold-plated product: Nickel-undercoated, selective gold-plated * mating part: gold-plated (flash) soldering part: tin-plated Tin-plated product: Copper-undercoated, tin-plated
Wafer	Thermoplastic resin, UL94V-0, black

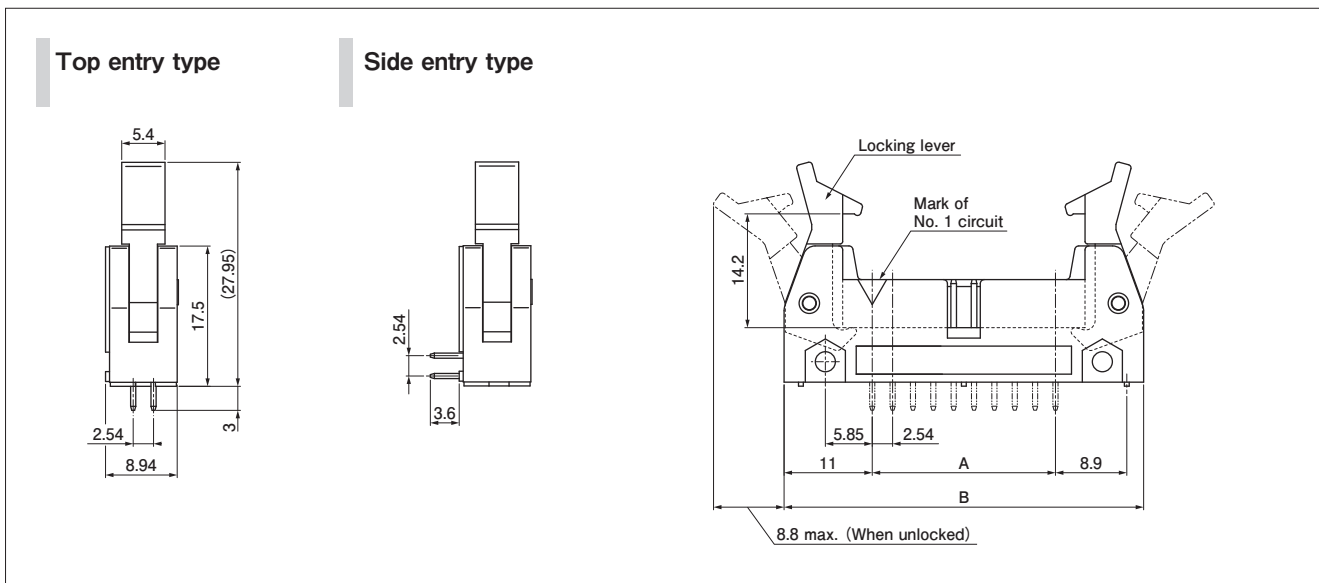
## Header

### Model number allocation



Note: The code -1100 is not shown for partially gold-plated flush products with lock levers.  
 For other specifications, the codes specified on the left will be displayed.  
 Please contact JST for the indication of special specifications not specified in the left column.

### Dimensions of assembly products

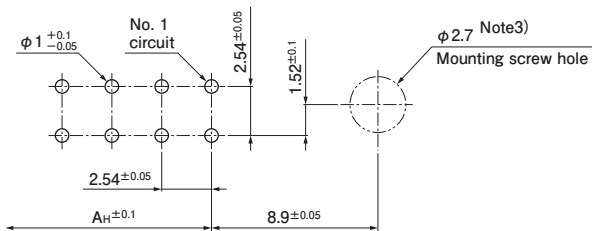


No. of circuits	No. of guide grooves	Model No.				Dimensions (mm)		Q'ty/box
		Gold-plated product (With locking lever)		Tin-plated product (With locking lever)		A	B	
		Top entry type	Side entry type	Top entry type	Side entry type			
10	1	RA-H101TD	RA-H101SD	RA-H101TD-1190	RA-H101SD-1190	10.16	32.16	50
14	1	RA-H141TD	RA-H141SD	—	—	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-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			

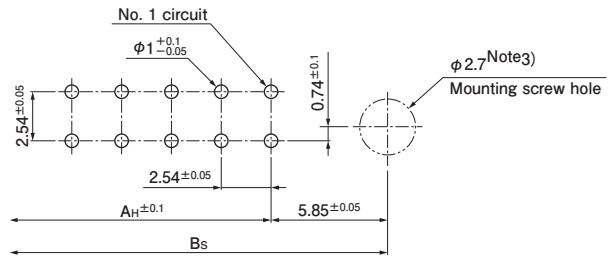
Note: 1. This product displays (LF) (SN) on a label.  
 2. Products marked with an asterisk (\*) are unlisted in CSA Standard.

## PC board layout

### Top entry type



### Side entry type



No. of circuits	Dimensions (mm)	
	A <sub>H</sub> : Dimensions between conductors at both ends	B <sub>S</sub> : Dimensions between mounting screw holes
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. The figure of PC board layout is the figure viewed from the connector mounting side (MIL-C-83503 compliant).  
 2. Tolerance for the PCB hole pitch shall be  $\pm 0.05$ , and shall not accumulate more than  $\pm 0.1$ .  
 3. The mounting screw holes are required when screwing the header to the PCB.