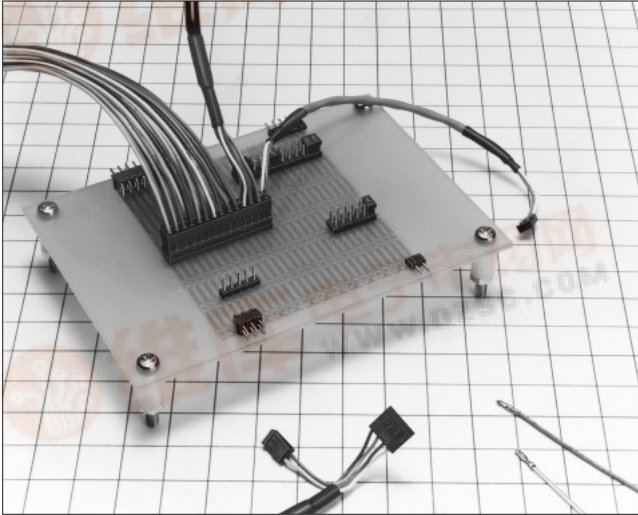


2mm Pitch Miniature Connector

A3 • A4 Series



■ Features

1. Miniature Type and High Density Mounting

These connectors are designed in a miniature and light weight product, and mounted in the high density. The crimping case is structured in the 2mm pitch grid, so that connectors can be arranged for use.

2. Variation in Number of Contacts

In addition to the dip type, SMT and crimping types are available with broad variations.

3. Stacking Variation

When the connector is used for board to board, set 6mm between boards in conjunction with the pin header A3B, or 5.1mm between boards in conjunction with the pin header A3C.

■ Product Specifications

Rating	Current rating 1A Voltage rating 200V AC	Operating Temperature Range -55 to +85°C (Note 1) Operating Moisture Range 40 to 80%	Storage Temperature Range -10 to +60°C (Note 2) Storage Humidity Range 40 to 70% (Note 2)
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Item	Specification	Condition
1. Insulation Resistance	1000M ohms min.	500V DC
2. Withstanding voltage	No flashover or insulation breakdown.	650V AC/1 minute
3. Contact Resistance	15m ohms max	0.1A
4. Vibration	No electrical discontinuity of 10μs or more	Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions.
5. Humidity (Steady state)	Insulation resistance: 1000M ohms min.	96 hours at temperature of 40°C and humidity of 90% to 95%
6. Humidity resistance (Steady state)	No damage, cracks, or parts looseness.	(-65°C: 30 minutes → 15 to 35°C: 5 minutes max. 125°C: 30 minutes → 15 to 35°C: 5 minutes max.) 5 cycles
7. Operating Life	Contact resistance: 20m ohms max.	100 cycles
8. Resistance to Soldering heat	No deformation of components affecting performance.	Flow: 260°C for 10 seconds Manual soldering: 300°C for 3 seconds

Note 1: Includes temperature rise caused by current flow.

Note 2: The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non conducting condition of installed connectors in storage, shipment or during transportation.

■ Applications

VTR, vehicle telephones, and other various kinds of electronic equipment

■ Material

Part	Material	Finish	Remarks
Insulator	Pin header (Through hole)	Polyamid	UL94V-0
	Receptacle (Through hole)	PBT	
	Pin header (SMT)	PPS	
	Receptacle (SMT)		
	Crimping socket	PBT	
Contact	Pin header	Brass	Selective gold plated
	Receptacle	Phosphor bronze	
	Crimping contact		



■ Ordering Information

● Pin Header (DIP type)

A **3B** - **12** **P** - **2** **DS**
 ① ② ③ ④ ⑤ ⑥

①	Series Name: A
②	Series No.: 3B : double row 4B : single row 3C : double row (low profile product)
③	Number of contacts: Double row...4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 44, 40, 50 (44 and 50 contacts correspond to the right angle type only. Straight angle type corresponds to the A3C type.) Single row... 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16
④	P, PA: Pin header
⑤	Contact pitch : 2mm
⑥	Contact type DS : Right angle type DSA : Straight type

● Receptacle (DIP type)

A **3** - **44** **D** - **2** **DS**
 ① ② ③ ④ ⑤ ⑥

①	Series Name: A
②	Series No.: 3 : double row 3C : double row 3D : double row (for FFC, FFC) (Note)
③	Number of contacts: 3 : 44, 50 3C, 3D : 4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 28, 32, 50
④	DA: Receptacle
⑤	Contact pitch : 2mm
⑥	Contact type DS: Right angle type DSA: Straight type (lead length: 3mm) DSC: Straight type (lead length: 2mm) DSE: Straight type (lead length: 1.27mm)

● Crimping Socket

A **3B** - **44** **D** - **2** **C**
 ① ② ③ ④ ⑤ ⑥

①	Series Name: A
②	Series No.: 3B : double row 4B : single row
③	Number of contacts: Double row...4, 6, 8, 10, 12, 14, 18, 20, 24, 26, 28, 44 Single row... 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 15, 16, 18
④	Contact alignment: D : double row S : single row
⑤	Contact pitch : 2mm
⑥	Connection type: C : crimping

●Crimping Contact

A **3B** - **2630** **SCFC**
 ① ② ③ ④

①	Series Name: A
②	Series No.: 3B
③	Applicable cable size 2630: AWG#26 to AWG#30 3236: AWG#32 to AWG#36
④	Packaging type SCFC: Reel SCC: Bag

● Pin Header (SMT type)

A **3** **A** - **44** **P** **A** - **2** **SV**
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①	Series Name: A
②	Series No.: 3
③	Positioning Boss:A : With boss No symbol : Without boss
④	Number of contacts: 4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 28, 30, 32, 44, 40, 50
⑤	P: Pin header
⑥	A: Selective gold plating
⑦	Contact pitch : 2mm
⑧	Contact type SV: Board vritical type

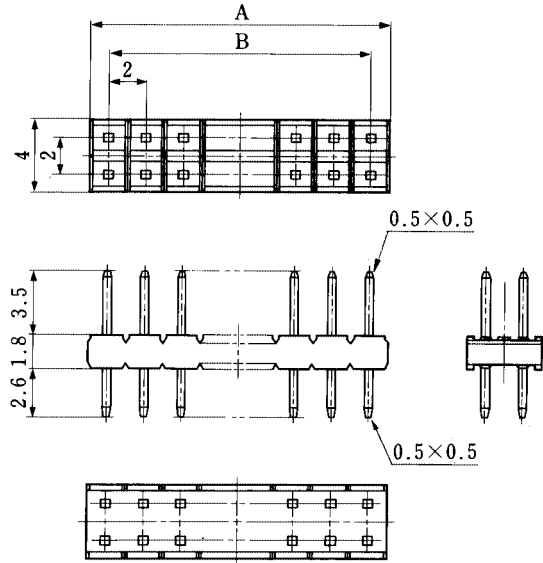
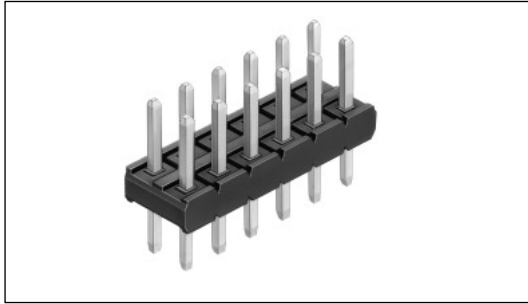
● Receptacle (SMT type)

A **3** **A** - **32** **D** **A** - **2** **SV**
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①	Series Name: A
②	Series No.: 3
③	Positioning Boss: A : With boss No symbol : Without boss
④	Number of contacts: 4, 6, 8, 10, 12, 14, 16, 18, 20, 24, 28, 30, 32
⑤	D: Receptacle
⑥	A: Selective gold plating
⑦	Contact pitch : 2mm
⑧	Contact type: SV: Vritical type

Pin Header

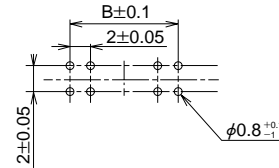
●A3B Straight Type



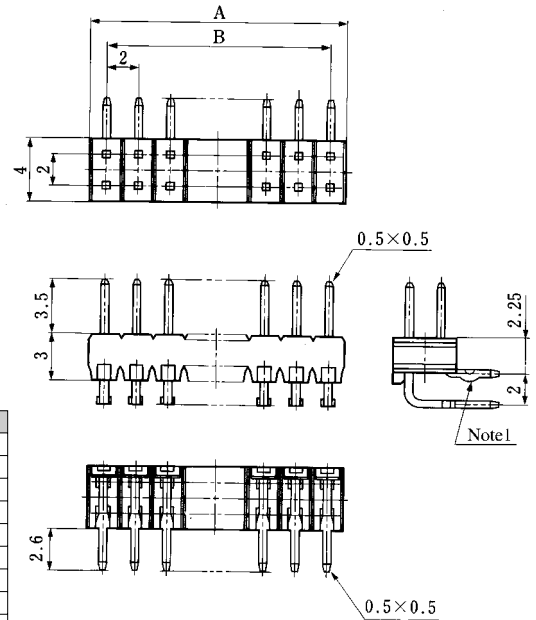
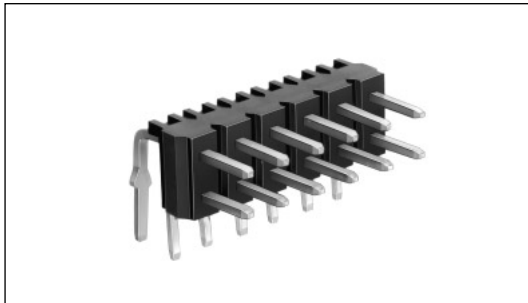
Part Number	CL No.	Number of Contacts	A	B
A3B- 4PA-2DSA	621-0401-1	4	4.0	2.0
A3B- 6PA-2DSA	621-0402-4	6	6.0	4.0
A3B- 8PA-2DSA	621-0403-7	8	8.0	6.0
A3B-10PA-2DSA	621-0404-0	10	10.0	8.0
A3B-12PA-2DSA	621-0405-2	12	12.0	10.0
A3B-14PA-2DSA	621-0406-5	14	14.0	12.0
A3B-16PA-2DSA	621-0407-8	16	16.0	14.0
A3B-18PA-2DSA	621-0408-0	18	18.0	16.0
A3B-20PA-2DSA	621-0409-3	20	20.0	18.0
A3B-22PA-2DSA	621-0410-2	22	22.0	20.0
A3B-24PA-2DSA	621-0411-5	24	24.0	22.0
A3B-26PA-2DSA	621-0412-8	26	26.0	24.0
A3B-28PA-2DSA	621-0413-0	28	28.0	26.0
A3B-30PA-2DSA	621-0414-3	30	30.0	28.0
A3B-32PA-2DSA	621-0415-6	32	32.0	30.0

Note: Please, order the product per 100 pcs.

◆PCB mounting pattern



●A3B Right Angle Type

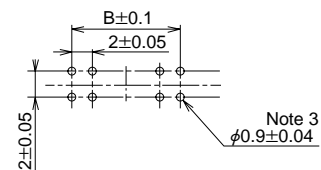


Part Number	CL No.	Number of Contacts	A	B	Kink Positions
A3B- 4PA-2DS	621-0351-5	4	4.0	2.0	2
A3B- 6PA-2DS	621-0352-8	6	6.0	4.0	1 or 2 alternately
A3B- 8PA-2DS	621-0353-0	8	8.0	6.0	2 alternately
A3B-10PA-2DS	621-0354-3	10	10.0	8.0	2 or 3 alternately
A3B-12PA-2DS	621-0355-6	12	12.0	10.0	3 alternately
A3B-14PA-2DS	621-0356-9	14	14.0	12.0	3 or 4 alternately
A3B-16PA-2DS	621-0357-1	16	16.0	14.0	4 alternately
A3B-18PA-2DS	621-0358-4	18	18.0	16.0	4 or 5 alternately
A3B-20PA-2DS	621-0359-7	20	20.0	18.0	5 alternately
A3B-22PA-2DS	621-0360-6	22	22.0	20.0	5 or 6 alternately
A3B-24PA-2DS	621-0361-9	24	24.0	22.0	6 alternately
A3B-26PA-2DS	621-0362-1	26	26.0	24.0	6 or 7 alternately
A3B-28PA-2DS	621-0363-4	28	28.0	26.0	7 alternately
A3B-30PA-2DS	621-0364-7	30	30.0	28.0	7 or 8 alternately
A3B-32PA-2DS	621-0365-0	32	32.0	30.0	8 alternately
A3B-44PA-2DS	621-0377-9	44	44.0	42.0	11 alternately
A3B-50PA-2DS	621-0383-1	50	50.0	48.0	12 or 13 alternately

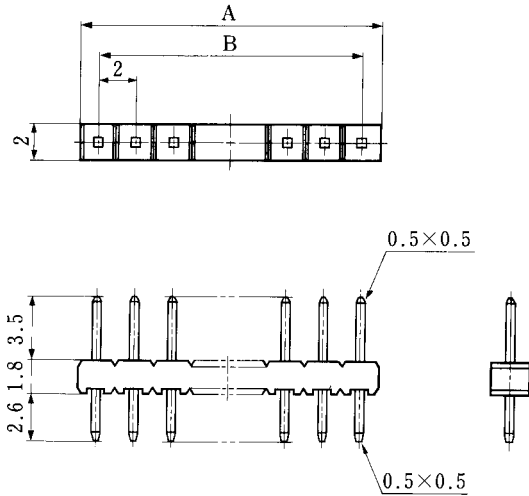
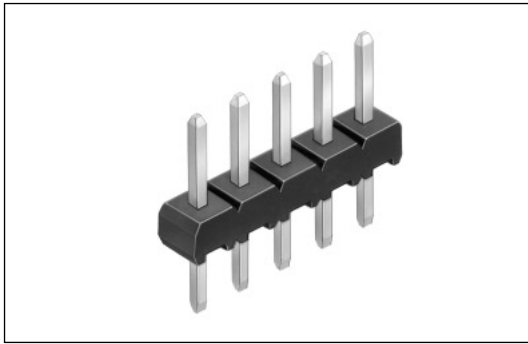
Note 1. Please order the product per 100 pcs.

Note 2. Diameter of 28 or more contacts is $\phi 0.95 \pm 0.04$.

◆PCB mounting pattern



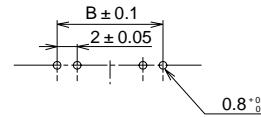
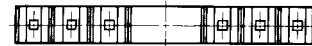
●A4B Straight Type



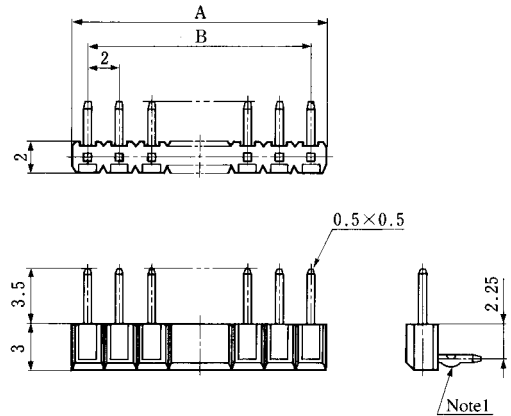
Part Number	CL No.	Number of Contacts	A	B
A4B- 2PA-2DSA	622-0401-8	2	4.0	2.0
A4B- 3PA-2DSA	622-0402-0	3	6.0	4.0
A4B- 4PA-2DSA	622-0403-3	4	8.0	6.0
A4B- 5PA-2DSA	622-0404-6	5	10.0	8.0
A4B- 6PA-2DSA	622-0405-9	6	12.0	10.0
A4B- 7PA-2DSA	622-0406-1	7	14.0	12.0
A4B- 8PA-2DSA	622-0407-4	8	16.0	14.0
A4B- 9PA-2DSA	622-0408-7	9	18.0	16.0
A4B-10PA-2DSA	622-0409-0	10	20.0	18.0
A4B-12PA-2DSA	622-0411-1	12	24.0	22.0
A4B-13PA-2DSA	622-0412-4	13	26.0	24.0
A4B-14PA-2DSA	622-0413-7	14	28.0	26.0
A4B-15PA-2DSA	622-0414-0	15	30.0	28.0
A4B-16PA-2DSA	622-0415-2	16	32.0	30.0

Note: Please order the product per 100 pcs.

◆PCB mounting pattern



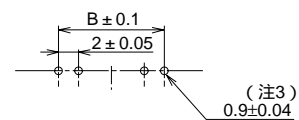
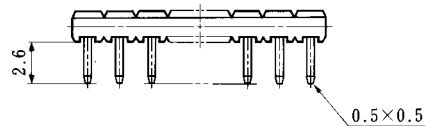
●A4B Right Angle Type



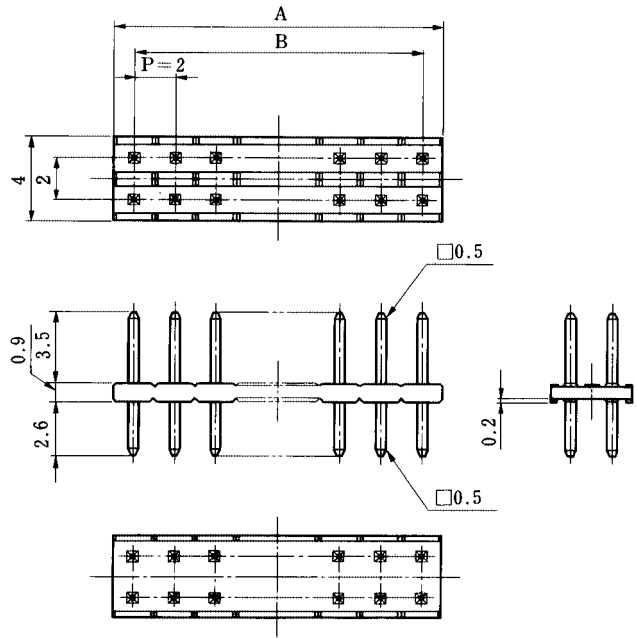
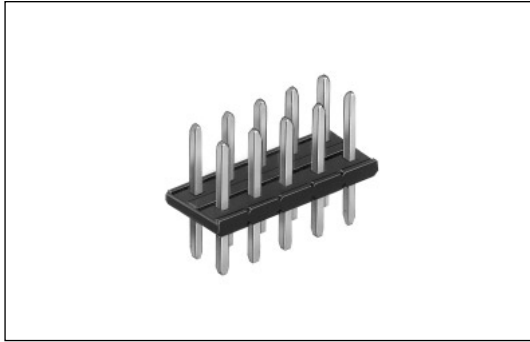
Part Number	CL No.	Number of Contacts	A	B	Kink Positions
A4B- 2PA-2DS	622-0351-1	2	4.0	2.0	2
A4B- 3PA-2DS	622-0352-4	3	6.0	4.0	1 or 2 alternately
A4B- 4PA-2DS	622-0353-7	4	8.0	6.0	2 alternately
A4B- 5PA-2DS	622-0354-0	5	10.0	8.0	2 or 3 alternately
A4B- 6PA-2DS	622-0355-2	6	12.0	10.0	3 alternately
A4B- 7PA-2DS	622-0356-5	7	14.0	12.0	3 or 4 alternately
A4B- 8PA-2DS	622-0357-8	8	16.0	14.0	4 alternately
A4B- 9PA-2DS	622-0358-0	9	18.0	16.0	4 or 5 alternately
A4B-10PA-2DS	622-0359-3	10	20.0	18.0	5 alternately
A4B-11PA-2DS	622-0360-2	11	22.0	20.0	5 or 6 alternately
A4B-12PA-2DS	622-0361-5	12	24.0	22.0	6 alternately
A4B-13PA-2DS	622-0362-8	13	26.0	24.0	6 or 7 alternately
A4B-14PA-2DS	622-0363-0	14	28.0	26.0	7 alternately
A4B-15PA-2DS	622-0364-3	15	30.0	28.0	7 or 8 alternately
A4B-16PA-2DS	622-0365-6	16	32.0	30.0	8 alternately

Note 1. Please order the product per 100 pcs.

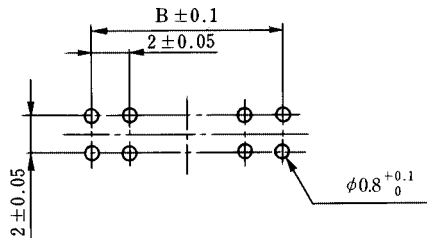
◆PCB mounting pattern



■ Pin Header



◆ PCB mounting pattern



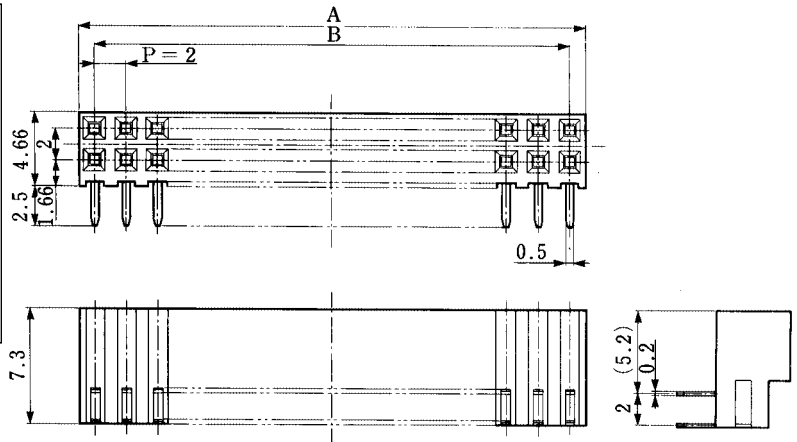
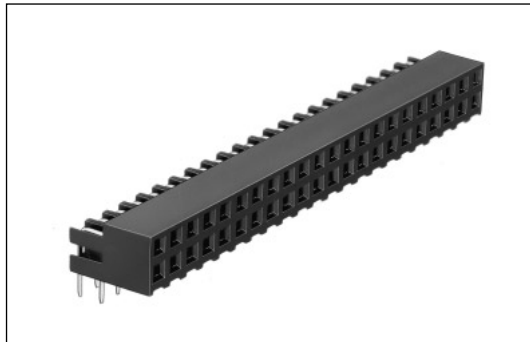
Note: Please order the product per 100 pcs.

Unit: mm

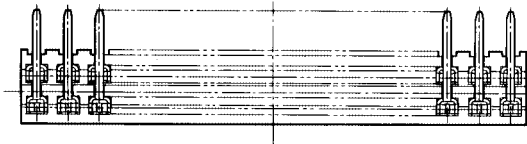
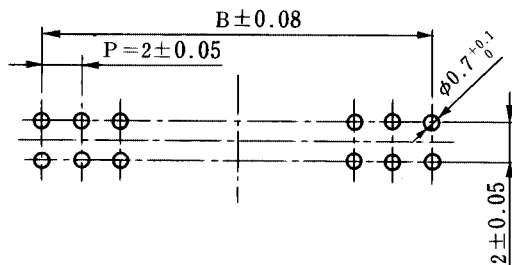
Part Number	CL No.	Number of Contacts	A	B
A3C- 2P-2DSA	621-0601-0	2	2.0	—
A3C- 4P-2DSA	621-0602-3	4	4.0	2.0
A3C- 6P-2DSA	621-0603-6	6	6.0	4.0
A3C- 8P-2DSA	621-0604-9	8	8.0	6.0
A3C-10P-2DSA	621-0605-1	10	10.0	8.0
A3C-12P-2DSA	621-0606-4	12	12.0	10.0
A3C-14P-2DSA	621-0607-7	14	14.0	12.0
A3C-16P-2DSA	621-0608-0	16	16.0	14.0
A3C-18P-2DSA	621-0609-2	18	18.0	16.0
A3C-20P-2DSA	621-0610-1	20	20.0	18.0
A3C-22P-2DSA	621-0611-4	22	22.0	20.0
A3C-24P-2DSA	621-0612-7	24	24.0	22.0
A3C-26P-2DSA	621-0613-0	26	26.0	24.0
A3C-28P-2DSA	621-0614-2	28	28.0	26.0
A3C-32P-2DSA	621-0615-5	32	32.0	30.0
A3C-44P-2DSA	621-0622-0	44	44.0	42.0
A3C-48P-2DSA	621-0625-9	48	48.0	46.0
A3C-50P-2DSA	621-0628-7	50	50.0	48.0

■ Receptacle

● A3 Right Angle Type



◆ PCB mounting pattern

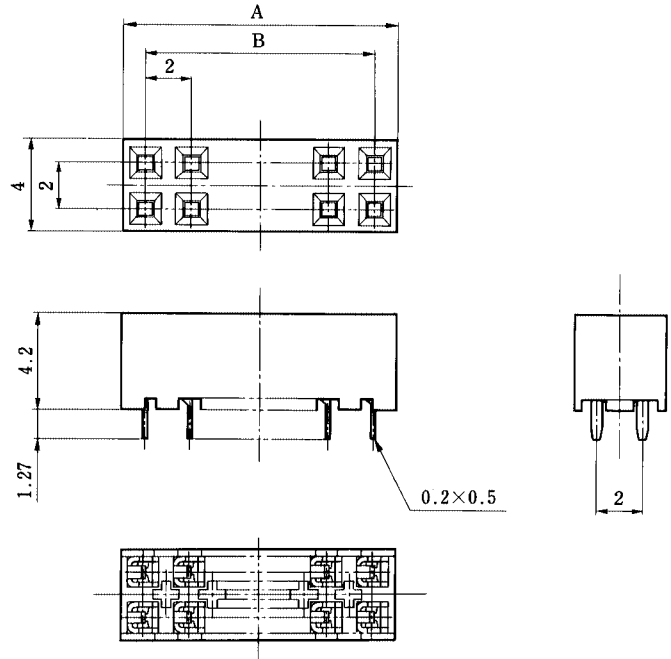
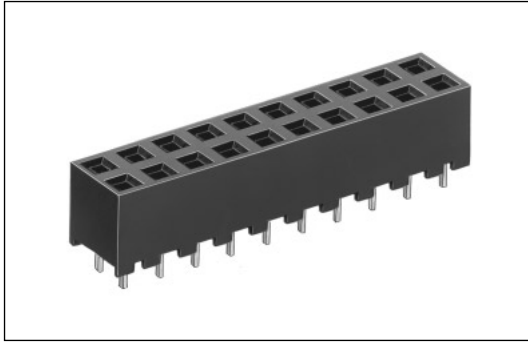


Unit: mm

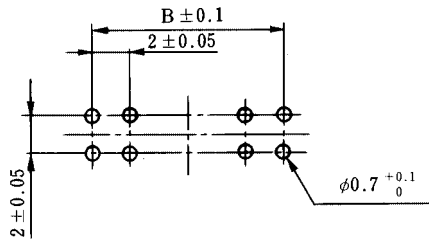
Part Number	CL No.	A	B
A3-44DA-2DS	621-0711-9	44	42
A3-50DA-2DS	621-0714-7	50	48

Note: Please order the product per 100 pcs.

●A3D Type



◆PCB mounting pattern

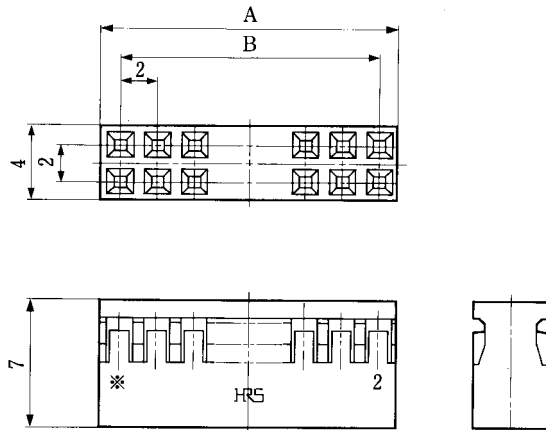
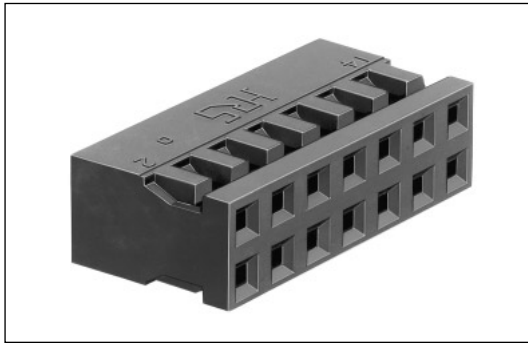


Unit: mm

Part Number	CL No.	Number of Contacts	A	B
A3D- 4DA-2DSE	621-0751-3	4	4.0	2.0
A3D- 6DA-2DSE	621-0752-6	6	6.0	4.0
A3D- 8DA-2DSE	621-0753-9	8	8.0	6.0
A3D-10DA-2DSE	621-0754-1	10	10.0	8.0
A3D-12DA-2DSE	621-0755-4	12	12.0	10.0
A3D-14DA-2DSE	621-0756-7	14	14.0	12.0
A3D-16DA-2DSE	621-0757-0	16	16.0	14.0
A3D-18DA-2DSE	621-0758-2	18	18.0	16.0
A3D-20DA-2DSE	621-0759-5	20	20.0	18.0
A3D-28DA-2DSE	621-0763-2	28	28.0	26.0
A3D-44DA-2DSE	621-0766-0	44	44.0	42.0

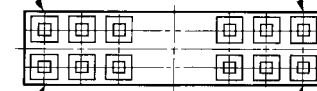
■Crimping Socket

●A3B-*D-2C



Part Number	CL No.	Number of Contacts	A	B
A3B- 4D-2C	621-0305-8	4	4.0	2.0
A3B- 6D-2C	621-0306-0	6	6.0	4.0
A3B- 8D-2C	621-0307-3	8	8.0	6.0
A3B-10D-2C	621-0308-6	10	10.0	8.0
A3B-12D-2C	621-0309-9	12	12.0	10.0
A3B-14D-2C	621-0310-8	14	14.0	12.0
A3B-18D-2C	621-0311-0	18	18.0	16.0
A3B-20D-2C	621-0312-3	20	20.0	18.0
A3B-24D-2C	621-0313-6	24	24.0	22.0
A3B-28D-2C	621-0314-9	28	28.0	26.0
A3B-44D-2C	621-0330-5	44	44.0	42.0

Contact No.*-1 mark Contact No.2 mark



Contact No.*-1 mark Contact No.1 mark

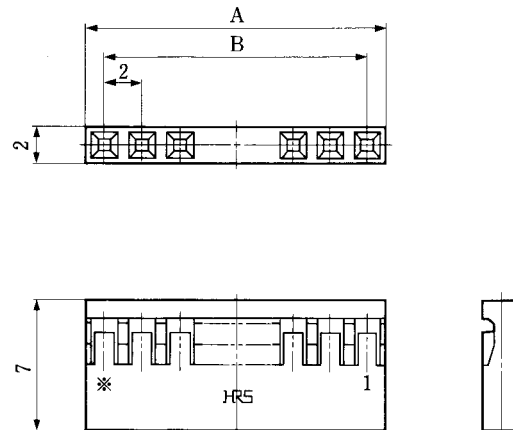
Note 1. * indicates the number of contacts.

Note 2. Please order the product per 100 pcs.

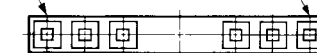
Note 3. Use other contacts in combination.

(Example: 50 contacts = 44 contacts + 6 contacts)

●A4B-*S-2C



Contact No. * mark Contact No.1 mark



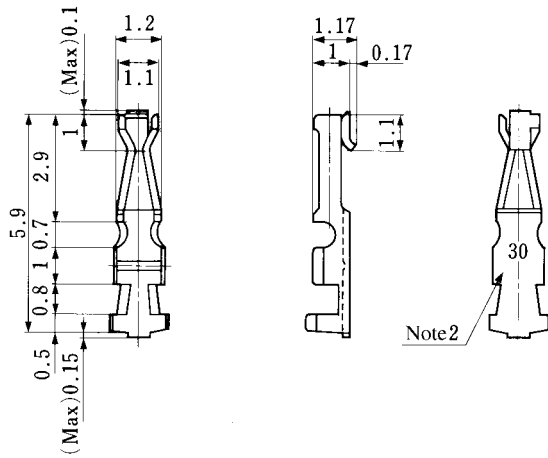
Note 1. * indicates the number of contacts.

Note 2. Please, order the product per 100 pcs.

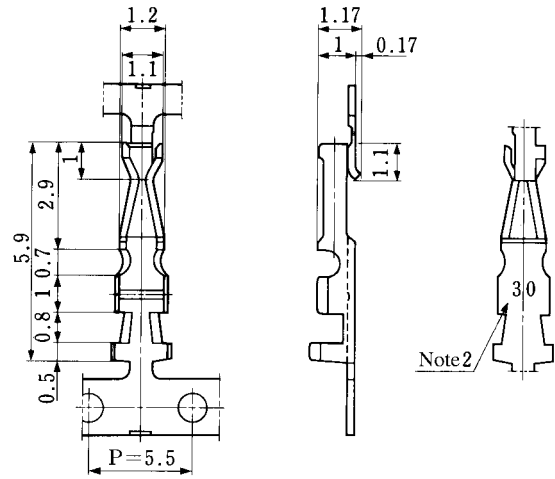
Part Number	CL No.	Number of Contacts	A	B
A4B- 2S-2C	622-0301-3	2	4.0	2.0
A4B- 3S-2C	622-0302-6	3	6.0	4.0
A4B- 4S-2C	622-0303-9	4	8.0	6.0
A4B- 5S-2C	622-0304-1	5	10.0	8.0
A4B- 6S-2C	622-0305-4	6	12.0	10.0
A4B- 8S-2C	622-0306-7	8	16.0	14.0
A4B-10S-2C	622-0307-0	10	20.0	18.0
A4B-12S-2C	622-0308-2	12	24.0	22.0
A4B-15S-2C	622-0311-7	15	30.0	28.0
A4B-16S-2C	622-0310-4	16	32.0	30.0
A4B-18S-2C	622-0309-5	18	36.0	34.0

■Crimping Contact

SCC contact



SCFC contact



Note 1. The plating specification is shown as follows:
 (Contact area) : Gold plating
 (Others): Nickel plating

Note 2. "30" is stamped on A3B-2630SCFC(SCC),
 and "36" is stamped on A3B-3236SCFC(SCC).

Part Number	CL No.	Applicable Cable	Type	Quantity	Crimping Tool
A3B-2630SCFC	621-0301-7	AWG#26 to #30	Reel	10000	Automatic crimper CM-105-AP 105-A3B-2630
A3B-2630SCC	621-0302-0	AWG#26 to #30	Bag	100	A3B-TA2630HC
A3B-3236SCFC	621-0303-2	AWG#32 to #36	Reel	10000	Automatic crimper CM-105-AP 105-A3B-3236

◆Crimping Tool

Manual crimping tool
 A3B-TA2630HC



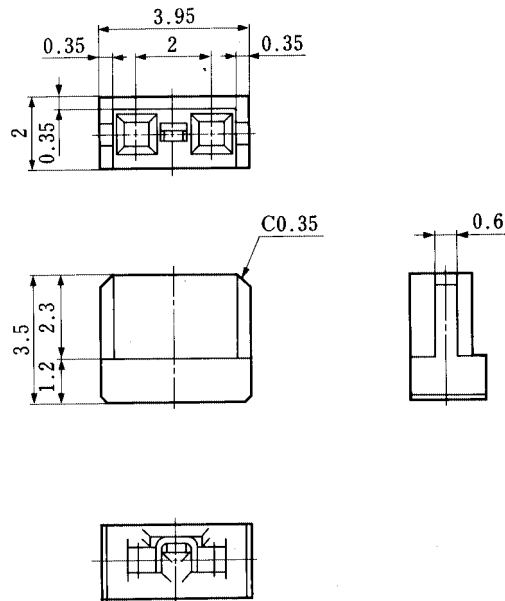
Automatic crimping machine
 CM-105



Specification	
Power supply	100V AC, single phase 200W
Gross weight	75kg
Machining range	2000 to 4000 contacts/hour
Remarks	Crimping of various contacts by replacing the applicator

Type	Item	Part Number	CL No.	Applicable Contact	Applicable Cable
Manual	Manual crimping tool	A3B-TA2630HC	550-0200-7	A3B-2630SCC	AWG#26 to #30
Automatic	Automatic crimping machine	CM-105	901-0005-4	—	—
	Applicator	AP105-A3B-2630S	901-4016-2	A3B-2630SCFC	AWG#26 to #30
		AP105-A3B-3236S	901-4017-5	A3B-3236SCFC	AWG#32 to #36

◆ Short Pin

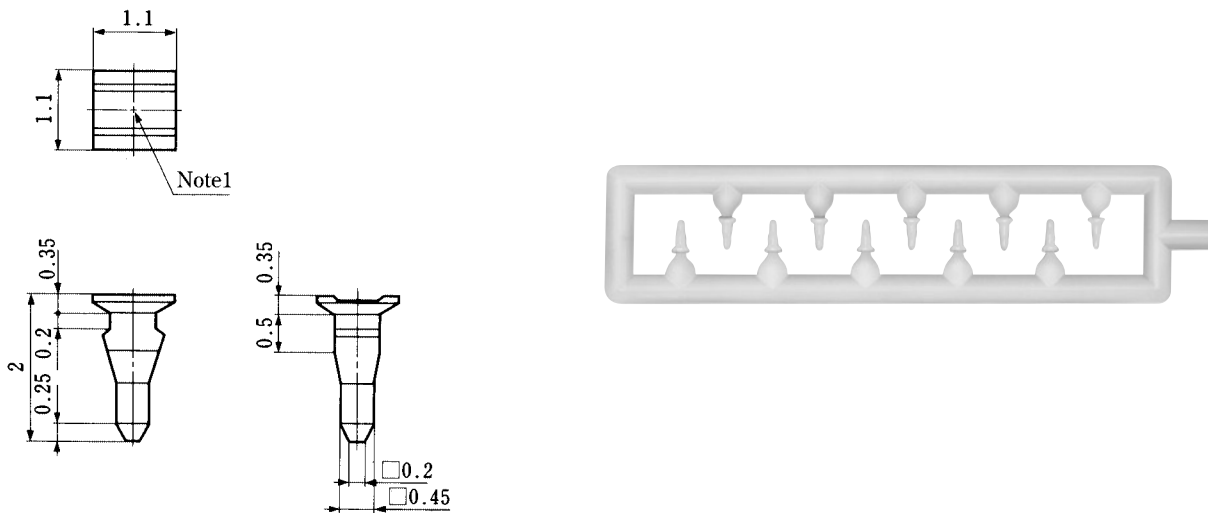


Please, order the product per 1000 pcs.

Part Number	CL No.	Material		Finish
A3-SP(A)	621-0180-4	Housing	PBT	Black (UL94V-0)
		Contact	Phosphor bronze	Selective gold plating

◆ Polarizing Key

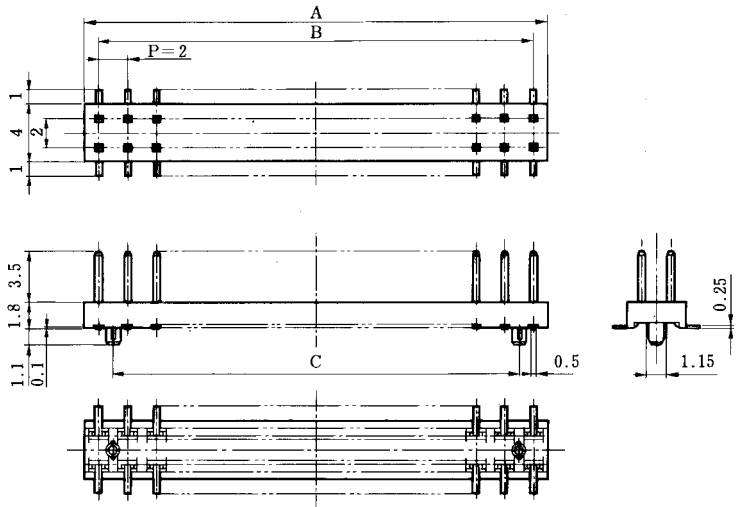
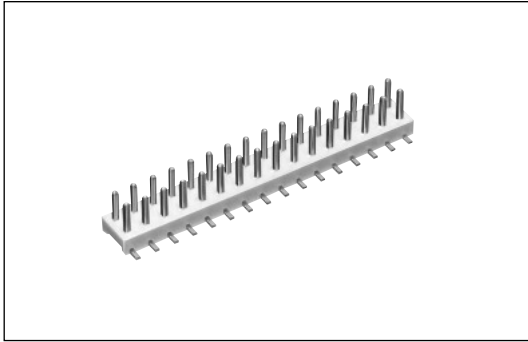
A3-GPIN(A)



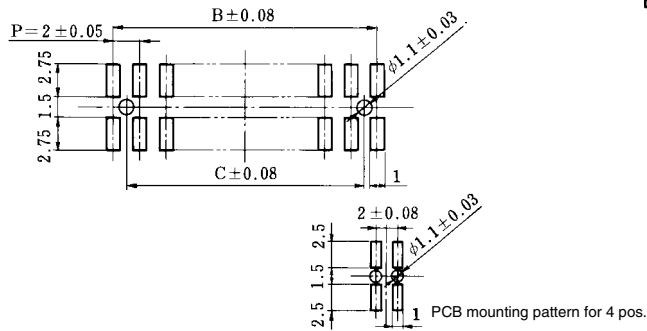
Note: This product is provided in a set of 10 pieces in conjunction with a runner.
The unit for sale consists of 10 sets, which are included in one pack.

Part Number	CL No.	Material
A3-GPIN(A)	621-0178-2	Poly acetal (white)

■ Pin Header



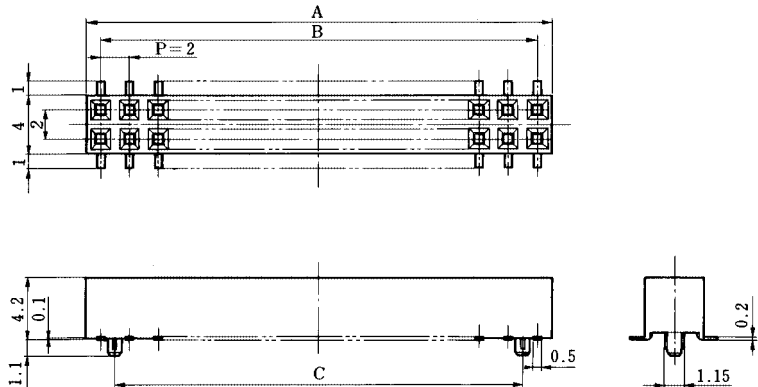
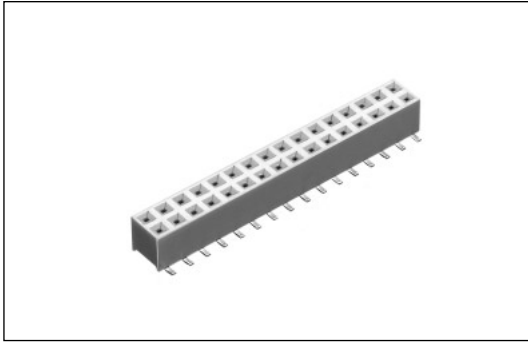
◆ PCB mounting pattern



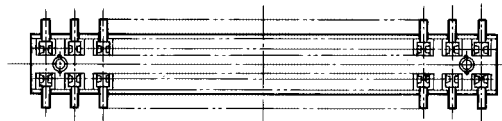
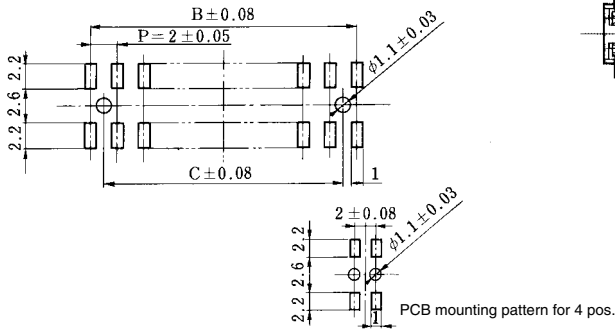
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C
A3 - 4PA-2SV	621-1000-6	4	4.0	2.0	—
A3A- 4PA-2SV	621-1040-0				2.0
A3 - 6PA-2SV	621-1001-9	6	6.0	4.0	—
A3A- 6PA-2SV	621-1041-3				2.0
A3 - 8PA-2SV	621-1002-1	8	8.0	6.0	—
A3A- 8PA-2SV	621-1042-6				4.0
A3 -10PA-2SV	621-1003-4	10	10.0	8.0	—
A3A-10PA-2SV	621-1043-9				6.0
A3 -12PA-2SV	621-1004-7	12	12.0	10.0	—
A3A-12PA-2SV	621-1044-1				8.0
A3 -14PA-2SV	621-1005-0	14	14.0	12.0	—
A3A-14PA-2SV	621-1045-4				10.0
A3 -16PA-2SV	621-1006-2	16	16.0	14.0	—
A3A-16PA-2SV	621-1046-7				12.0
A3 -20PA-2SV	621-1008-8	20	20.0	18.0	—
A3A-20PA-2SV	621-1048-2				16.0
A3 -24PA-2SV	621-1010-0	24	24.0	22.0	—
A3A-24PA-2SV	621-1050-4				20.0
A3 -28PA-2SV	621-1012-5	28	28.0	26.0	—
A3A-28PA-2SV	621-1052-0				24.0
A3 -32PA-2SV	621-1014-0	32	32.0	30.0	—
A3A-32PA-2SV	621-1054-5				28.0
A3 -44PA-2SV	621-1015-3	44	44.0	42.0	—
A3A-44PA-2SV	621-1055-8				40.0
A3 -50PA-2SV	621-1016-6	50	50.0	48.0	—
A3A-50PA-2SV	621-1056-0				46.0

■ Receptacle



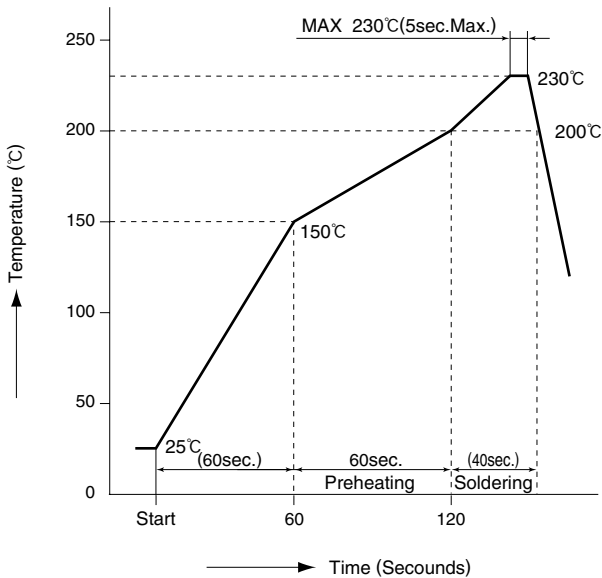
◆ PCB mounting pattern



Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C
A3 - 4DA-2SV	621-1100-0	4	4.0	2.0	—
A3A- 4DA-2SV	621-1140-5				2.0
A3 - 6DA-2SV	621-1101-3	6	6.0	4.0	—
A3A- 6DA-2SV	621-1141-8				2.0
A3 - 8DA-2SV	621-1102-6	8	8.0	6.0	—
A3A- 8DA-2SV	621-1142-0				4.0
A3 -10DA-2SV	621-1103-9	10	10.0	8.0	—
A3A-10DA-2SV	621-1143-3				6.0
A3 -12DA-2SV	621-1104-1	12	12.0	10.0	—
A3A-12DA-2SV	621-1144-6				8.0
A3 -14DA-2SV	621-1105-4	14	14.0	12.0	—
A3A-14DA-2SV	621-1145-9				10.0
A3 -16DA-2SV	621-1106-7	16	16.0	14.0	—
A3A-16DA-2SV	621-1146-1				12.0
A3 -20DA-2SV	621-1108-2	20	20.0	18.0	—
A3A-20DA-2SV	621-1148-7				16.0
A3 -24DA-2SV	621-1110-4	24	24.0	22.0	—
A3A-24DA-2SV	621-1150-9				20.0
A3 -28DA-2SV	621-1112-0	28	28.0	26.0	—
A3A-28DA-2SV	621-1152-4				24.0
A3 -32DA-2SV	621-1114-5	32	32.0	30.0	—
A3A-32DA-2SV	621-1154-0				28.0

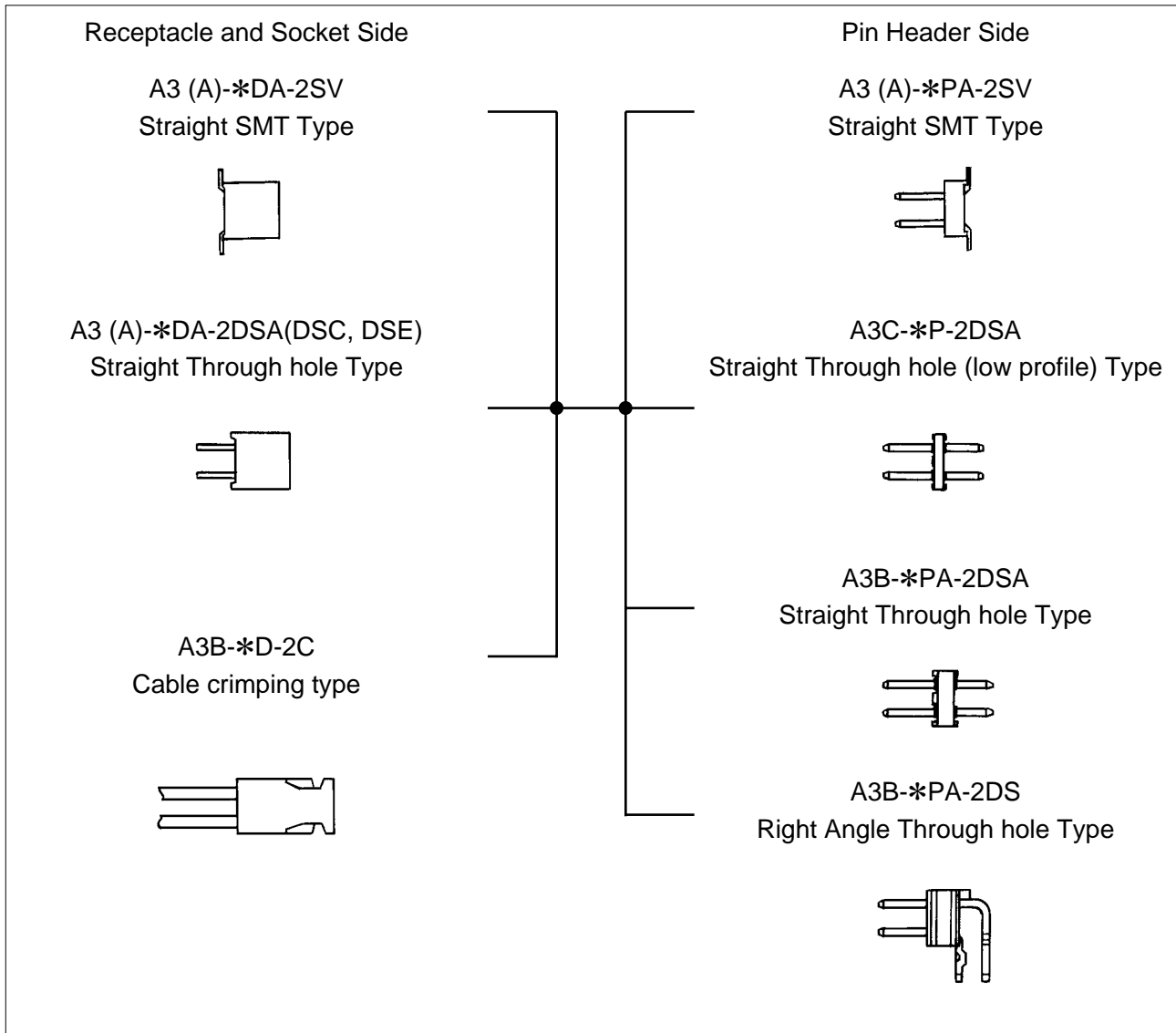
◆ Recommended Temperature Profile



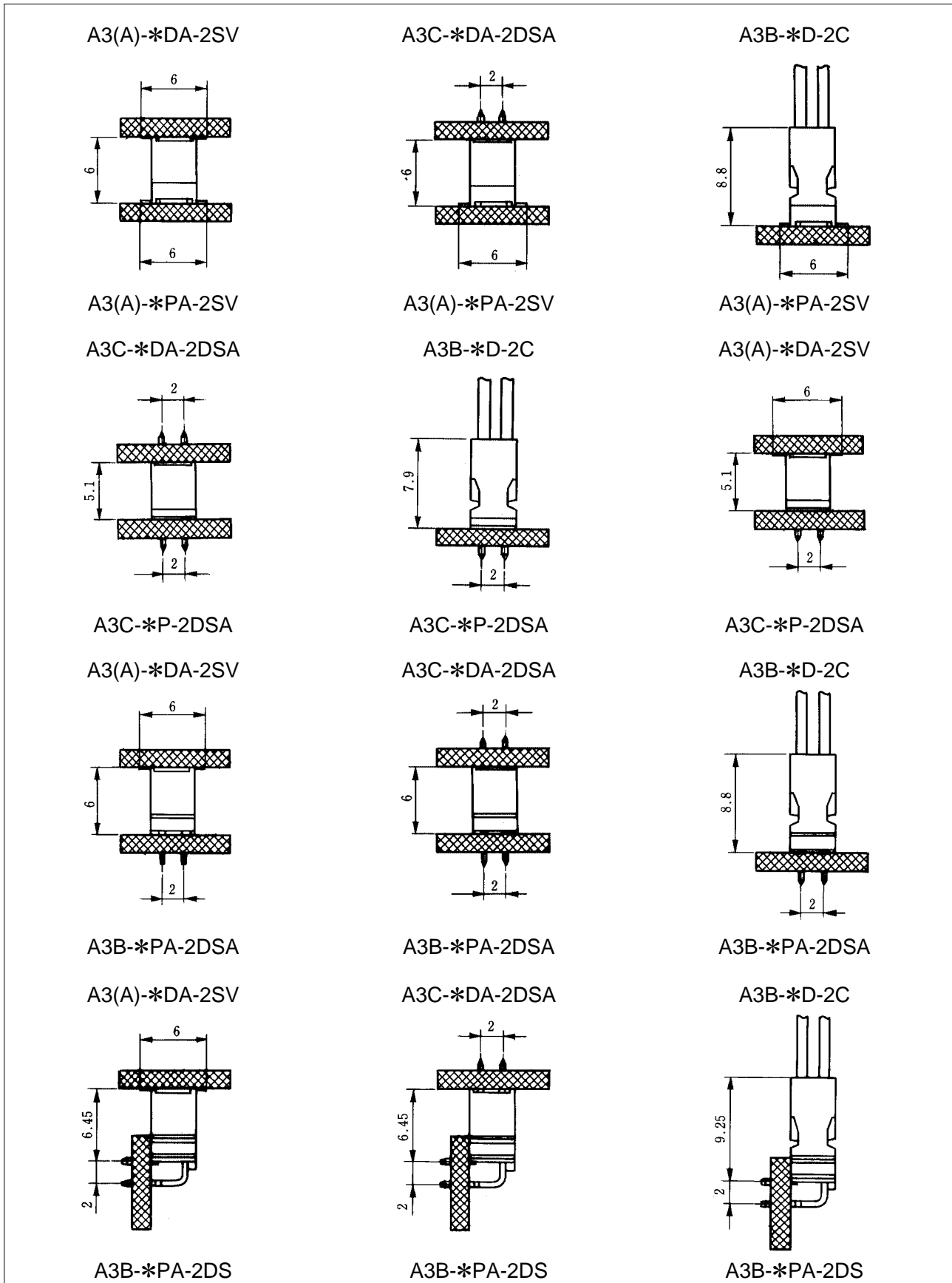
Applicable
 Reflow method : IR reflow
 Solder : Paste type 63 Sn/37 Pb
 (Flux content 9%/wt)
 Test board : Glass epoxy 85×60×1.6mm
 Metal mask thickness : 0.2mm

Recommended temperature profile
 The temperature may be slightly changed according to the solder paste type and amount.

◆ Functional Block Chart



◆ Application Pattern (A3 series)



Note. When the connector is mounted on the board surface, the mounting height is a size designed in single connector. Solder paste used for installation will slightly change according to solder thickness.