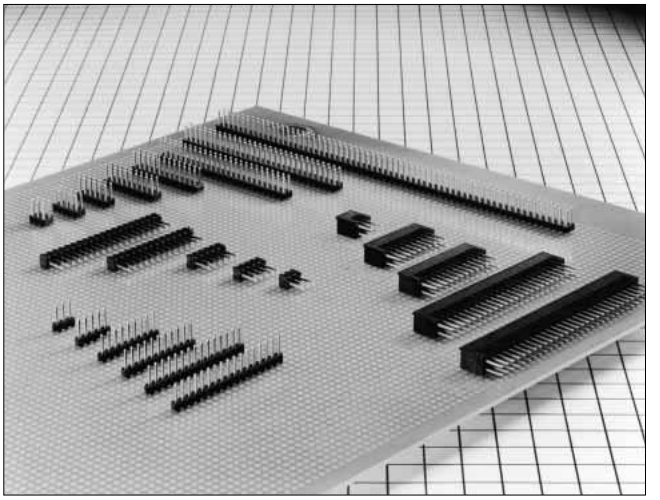
# 2.54mm Pitch High Density Connector

## A1 and A2 Series



## ■Features

### 1. High Density Mounting

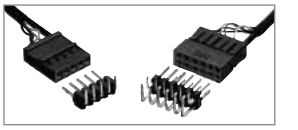
Connectors are aligned in the longitudinal direction on the 2.54 mm mesh board, so that no idle space can occur.

### 2. Variation in Number of Contacts

The A1 series contains 16 types of 6 to 64 contacts, while the A2 series contains 20 types of 1 to 20 contacts,

### 3. Compatibility

The A1 series is compatible with HIF3B series cable side and HIF3H receptacle for wide applications.



## ■Product Specifications

| | | | |
|---|---|---|---|
| Rating | Current rating: 3A | Operating Temperature Range: -55 to +85℃ (Note 1) | Storage Temperature Range: -10 to +60℃ (Note 2) |
| | Voltage rating: 200V AC | Operating Moisture Range: 40 to 80% | Storage Humidity Range: 40 to 70% (Note 2) |

| 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 1μs 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℃ and humidity of 90% to 95% |
| 6. Temperature Cycle | No damage, cracks, or parts looseness. | (-65℃: 30 minutes →15 to 35℃: 5 minutes max.→ 125℃: 30 minutes→ 15 to 35℃: 5 minutes max.) 5 cycles |
| 7. Operating Life | Contact resistance: 15m ohms max. | 500 cycles |
| 8. Resistance to Soldering heat | No deformation of components affecting performance. | Solder bath: 260℃ for 10 seconds |
| | | Manual soldering: 350℃ 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.
Note 3: Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

## ■Applications

Computers, VTR, and other various kinds of electronic equipment

## ■Material

| Part | | Material | Finish | Remarks |
|---|---|---|---|---|
| Pin header | Insulator | PBT | Black | UL94V-0 |
| | Contact | Brass | Contact area: gold plated<br>DIP area : tin plated | ———— |
| Crimping socket | | Polyamid | Black | UL94V-0 |
| Crimping contact | | Phosphor bronze | Contact area : gold plated<br>Termination area: nickel plated | ———— |

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In cases where the application will demand a high level of reliability, such as automotive, please contact a company representative for further information.

## ■ Ordering Information

### ● Pin Header

**A 1 - 6 P A - 2.54 DS**
❶ ❷ ❸ ❹ ❺ ❻ ❼

| | |
|---|---|
| ❶ | Series Name: A |
| ❷ | Series No.:1 (double row)<br>2 (single row) |
| ❸ | Number of contacts: A1...6, 8, 10, 12, 14, 16, 20, 24, 26, 34, 40, 50, 60, 64<br>A2...1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 |
| ❹ | P: Pin header |
| ❺ | A: Selective gold plated |
| ❻ | Contact pitch : 2.54mm |
| ❼ | Contact type:<br>DS : Right angle type<br>DSA : Straight type |

### ● Crimping Socket

**A 1 - 12 D - 2.54 C**
❶ ❷ ❸ ❹ ❺ ❻

| | |
|---|---|
| ❶ | Series Name : A |
| ❷ | Series No. : 1 (double row)<br>2 (single row) |
| ❸ | Number of contacts: A1 : 8, 10, 12<br>A2 : 5, 6 |
| ❹ | Contact alignment : A1 : D (double row)<br>A2 : S (single row) |
| ❺ | Contact pitch : 2.54mm |
| ❻ | Connection type: C : crimping |

### ● Crimping Contact

**A 1 - 2630 - SCFC**
❶ ❷ ❸ ❹

| | |
|---|---|
| ❶ | Series Name : A |
| ❷ | Series No. : 1 |
| ❸ | Applicable cable size<br>2226: AWG#22~ AWG#26<br>2630: AWG#26~ AWG#30 |
| ❹ | Packaging type<br>SCFC : Reel<br>SCC : Bag |

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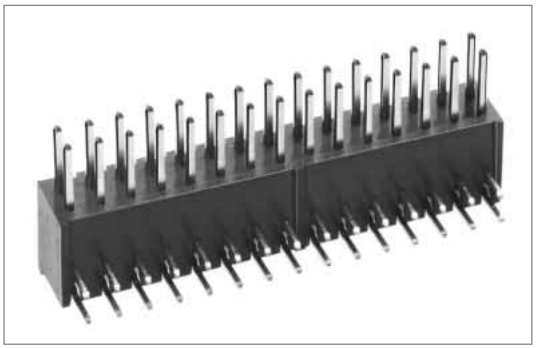
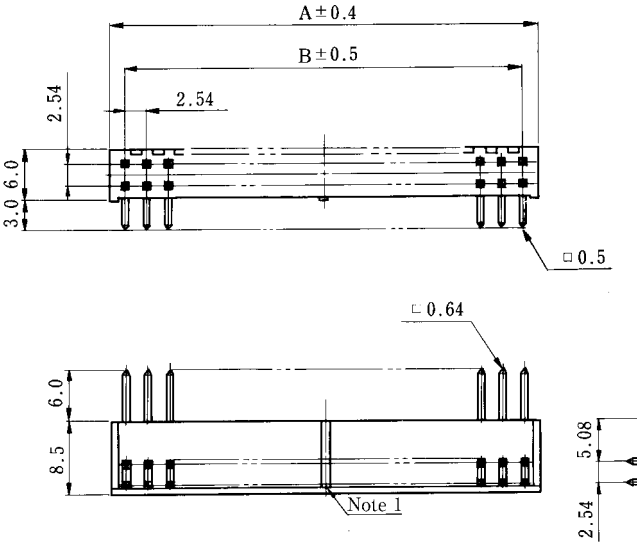
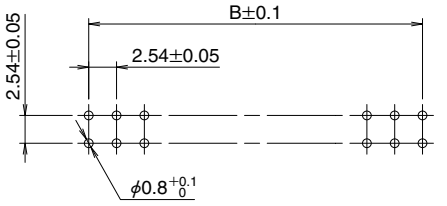
## ■ A1 (Double Row)- Right Angle Type






### ◆PCB mounting pattern




Unit: mm

| Part Number | CL No. | Number of Contacts | A | B | RoHS |
|---|---|---|---|---|---|
| A1- 6PA-2.54DS(71) | 619-0001-7-71 | 6 | 7.62 | 5.08 | YES |
| A1- 8PA-2.54DS(71) | 619-0016-4-71 | 8 | 10.16 | 7.62 | |
| A1-10PA-2.54DS(71) | 619-0002-0-71 | 10 | 12.70 | 10.16 | |
| A1-12PA-2.54DS(71) | 619-0003-2-71 | 12 | 15.24 | 12.70 | |
| A1-14PA-2.54DS(71) | 619-0004-5-71 | 14 | 17.78 | 15.24 | |
| A1-16PA-2.54DS(71) | 619-0005-8-71 | 16 | 20.32 | 17.78 | |
| A1-18PA-2.54DS(71) | 619-0006-0-71 | 18 | 22.86 | 20.32 | |
| A1-20PA-2.54DS(71) | 619-0007-3-71 | 20 | 25.40 | 22.86 | |

Unit: mm

| Part Number | CL No. | Number of Contacts | A | B | RoHS |
|---|---|---|---|---|---|
| A1-26PA-2.54DS(71) | 619-0009-9-71 | 26 | 33.02 | 30.48 | YES |
| A1-30PA-2.54DS(71) | 619-0010-8-71 | 30 | 38.10 | 35.56 | |
| A1-34PA-2.54DS(71) | 619-0011-0-71 | 34 | 43.18 | 40.64 | |
| A1-40PA-2.54DS(71) | 619-0012-3-71 | 40 | 50.80 | 48.26 | |
| A1-50PA-2.54DS(71) | 619-0013-6-71 | 50 | 63.50 | 60.96 | |
| A1-60PA-2.54DS(71) | 619-0014-9-71 | 60 | 76.20 | 73.66 | |
| A1-64PA-2.54DS(71) | 619-0015-1-71 | 64 | 81.28 | 78.74 | |

Note: Right side and left side rib is added for 34pos, or more.

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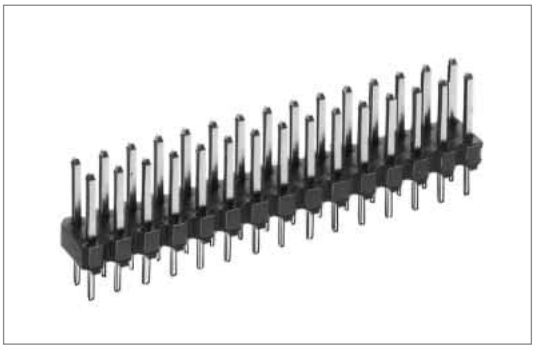
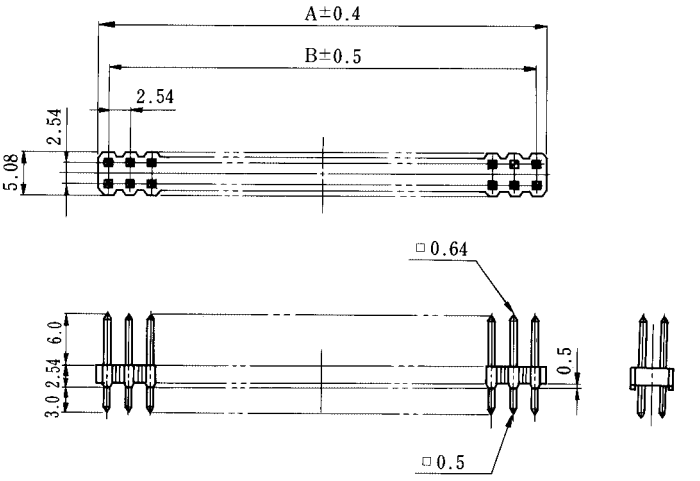
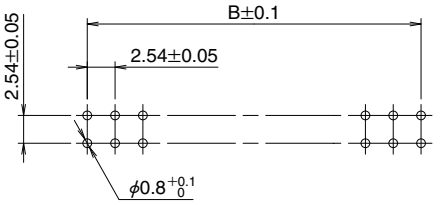
## ■ A1 (Double Row)- Straight Type






### ◆PCB mounting pattern




Unit: mm

| Part Number | CL No. | Number of Contacts | A | B | RoHS |
|---|---|---|---|---|---|
| A1- 6PA-2.54DSA(71) | 619-0021-4-71 | 6 | 7.32 | 5.08 | YES |
| A1- 8PA-2.54DSA(71) | 619-0037-4-71 | 8 | 9.86 | 7.62 | |
| A1-10PA-2.54DSA(71) | 619-0022-7-71 | 10 | 12.40 | 10.16 | |
| A1-12PA-2.54DSA(71) | 619-0023-0-71 | 12 | 14.94 | 12.70 | |
| A1-14PA-2.54DSA(71) | 619-0024-2-71 | 14 | 17.48 | 15.24 | |
| A1-16PA-2.54DSA(71) | 619-0025-5-71 | 16 | 20.02 | 17.78 | |
| A1-18PA-2.54DSA(71) | 619-0026-8-71 | 18 | 22.56 | 20.32 | |
| A1-20PA-2.54DSA(71) | 619-0027-0-71 | 20 | 25.10 | 22.86 | |
| A1-24PA-2.54DSA(71) | 619-0028-3-71 | 24 | 30.18 | 27.94 | |
| A1-26PA-2.54DSA(71) | 619-0029-6-71 | 26 | 32.72 | 30.48 | |
| A1-30PA-2.54DSA(71) | 619-0030-5-71 | 30 | 37.80 | 35.56 | |
| A1-34PA-2.54DSA(71) | 619-0031-8-71 | 34 | 42.88 | 40.64 | |
| A1-40PA-2.54DSA(71) | 619-0032-0-71 | 40 | 50.50 | 48.26 | |
| A1-50PA-2.54DSA(71) | 619-0033-3-71 | 50 | 63.20 | 60.96 | |
| A1-60PA-2.54DSA(71) | 619-0034-6-71 | 60 | 75.9 | 73.66 | |
| A1-64PA-2.54DSA(71) | 619-0035-9-71 | 64 | 80.98 | 78.74 | |

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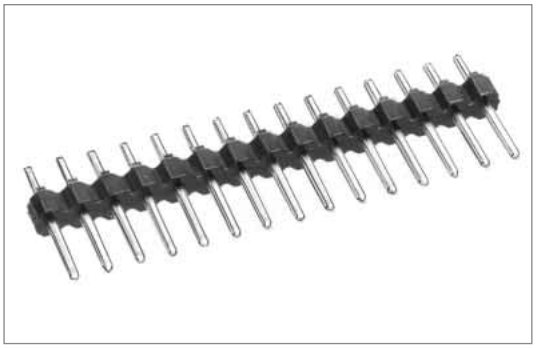
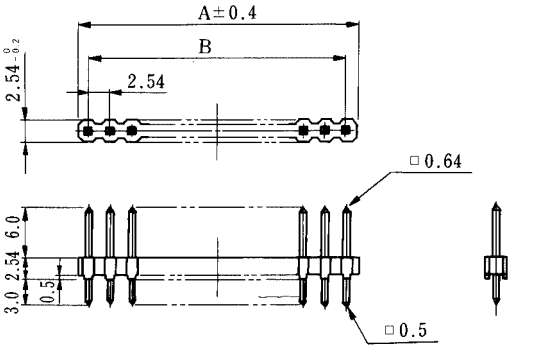
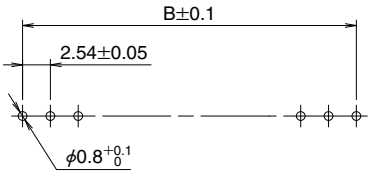
## ■ A2 (Single Row)-DIP Type



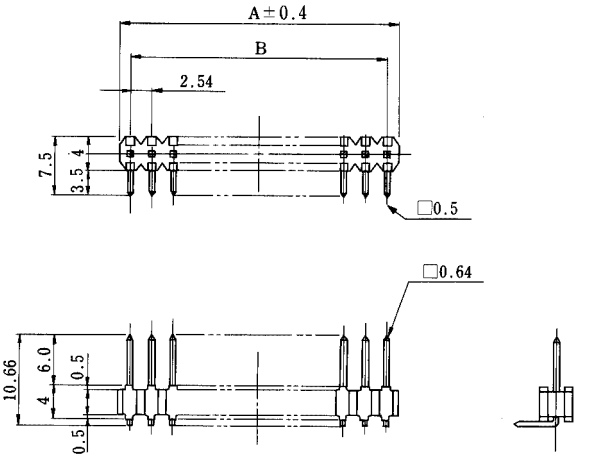
● Straight type




## ◆PCB mounting pattern




● Right angle type




● Straight type

Unit: mm

| Part Number | CL No. | Number of Contacts | A | B | RoHS |
|---|---|---|---|---|---|
| A2- 1PA-2.54DSA(71) | 620-0051-5-71 | 1 | 2.24 | – | YES |
| A2- 2PA-2.54DSA(71) | 620-0052-8-71 | 2 | 4.78 | 2.54 | |
| A2- 3PA-2.54DSA(71) | 620-0053-0-71 | 3 | 7.32 | 5.08 | |
| A2- 4PA-2.54DSA(71) | 620-0054-3-71 | 4 | 9.86 | 7.62 | |
| A2- 5PA-2.54DSA(71) | 620-0055-6-71 | 5 | 12.40 | 10.16 | |
| A2- 6PA-2.54DSA(71) | 620-0056-9-71 | 6 | 14.94 | 12.70 | |
| A2- 7PA-2.54DSA(71) | 620-0057-1-71 | 7 | 17.48 | 15.24 | |
| A2- 8PA-2.54DSA(71) | 620-0058-4-71 | 8 | 20.02 | 17.78 | |
| A2- 9PA-2.54DSA(71) | 620-0059-7-71 | 9 | 22.56 | 20.30 | |
| A2-10PA-2.54DSA(71) | 620-0060-6-71 | 10 | 25.10 | 22.86 | |
| A2-11PA-2.54DSA(71) | 620-0061-9-71 | 11 | 27.64 | 25.40 | |
| A2-12PA-2.54DSA(71) | 620-0062-1-71 | 12 | 30.18 | 27.94 | |
| A2-13PA-2.54DSA(71) | 620-0063-4-71 | 13 | 32.72 | 30.48 | |
| A2-14PA-2.54DSA(71) | 620-0064-7-71 | 14 | 35.26 | 33.02 | |
| A2-15PA-2.54DSA(71) | 620-0065-0-71 | 15 | 37.80 | 35.56 | |
| A2-16PA-2.54DSA(71) | 620-0066-2-71 | 16 | 40.34 | 38.10 | |
| A2-17PA-2.54DSA(71) | 620-0067-5-71 | 17 | 42.88 | 40.64 | |
| A2-18PA-2.54DSA(71) | 620-0068-8-71 | 18 | 45.42 | 43.18 | |
| A2-19PA-2.54DSA(71) | 620-0069-0-71 | 19 | 47.96 | 45.72 | |
| A2-20PA-2.54DSA(71) | 620-0070-0-71 | 20 | 50.50 | 48.26 | |

● Right angle type

Unit: mm

| Part Number | CL No. | Number of Contacts | A | B | RoHS |
|---|---|---|---|---|---|
| A2- 1PA-2.54DS(71) | 620-0001-7-71 | 1 | 2.24 | – | YES |
| A2- 2PA-2.54DS(71) | 620-0002-0-71 | 2 | 4.78 | 2.54 | |
| A2- 3PA-2.54DS(71) | 620-0003-2-71 | 3 | 7.32 | 5.08 | |
| A2- 4PA-2.54DS(71) | 620-0004-5-71 | 4 | 9.86 | 7.62 | |
| A2- 5PA-2.54DS(71) | 620-0005-8-71 | 5 | 12.40 | 10.16 | |
| A2- 6PA-2.54DS(71) | 620-0006-0-71 | 6 | 14.94 | 12.70 | |
| A2- 7PA-2.54DS(71) | 620-0007-3-71 | 7 | 17.48 | 15.24 | |
| A2- 8PA-2.54DS(71) | 620-0008-6-71 | 8 | 20.02 | 17.78 | |
| A2- 9PA-2.54DS(71) | 620-0009-9-71 | 9 | 22.56 | 20.30 | |
| A2-10PA-2.54DS(71) | 620-0010-8-71 | 10 | 25.10 | 22.86 | |
| A2-11PA-2.54DS(71) | 620-0011-0-71 | 11 | 27.64 | 25.40 | |
| A2-12PA-2.54DS(71) | 620-0012-3-71 | 12 | 30.18 | 27.94 | |
| A2-13PA-2.54DS(71) | 620-0013-6-71 | 13 | 32.72 | 30.48 | |
| A2-14PA-2.54DS(71) | 620-0014-9-71 | 14 | 35.26 | 33.02 | |
| A2-15PA-2.54DS(71) | 620-0015-1-71 | 15 | 37.80 | 35.56 | |
| A2-16PA-2.54DS(71) | 620-0016-4-71 | 16 | 40.34 | 38.10 | |
| A2-17PA-2.54DS(71) | 620-0017-7-71 | 17 | 42.88 | 40.64 | |
| A2-18PA-2.54DS(71) | 620-0018-0-71 | 18 | 45.42 | 43.18 | |
| A2-19PA-2.54DS(71) | 620-0019-2-71 | 19 | 47.96 | 45.72 | |
| A2-20PA-2.54DS(71) | 620-0020-1-71 | 20 | 50.50 | 48.26 | |

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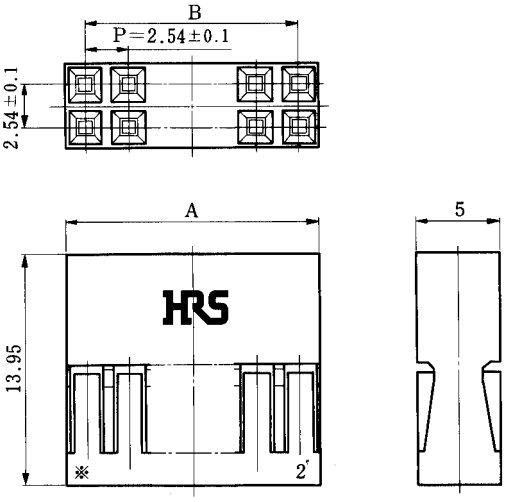
## ■ Crimping Socket

● Double Row Type

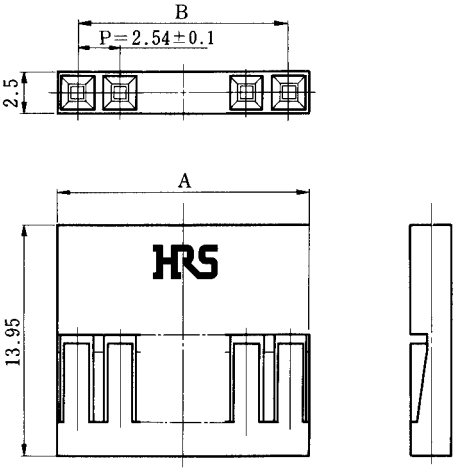
A1-∗D-2.54C




| Part Number | CL No. | A | B | RoHS |
|---|---|---|---|---|
| A1- 8D-2.54C | 619-0093-5 | 10.16 | 7.62 | YES |
| A1-10D-2.54C | 619-0091-0 | 12.70 | 10.16 | |
| A1-12D-2.54C | 619-0092-2 | 15.24 | 12.70 | |

● Single Row Type

A2-∗S-2.54C




| Part Number | CL No. | A | B | RoHS |
|---|---|---|---|---|
| A2-5S-2.54C | 620-0101-1 | 12.70 | 10.16 | YES |
| A2-6S-2.54C | 620-0102-4 | 15.24 | 12.70 | |

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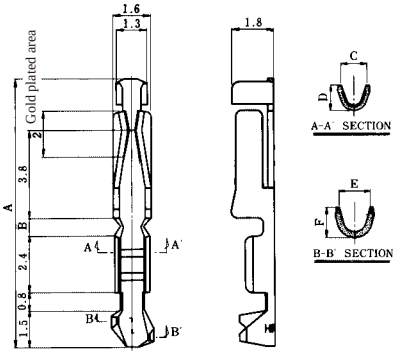
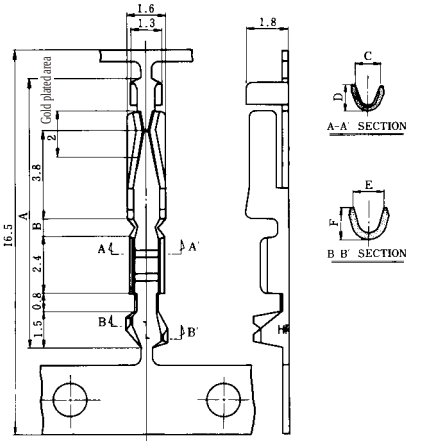
## ■ Crimping Contact

SCC contact



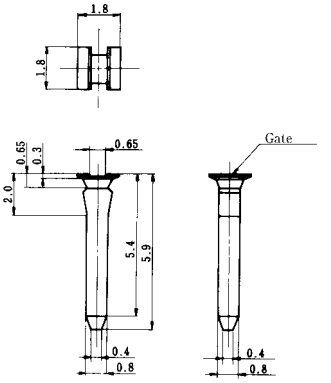

SCFC contact

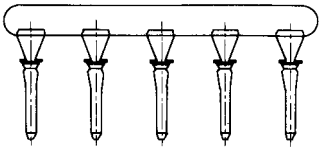



| Part Number | CL No. | Applicable Cable | Packaging Type | Quantity | A | B | C | D | E | F | RoHS |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A1-2226SCFC | 619-0211-0 | AWG#22 to #26 | Reel | 10,000 | 11.5 | 0.8 | 1.8 | 1.80 | 2.3 | 2.6 | YES |
| A1-2226SCC | 619-0214-8 | | Bag | 100 | 11.5 | 0.8 | 1.8 | 1.80 | 2.3 | 2.6 | |
| A1-2630SCFC | 619-0212-2 | AWG#26 to #30 | Reel | 10,000 | 11.5 | 0.8 | 1.4 | 1.35 | 2.0 | 2.1 | |
| A1-2630SCC | 619-0215-0 | | Bag | 100 | 11.5 | 0.8 | 1.4 | 1.35 | 2.0 | 2.1 | |

## ■ Polarizing Key

HIF3-GPIN(A)



| Part Number | CL No. | Material | Remarks | Packaging | RoHS |
|---|---|---|---|---|---|
| HIF3-GPIN(A) | 562-0126-6 | Poly acetal (white) | 5 pieces set | 4 sets | YES |

## ■ Crimping Tools

| | Part Number | CL No. | Applicable Contact | Applicable Cable |
|---|---|---|---|---|
| Manual crimping tool | HIF3-TB2226HC | 550-0154-1 | A1-2226SCC | AWG#22 to #26 |
| | HIF3-TB2630HC | 550-0155-4 | A1-2630SCC | AWG#26 to #30 |
| Crimper unit | CM-105 | 901-0005-4 | ———— | ———— |
| Applicator | AP105-A1-2226S | 901-4008-4 | A1-2226SCFC | ———— |
| | AP105-A1-2630S | 901-4009-7 | A1-2630SCFC | ———— |

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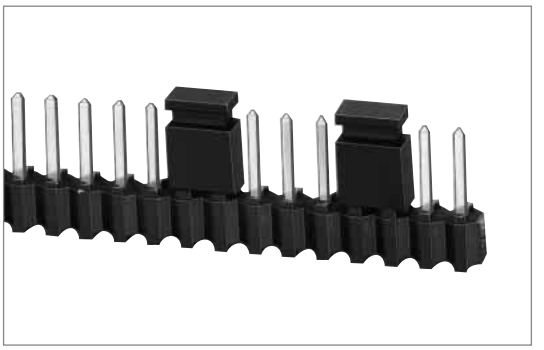
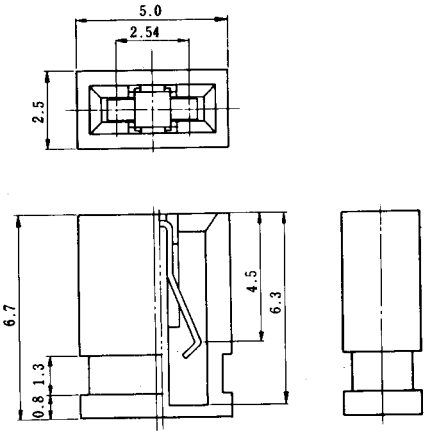
## ■ Short Pin






## ■ Performance

| Item | Rating Value |
|---|---|
| Contact Resistance | 30m ohms max. at 0.1A DC |
| Insulation Resistance | 1000M ohms min. at 500V DC |
| Current rating | 3A |

| Part Number | CL No. | RoHS |
|---|---|---|
| HIF3GA-2.54SP | 562-0403-4 | YES |

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