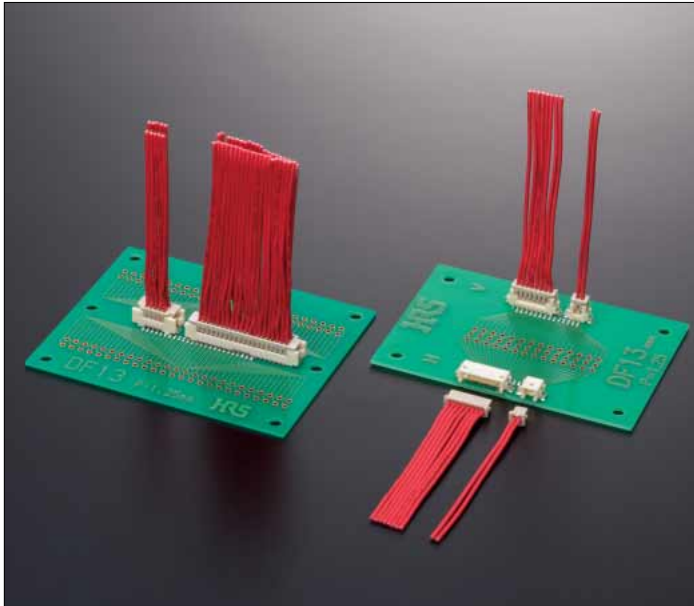


1.25mm Pitch Miniature Crimping Connector (UL Listed)

DF13 Series



| | Type | Mounting Type | Mounting Height(h) |
|------------------|------|---------------|--------------------|
| Straight Type | DIP | | 5.3mm |
| | SMT | | 5.8mm |
| Right Angle Type | DIP | | 3.6mm |
| | SMT | | |

■ Features

1. Miniature Size

Designed in the low profile at mounting height 5.8mm. (SMT mounting straight type)
 (For DIP type, the mounting height is to 5.3mm to the straight and 3.6mm at the right angle)

2. Multi-contact

The double row type achieves the multi-contact up to 40 contacts, and secures 30% higher density in the mounting area, compared with the single row type.

3. Correspond to Automatic Mounting

The header provides the grade with the vacuum absorption area, and secures automatic mounting by the embossed tape packaging.

In addition, the tube packaging can be selected. (Fig.1)

4. Integral Basic Function Despite Miniature Size

The header is designed in a scoop-proof box structure, and completely prevents mis-insertion.
 In addition, the surface mounting (SMT) header is equipped with the metal fitting to prevent solder peeling. (Fig.1)

5. UL Certified

■ Applications

Note PC, mobile terminal, miniature type business equipment, and other various consumer equipment, including video camera

Correspond to Automatic Mounting
 Secure the automatic plain area for the absorption type automatic mounting machine.

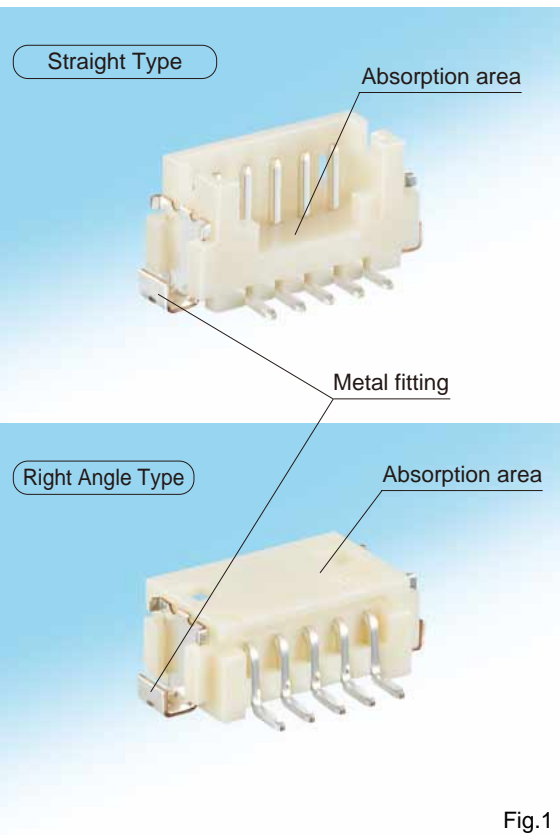


Fig.1

Product Specifications

| | | | | | |
|--------|----------------|---------------------|------------------------|--|--|
| Rating | Current rating | Specification UL | 1A | Operating Temperature Range : -35 to +85°C (Note 1) Operating Moisture Range : 20 to 80% (Note 3) | Storage Temperature Range : -10 to +60°C (Note 2) Storage Moisture Range : 40 to 70% (Note 2) |
| | Voltage rating | Specification UL | AC 150V AC/DC 29.9V | | |

| Item | Specification | Condition |
|---------------------------------|---|---|
| 1.Insulation Resistance | 500MΩ min. | 100V DC |
| 2.Withstanding voltage | No flashover or insulation breakdown. | 500V AC/1 minute |
| 3.Contact Resistance | 30mΩ max. | 100mA |
| 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) | Contact resistance : 30mΩ max. Insulation resistance : 500MΩ min. | 96 hours at temperature of 40°C and humidity of 90% to 95% |
| 6.Temperature Cycle | Contact resistance : 30mΩ max. Insulation resistance : 500MΩ min. | (-55°C : 30 minutes → 5 to 35°C : 10 minutes → 85°C : 30 minutes → 5 to 35°C : 10 minutes) 5 cycles |
| 7.Durability (Mating/un-mating) | Contact resistance : 30mΩ max. | Tin plating : 30 cycles Gold plating : 50 cycles |
| 8.Resistance to Soldering heat | No deformation of components affecting performance. | Flow : 250°C for 10 seconds |
| | | Manual soldering : 300°C for 3 seconds |
| | | Reflow : At the recommended temperature profile |
| | | 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.

Note 3 : Use without condensation on parts.

●UL File No. and Recognition
No. UL : E52653

Materials/Finish

| Product | Part | Material | Finish | Remarks |
|-----------------------------|---------------|-----------------|----------------------------------|---------|
| Crimping Socket | Insulator | Polyamide | Beige | UL94V-0 |
| Crimping Contact for Socket | Contact | Phosphor copper | Tin plated or gold plated | ———— |
| Pin Header (Through hole) | Insulator | Polyamide | Beige | UL94V-0 |
| | Contact | Brass | Tin plated | ———— |
| Pin Header (SMT Single row) | Insulator | Polyamide | Beige | UL94V-0 |
| | Contact | Brass | Tin plated or gold plated | ———— |
| | Metal Fitting | Phosphor copper | Tin plated | ———— |
| Pin Header (SMT Double row) | Insulator | Polyamide | Beige | UL94V-0 |
| | Contact | Brass | Tin-copper plated or gold plated | ———— |
| | Metal Fitting | Phosphor copper | Tin plated | ———— |

Product Number Structure

Refer to the chart below when determining the product specifications from the product number.

Please select from the product numbers listed in this catalog when placing orders.

●Connector

DF13 **#** - ***** **S** - **1.25** **C**

① ② ③ ④ ⑤ ⑥

| | | |
|--|--|--|
| ① Series Name : DF13 | ③ Number of Contacts Single row : 2 to 12, 14, 15 Double row : 10, 20, 30, 40 | ⑤ Contact Pitch : 1.25mm |
| ② Style Symbol : Blank : With boss A : Without boss C : Without boss | ④ Connector Type S : Single row socket / P : Single row pin header DS : Double row socket / DP : Double row pin header | ⑥ Connection Form / Contact Style. C : Crimping socket / DSA : Straight through hole DS : Right angle through hole / V : Straight SMT H : Right angle SMT |

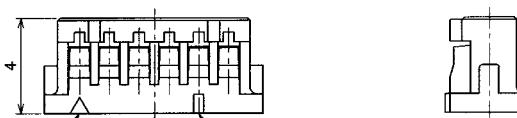
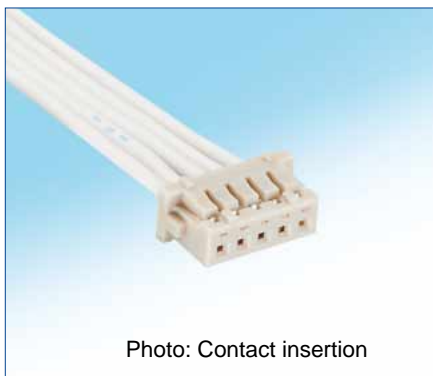
●Contact

DF13 **#** - **2630** **SCF** **A**

① ② ③ ④

| | |
|--|--|
| ① Style Symbol Blank : Standard G : Low insertion / extraction | ③ Packaging Type SCF : Socket Contact/Reel |
| ② Applicable Cable Size 2630 : 26 to 30 AWG 3032 : 30 to 32 AWG | ④ Plating Type Blank : Tin plated A : Gold plated |

Single Row Socket



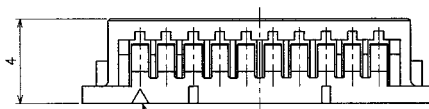
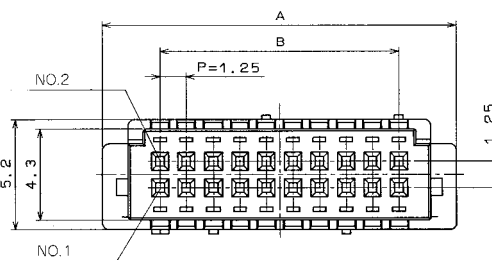
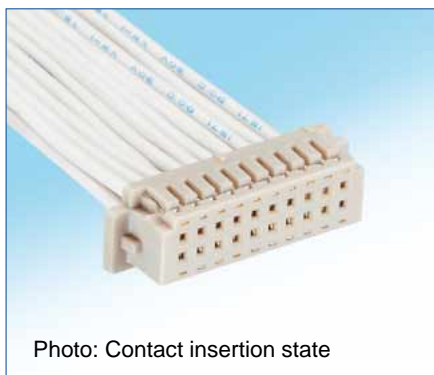
Contact No.1 mark Marking per 5 contacts

Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | RoHS | Part No. | HRS No. | No. of Contacts | A | B | RoHS |
|---------------|------------|-----------------|------|-------|------|----------------|------------|-----------------|-------|-------|------|
| DF13-2S-1.25C | 536-0001-4 | 2 | 1.25 | 4.15 | Yes | DF13- 9S-1.25C | 536-0008-3 | 9 | 10.00 | 12.90 | Yes |
| DF13-3S-1.25C | 536-0002-7 | 3 | 2.50 | 5.40 | | DF13-10S-1.25C | 536-0009-6 | 10 | 11.25 | 14.15 | |
| DF13-4S-1.25C | 536-0003-0 | 4 | 3.75 | 6.65 | | DF13-11S-1.25C | 536-0010-5 | 11 | 12.50 | 15.40 | |
| DF13-5S-1.25C | 536-0004-2 | 5 | 5.00 | 7.90 | | DF13-12S-1.25C | 536-0011-8 | 12 | 13.75 | 16.65 | |
| DF13-6S-1.25C | 536-0005-5 | 6 | 6.25 | 9.15 | | DF13-13S-1.25C | 536-0012-0 | 13 | 15.00 | 17.90 | |
| DF13-7S-1.25C | 536-0006-8 | 7 | 7.50 | 10.40 | | DF13-14S-1.25C | 536-0013-3 | 14 | 16.25 | 19.15 | |
| DF13-8S-1.25C | 536-0007-0 | 8 | 8.75 | 11.65 | | DF13-15S-1.25C | 536-0014-6 | 15 | 17.50 | 20.40 | |

Note 1 : The quantity is delivered per bag (100pcs.). If needed, please select and order the products per bag.

Double Row Socket



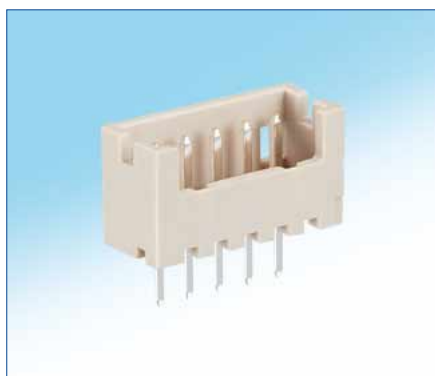
Contact No.1 mark

Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | RoHS |
|-----------------|------------|-----------------|-------|-------|------|
| DF13-10DS-1.25C | 536-0550-2 | 10 | 10.40 | 5.00 | Yes |
| DF13-20DS-1.25C | 536-0555-6 | 20 | 16.65 | 11.25 | |
| DF13-30DS-1.25C | 536-0560-6 | 30 | 22.90 | 17.50 | |
| DF13-40DS-1.25C | 536-0565-0 | 40 | 29.15 | 23.75 | |

Note : The quantity is delivered per bag (100pcs.). If needed, please select and order the products per bag.

Single Row Straight Pin Header (Through hole)

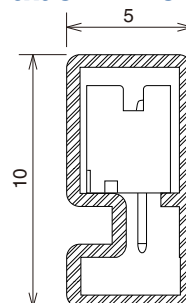


●Board Through-hole Diameter : $\phi 0.6 \pm 0.03$



[Specific No.] (**), **
Blank : Tin plated
(75) : Tin plated, tube packaging

Tube Dimensions



Unit: mm

| Part No. | HRS No. | No. of Contacts | A | B | Tube Packaging Quantity | RoHS | Part No. | HRS No. | No. of Contacts | A | B | Tube Packaging Quantity | RoHS |
|---------------------|---------------|-----------------|------|-------|-------------------------|------|----------------------|---------------|-----------------|-------|-------|-------------------------|------|
| DF13-2P-1.25DSA(**) | 536-0101-9 ** | 2 | 1.25 | 4.15 | 115 | Yes | DF13- 9P-1.25DSA(**) | 536-0108-8 ** | 9 | 10.00 | 12.90 | 37 | Yes |
| DF13-3P-1.25DSA(**) | 536-0102-1 ** | 3 | 2.50 | 5.40 | 89 | | DF13-10P-1.25DSA(**) | 536-0109-0 ** | 10 | 11.25 | 14.15 | 34 | |
| DF13-4P-1.25DSA(**) | 536-0103-4 ** | 4 | 3.75 | 6.65 | 72 | | DF13-11P-1.25DSA(**) | 536-0110-0 ** | 11 | 12.50 | 15.40 | 31 | |
| DF13-5P-1.25DSA(**) | 536-0104-7 ** | 5 | 5.00 | 7.90 | 61 | | DF13-12P-1.25DSA(**) | 536-0111-2 ** | 12 | 13.75 | 16.65 | 29 | |
| DF13-6P-1.25DSA(**) | 536-0105-0 ** | 6 | 6.25 | 9.15 | 52 | | DF13-13P-1.25DSA(**) | 536-0112-5 ** | 13 | 15.00 | 17.90 | 27 | |
| DF13-7P-1.25DSA(**) | 536-0106-2 ** | 7 | 7.50 | 10.40 | 46 | | DF13-14P-1.25DSA(**) | 536-0113-8 ** | 14 | 16.25 | 19.15 | 25 | |
| DF13-8P-1.25DSA(**) | 536-0107-5 ** | 8 | 8.75 | 11.65 | 41 | | DF13-15P-1.25DSA(**) | 536-0114-0 ** | 15 | 17.50 | 20.40 | 23 | |

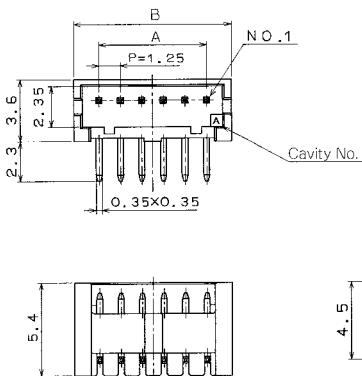
Note 1 : The quantity at the specific No."None" is delivered per bag (100pcs.). If needed, please select and order the products per bag.

Note 2 : Order the tube packaging product, multiplying the tube packaging quantity.

Single Row Right Angle Pin Header (Through hole)

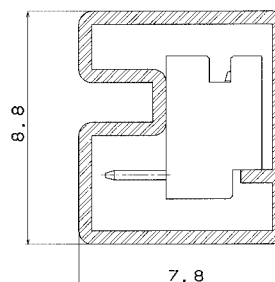


●Board Through-hole Diameter : $\phi 0.6 \pm 0.03$



[Specific No.] (**), **
(20) : Tin plated tube packaging

Tube Dimensions



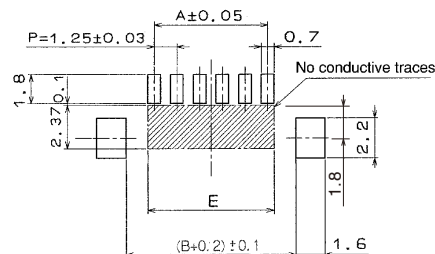
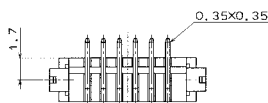
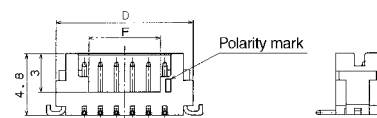
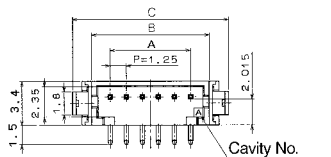
Unit: mm

| Part No. | HRS No. | No. of Contacts | A | B | Tube Packaging Quantity | RoHS | Part No. | HRS No. | No. of Contacts | A | B | Tube Packaging Quantity | RoHS |
|--------------------|---------------|-----------------|------|-------|-------------------------|------|---------------------|---------------|-----------------|-------|-------|-------------------------|------|
| DF13-2P-1.25DS(20) | 536-0151-7 20 | 2 | 1.25 | 4.15 | 115 | Yes | DF13- 9P-1.25DS(20) | 536-0158-6 20 | 9 | 10.00 | 12.90 | 37 | Yes |
| DF13-3P-1.25DS(20) | 536-0152-0 20 | 3 | 2.50 | 5.40 | 89 | | DF13-10P-1.25DS(20) | 536-0159-9 20 | 10 | 11.25 | 14.15 | 34 | |
| DF13-4P-1.25DS(20) | 536-0153-2 20 | 4 | 3.75 | 6.65 | 72 | | DF13-11P-1.25DS(20) | 536-0160-8 20 | 11 | 12.50 | 15.40 | 31 | |
| DF13-5P-1.25DS(20) | 536-0154-5 20 | 5 | 5.00 | 7.90 | 61 | | DF13-12P-1.25DS(20) | 536-0161-0 20 | 12 | 13.75 | 16.65 | 29 | |
| DF13-6P-1.25DS(20) | 536-0155-8 20 | 6 | 6.25 | 9.15 | 52 | | DF13-14P-1.25DS(20) | 536-0163-6 20 | 14 | 16.25 | 19.15 | 25 | |
| DF13-7P-1.25DS(20) | 536-0156-0 20 | 7 | 7.50 | 10.40 | 46 | | DF13-15P-1.25DS(20) | 536-0164-9 20 | 15 | 17.50 | 20.40 | 23 | |
| DF13-8P-1.25DS(20) | 536-0157-3 20 | 8 | 8.75 | 11.65 | 41 | | | | | | | | |

Note 1 : Order the tube packaging product, multiplying the tube packaging quantity.

Single Row Straight Pin Header (SMT) (Three-Wall/Correspond to Vacuum Absorption)

PCB mounting pattern



Note 1. Shaded area must be free of any electrically conductive traces to avoid contact with soldered pin header terminations.

This pin header is a three-wall type, header has sufficiently large flat areas to allow pick-up with vacuum nozzles of automatic placement equipment.

[Specific No.] (**), **
(21) : Tin plated embossed tape packaging
(51) : Gold plated embossed tape packaging

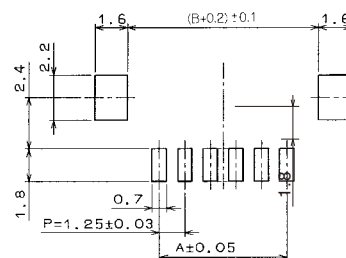
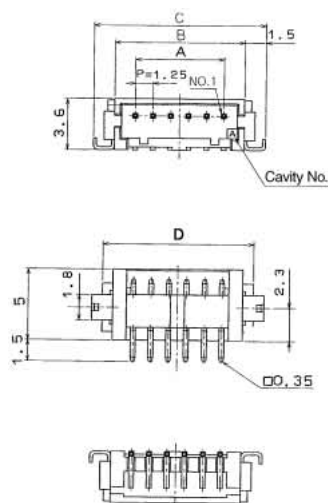
Unit : mm

| Part No. | HRS No. | No. of Contacts | A | B | C | D | E | F | Emboss Width | RoHS |
|---------------------|---------------|-----------------|-------|-------|-------|-------|-------|-------|--------------|------|
| DF13C- 2P-1.25V(**) | 536-0401-2 ** | 2 | 1.25 | 4.15 | 7.15 | 5.65 | 1.95 | 2.20 | 16 | Yes |
| DF13C- 3P-1.25V(**) | 536-0402-5 ** | 3 | 2.50 | 5.40 | 8.40 | 6.90 | 3.20 | 3.45 | 16 | |
| DF13C- 4P-1.25V(**) | 536-0403-8 ** | 4 | 3.75 | 6.65 | 9.65 | 8.15 | 4.45 | 3.10 | 24 | |
| DF13C- 5P-1.25V(**) | 536-0404-0 ** | 5 | 5.00 | 7.90 | 10.90 | 9.40 | 5.70 | 4.35 | 24 | |
| DF13C- 6P-1.25V(**) | 536-0405-3 ** | 6 | 6.25 | 9.15 | 12.15 | 10.65 | 6.95 | 5.60 | 24 | |
| DF13C- 7P-1.25V(**) | 536-0406-6 ** | 7 | 7.50 | 10.40 | 13.40 | 11.90 | 8.20 | 6.85 | 24 | |
| DF13C- 8P-1.25V(**) | 536-0407-9 ** | 8 | 8.75 | 11.65 | 14.65 | 13.15 | 9.45 | 8.10 | 24 | |
| DF13C- 9P-1.25V(**) | 536-0408-1 ** | 9 | 10.00 | 12.90 | 15.90 | 14.40 | 10.70 | 9.35 | 24 | |
| DF13C-10P-1.25V(**) | 536-0409-4 ** | 10 | 11.25 | 14.15 | 17.15 | 15.65 | 11.95 | 10.60 | 24 | |
| DF13C-11P-1.25V(**) | 536-0410-3 ** | 11 | 12.50 | 15.40 | 18.40 | 16.90 | 13.20 | 11.85 | 32 | |
| DF13C-12P-1.25V(**) | 536-0411-6 ** | 12 | 13.75 | 16.65 | 19.65 | 18.15 | 14.45 | 13.10 | 32 | |
| DF13C-14P-1.25V(**) | 536-0413-1 ** | 14 | 16.25 | 19.15 | 22.15 | 20.65 | 16.95 | 15.60 | 32 | |
| DF13C-15P-1.25V(**) | 536-0414-4 ** | 15 | 17.50 | 20.40 | 23.40 | 21.90 | 18.20 | 16.85 | 44 | |

Note 1 : Please order the embossed tape packaging product according to reel number. (1000pcs/reel)

Single Row Right Angle Pin Header (SMT) (Four-Wall/Correspond to Vacuum Absorption)

PCB mounting pattern



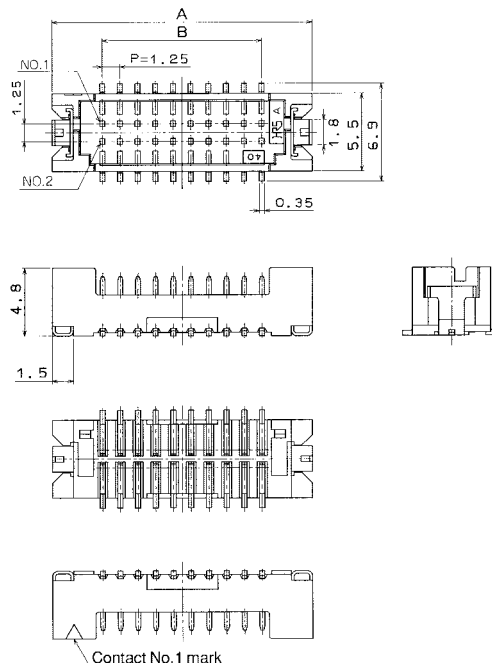
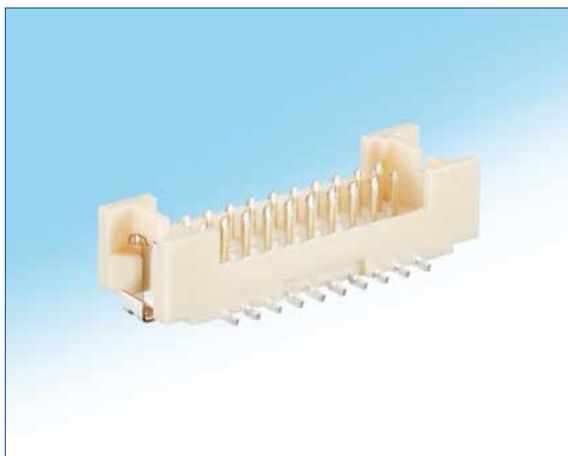
[Specific No.] (**), **
(21) : Tin plated embossed tape packaging
(51) : Gold plated embossed tape packaging

Unit : mm

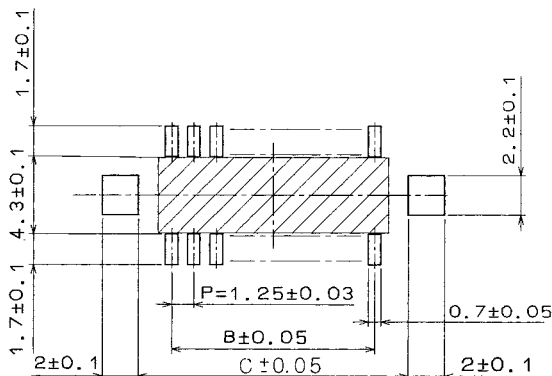
| Part No. | HRS No. | No. of Contacts | A | B | C | D | Emboss Width | RoHS |
|---------------------|---------------|-----------------|-------|-------|-------|-------|--------------|------|
| DF13A- 2P-1.25H(**) | 536-0301-8 ** | 2 | 1.25 | 4.15 | 7.15 | 5.65 | 16 | Yes |
| DF13A- 3P-1.25H(**) | 536-0302-0 ** | 3 | 2.50 | 5.40 | 8.40 | 6.90 | 16 | |
| DF13A- 4P-1.25H(**) | 536-0303-3 ** | 4 | 3.75 | 6.65 | 9.65 | 8.15 | 24 | |
| DF13A- 5P-1.25H(**) | 536-0304-6 ** | 5 | 5.00 | 7.90 | 10.90 | 9.40 | 24 | |
| DF13A- 6P-1.25H(**) | 536-0305-9 ** | 6 | 6.25 | 9.15 | 12.15 | 10.65 | 24 | |
| DF13A- 7P-1.25H(**) | 536-0306-1 ** | 7 | 7.50 | 10.40 | 13.40 | 11.90 | 24 | |
| DF13A- 8P-1.25H(**) | 536-0307-4 ** | 8 | 8.75 | 11.65 | 14.65 | 13.15 | 24 | |
| DF13A- 9P-1.25H(**) | 536-0308-7 ** | 9 | 10.00 | 12.90 | 15.90 | 14.40 | 24 | |
| DF13A-10P-1.25H(**) | 536-0309-0 ** | 10 | 11.25 | 14.15 | 17.15 | 15.65 | 24 | |
| DF13A-11P-1.25H(**) | 536-0310-9 ** | 11 | 12.50 | 15.40 | 18.40 | 16.90 | 32 | |
| DF13A-12P-1.25H(**) | 536-0311-1 ** | 12 | 13.75 | 16.65 | 19.65 | 18.15 | 32 | |
| DF13A-14P-1.25H(**) | 536-0313-7 ** | 14 | 16.25 | 19.15 | 22.15 | 20.65 | 32 | |
| DF13A-15P-1.25H(**) | 536-0314-0 ** | 15 | 17.50 | 20.40 | 23.40 | 21.90 | 44 | |

Note 1 : Please order the embossed tape packaging product according to reel number. (1000pcs/reel)

Double Row Straight Pin Header (SMT) (Four-Wall/Correspond to Vacuum Absorption)



PCB mounting pattern



Note 1. Shaded area must be free of any electrically conductive traces to avoid contact with soldered pin header terminations.

[Specific No.] (**), **
(21) : Tin-copper plated embossed tape packaging
(51) : Gold plated embossed tape packaging

Unit: mm

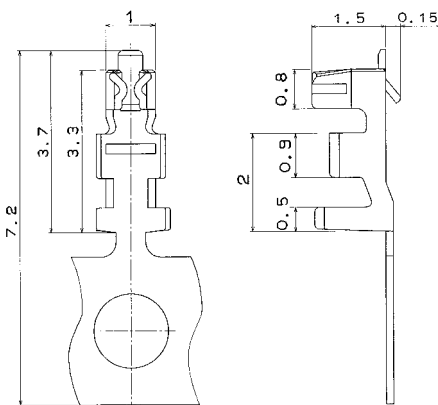
| Part No. | HRS No. | No. of Contacts | A | B | C | Spec No. (21) | Spec No. (51) | Emboss Width | RoHS |
|-----------------------|------------|-----------------|-------|-------|-------|------------------|------------------|-----------------|------|
| DF13EA-10DP-1.25V(**) | 536-0570-0 | 10 | 12.10 | 5.00 | 8.70 | ✓ | ✓ | 24 | Yes |
| DF13EA-20DP-1.25V(**) | 536-0571-0 | 20 | 18.35 | 11.25 | 14.95 | ✓ | ✓ | 32 | |
| DF13EA-30DP-1.25V(**) | 536-0572-0 | 30 | 24.60 | 17.50 | 21.20 | ✓ | ✓ | 44 | |
| DF13EA-40DP-1.25V(**) | 536-0573-0 | 40 | 30.85 | 23.75 | 27.45 | - | ✓ | 44 | |

Note 1 : Please order the embossed tape packaging product according to reel number. (1000pcs/reel)

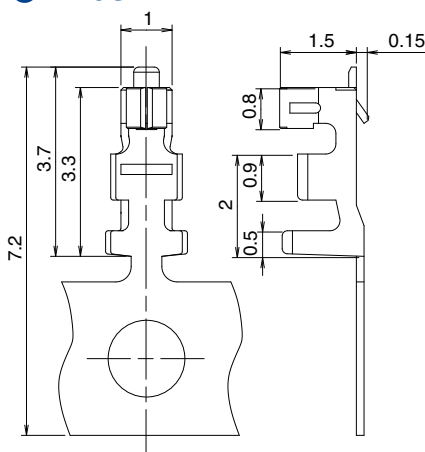
Note 2 : The absorption cap is attached to the embossed tape packaging product.

■ Crimping Contact

● DF13



● DF13G



Reel Contact (1 Reel, 10,000 reel contacts)

| Part No. | HRS No. | Finish | Applicable Cable (Tin Plated Annealing Copper Wire) (Note 1) | | | | RoHS |
|---|---------------|------------|--|-----------|-------------------------|--------------------------|---------------|
| | | | UL | Wire size | Stranded wire conductor | Calculated cross-section | |
| DF13-2630SCF | 536-0300-5 | Tin plated | 1061 | 26 AWG | 7Pieces / φ0.16mm | 0.141mm ² | 0.56 to 1.0mm |
| | | | 1571 | 28 AWG | 7Pieces / φ0.127mm | 0.089mm ² | |
| | | | | 30 AWG | 7Pieces / φ0.1mm | 0.055mm ² | |
| DF13-3032SCF | 536-0299-8 | Tin plated | 1061 | 30 AWG | 7Pieces / φ0.1mm | 0.055mm ² | 0.52 to 0.8mm |
| | | | 1571 | 32 AWG | 7Pieces / φ0.08mm | 0.035mm ² | |
| | | | | 26 AWG | 7Pieces / φ0.16mm | 0.141mm ² | |
| DF13-2630SCFA(04) | 536-0298-5 04 | Au plated | 1061 | 26 AWG | 7Pieces / φ0.16mm | 0.141mm ² | 0.56 to 1.0mm |
| | | | 1571 | 28 AWG | 7Pieces / φ0.127mm | 0.089mm ² | |
| | | | | 30 AWG | 7Pieces / φ0.1mm | 0.055mm ² | |
| DF13-3032SCFA | 536-0641-6 | Au plated | 1061 | 30 AWG | 7Pieces / φ0.1mm | 0.055mm ² | 0.52 to 0.8mm |
| | | | 1571 | 32 AWG | 7Pieces / φ0.08mm | 0.035mm ² | |
| | | | | 26 AWG | 7Pieces / φ0.16mm | 0.141mm ² | |
| DF13G-2630SCF (Low insertion/extraction) | 536-0643-1 | Tin plated | 1061 | 26 AWG | 7Pieces / φ0.16mm | 0.141mm ² | 0.56 to 1.0mm |
| | | | 1571 | 28 AWG | 7Pieces / φ0.127mm | 0.089mm ² | |
| | | | | 30 AWG | 7Pieces / φ0.1mm | 0.055mm ² | |
| DF13G-2630SCFA (Low insertion/extraction) | 536-0642-9 | Au plated | 1061 | 26 AWG | 7Pieces / φ0.16mm | 0.141mm ² | 0.56 to 1.0mm |
| | | | 1571 | 28 AWG | 7Pieces / φ0.127mm | 0.089mm ² | |
| | | | | 30 AWG | 7Pieces / φ0.1mm | 0.055mm ² | |

Note 1 : Please contact your local Hirose sales REP if you plan on using wires other than those listed above.

◆ Applicable Crimping Tool

| Type | Part No. | HRS No. | Applicable Cable (Note 5) | Applicable Contact |
|--|--------------------|------------|---------------------------|--|
| Applicator for Hirose Crimping Tool | AP105-DF13-2630S | 901-4531-9 | UL1571 UL1061 | DF13-2630SCF/SCFA (04) DF13G-2630SCF/SCFA |
| | AP105-DF13-2630S-S | 901-4555-7 | (Note 4) | |
| | AP105-DF13-3032S | 901-4552-9 | UL1571 | DF13-3032SCF/SCFA |
| Applicators Compatible with Other Companies' Crimping Tools (Note 3) | AP109A-DF13-2630S | 901-4562-2 | UL1571 UL1061 | DF13-2630SCF/SCFA (04) DF13G-2630SCF/SCFA |
| | AP109A-DF13-2630SS | 901-4557-2 | (Note 4) | |
| Hirose Crimping Tool | CM-105C | 901-0001-0 | — | — |
| Manual Crimping Tool | DF13-TB2630HC | 550-0256-1 | UL1571 | DF13-2630SCF (Note 6) DF13-2630SCF/SCFA (04) DF13G-2630SCF/SCFA DF13-3032SCF/SCFA |
| Extraction Tool | DF-C-PO (B) | 550-0179-2 | — | — |

Note 1 : Please conduct crimping based on the "Crimping Quality Standards (ATAD-H0895-00, ATAD-H0953-00)" and "Crimping Conditions Table".

Note 2 : Problems with tools not specified by Hirose are outside the scope of warranty.

Note 3 : Applicators compatible with other companies' crimping tools (AP109A type applicator) cannot be used with Hirose crimping tool CM-105C.

A separate attachment for mounting is needed when using the applicator. Contact the crimping tool maker for inquiries on the attachment.

Note 4 : Thin cable applicator type

Note 5 : Applicable cables are limited to those listed in the table. Contact a Hirose representative for inquiries regarding cables other than those listed.

Note 6 : Cut the reel terminal sequentially with the carrier attached for use with the manual crimping tool. The applicable contacts are limited to those listed in the table.

■ Crimp contact with cable



◆ Product Number Structure

Refer to the chart below when determining the product specifications from the product number.

Please select from the product numbers listed in this catalog when placing orders.

DF13-2630S 1 - 26 A 9 - 300

① ② ③ ④ ⑤ ⑥

| | | |
|---|---|------------------------------|
| ① Part No. of adopted crimping contact DF13-2630S : DF13-2630SCF | ③ Wire size 26 : 26AWG | ⑤ Wire color 9 : White |
| ② Wire type 1 : UL1571 | ④ Crimp position / End processing A : Both end crimped | ⑥ Wire length 300 : 300mm |

| Part No. | HRS No. | Quantity | Finish |
|--------------------------|---------------|-------------|-------------|
| DF13-2630S1-26A9-300(05) | 536-9001-0 05 | 100pcs/Pack | Tin plating |

Note 1 : Bag packaging (100pcs/pack). Order by number of packs.

◆ Crimping

■ Items required prior to start crimping

The work-related documents shown below are required before starting the harness connections.

(The ● mark shows the document required.)

When the documents shown below are not available, ask our sales personnel to provide them.

| Document Title | Description | Automatic Crimping Machine | Hand Crimping Tool | Remarks |
|--|---|----------------------------|--------------------|---|
| (1) Main unit of crimping machine instruction manual | Explanation of main press machine unit | ● | — | When purchasing main press machine unit, it is bundled. |
| (2) Operating Instructions for Hand Tool | Crimp operation | ● | — | When purchasing Applicator, it is bundled. |
| (3) Applicator Spare Parts Identification | Explanation for Applicator installation | ● | — | |
| (4) Crimp Conditions | Standard values of : Crimp height ; Tensile strength | ● | — | |
| (5) Crimp Quality Standards | Various standards for crimping conditions | ● | — | |
| (6) Operating Instructions for Hand Tool | Inspection items of : Crimp height ; Crimp operation Tensile strength | — | ● | When purchasing Hand Tool, it is bundled. |

■ Tools

When crimping work is applied to our contacts, the tool designated by Hirose should be used.

Crimping work by using tools other than as designated must not be done because it may result in contact failure, disconnection of cable, etc.

*The operating instructions manual is available for the crimping machine and the applicator. Be sure to carefully read the operating instructions manual before implementing the work.

■ Applicable electric wires

Check that the electric wire to be used is in the range of application.

If you intend to use an electric wire other than the recommended one, ask our sales personnel.

[Precautions]

- Electric wires that are applicable for crimping connectors shall, principally, be the tin-plated stranded soft-copper wire.
- Crimping of electric wires wherein single wires, polyester yarns, etc., exist and crimping of tin-coated wires should be avoided.
- Avoid crimping two electric wires together.
- The setting values of crimp height (Note 1) may vary between tin-plated and gold-plated terminals even if the same electric wires are used.
- The setting values of crimp height (Note 1) may vary depending on the difference in the core wire configuration even if the computed cross-sectional area is the same.

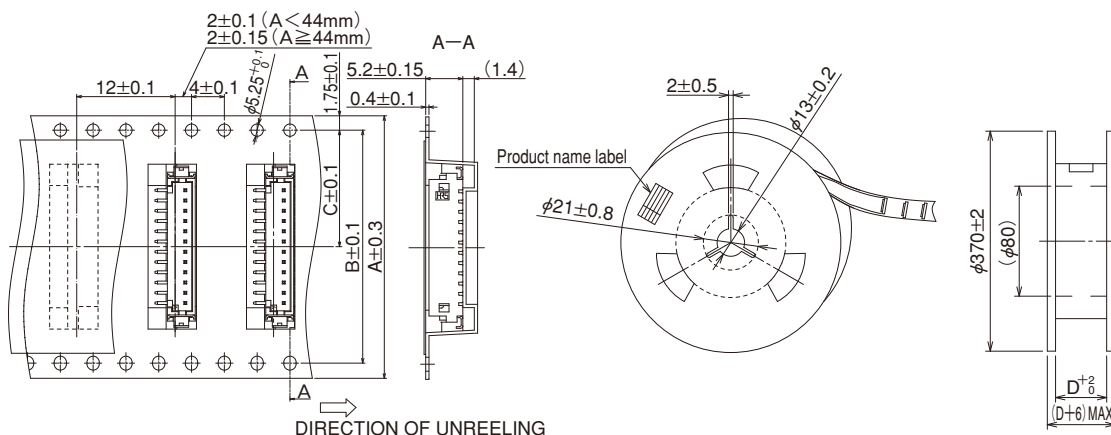
Note 1 : The crimp height is an important item that determines crimping quality. We execute crimping tests for each electric wire to ensure the optimal value for the crimp height with high precision, thereby ensuring optimal setup values.

◆ Application Pattern

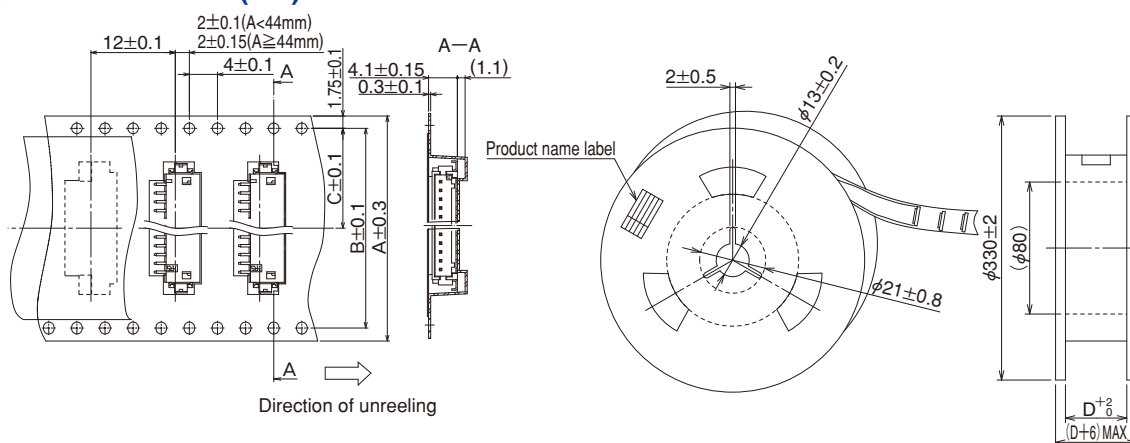
| | SMT (Single Row Product) | Through hole (Single Row Product) | SMT (Double Row Product) |
|-------------|---|--|---|
| Right Angle | <p>DF13-*S-1.25C (6) (3.6) DF13A-*P-1.25H(**)</p> | <p>DF13-*S-1.25C (6.4) (3.6) DF13-*P-1.25DS(**)</p> | |
| Straight | <p>DF13-*S-1.25C (5.8) (3.4) DF13C-*P-1.25V(**)</p> | <p>DF13-*S-1.25C (5.3) (3.4) DF13-*P-1.25DSA(**)</p> | <p>DF13-*S-1.25C (5.8) (5.5) DF13EA-*DP-1.25V(**)</p> |

◆ Embossed Carrier Tape Dimensions

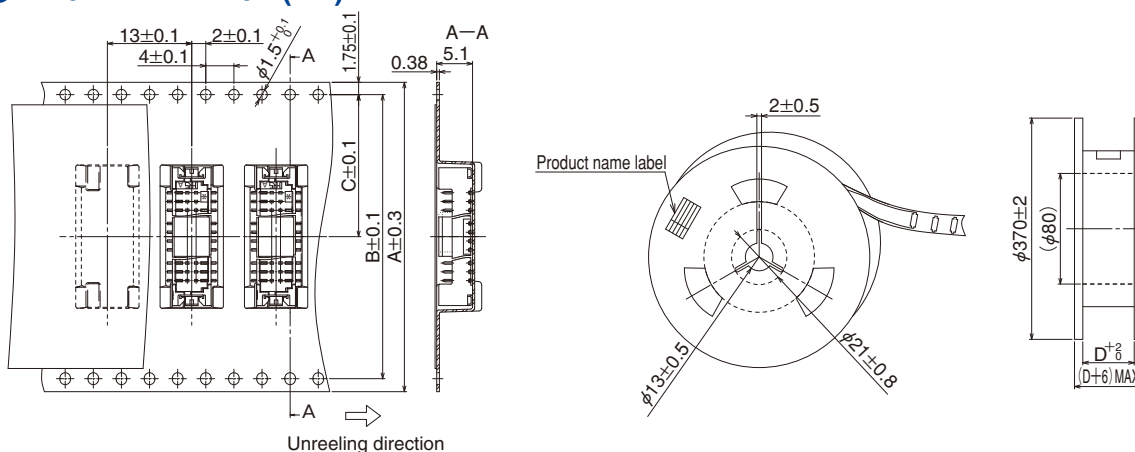
● DF13C-*P-1.25V (**)



● DF13A-*P-1.25H (**)



● DF13EA-*DP-1.25V (**)



Unit : mm

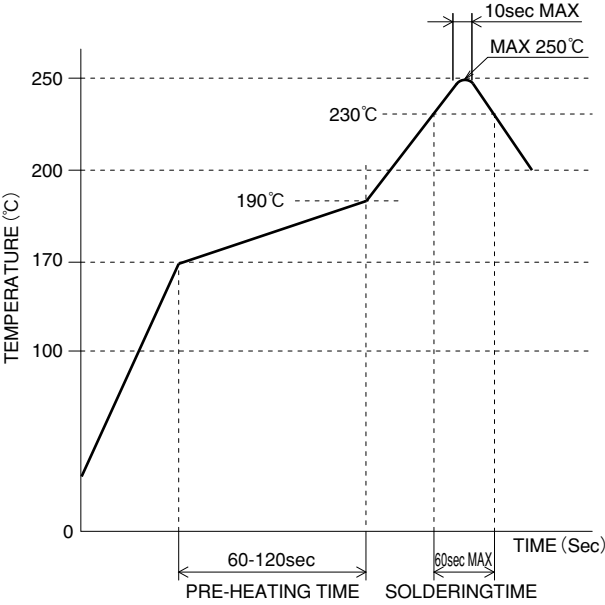
| Product Type | Size | No. of Contacts | A | B | C | D |
|---------------------|------|-----------------|----|------|------|------|
| DF13C-*P-1.25V (**) | | 2, 3 | 16 | — | 7.5 | 16.4 |
| | | 4 to 10 | 24 | — | 11.5 | 24.4 |
| | | 11 to 14 | 32 | 28.4 | 14.2 | 32.4 |
| DF13A-*P-1.25H (**) | | 15 | 44 | 40.4 | 20.2 | 44.4 |

Note : The 13 contacts is not serialized.

Unit : mm

| Product Type | Size | No. of Contacts | A | B | C | D |
|-----------------------|------|-----------------|----|------|------|------|
| DF13EA-*DP-1.25V (**) | | 10 | 24 | — | 11.5 | 24.4 |
| | | 20 | 32 | 28.4 | 14.2 | 32.4 |
| | | 30 to 40 | 44 | 40.4 | 20.2 | 44.4 |

◆ Precautions

| | |
|--|--|
| <p>1. Recommended Temperature Profile (SMT)</p> |  <p>[Applicable Conditions]</p> <ol style="list-style-type: none"> 1. Peak temperature : 250°C max. 2. Heating area : 230°C min. for less than 60 seconds 3. Preheating area : 170°C to 190°C for 60 to 120 seconds 4. Number of times : no more than 2 times <p>* Measurement is conducted at the contact lead part Soldering results may change depending on conditions such as solder paste type, manufacturer, PCB size, and other soldering materials. Please determine all mounting conditions before use.</p> <p>Note 1 : This temperature profile is a recommended value. Note 2 : Up to 2 cycles of Reflow soldering are possible under the same conditions, provided that there is a return to normal temperature between the first and second cycle. Note 3 : The temperature profile indicates the board surface temperature at the point of contacts with the connector terminals. Note 4 : Slight variations in color of the plastic compounds do not affect form, fit or function of the connector.</p> |
| <p>2. Recommended Soldering Condition (SMT)</p> | <p>Manual soldering : 290±10°C for 2 seconds max.</p> |
| <p>3. Recommended Screen Thickness (SMT)</p> | <p>0.15 to 0.2mm</p> |
| <p>4. Board Warpage (SMT)</p> | <p>Max 0.03mm in the connector center area, based on both connector edges</p> |
| <p>5. Recommended Soldering Condition (Through hole)</p> | <p>Flow : 250±5°C for 3 seconds Manual soldering : 290±10°C for 2 seconds</p> |
| <p>6. Cleaning Condition</p> | <p>Refer to Wire to board connector Use Hand book. IPA cleaning is allowed. (Cleaning is not recommended because cleaning may change the mating/withdrawal feeling etc. Please contact us when you use other cleaning agents.)</p> |
| <p>7. Cautions</p> | <p>■Be careful for the excessive scoop insertion/extraction, which will cause damage to the product.</p> |
| <p>8. Precautions</p> | <p>Please refer to following documents in handling this product. ■Crimp quality standards (ETAD-H0895-00, ETAD-H0953-00) ■Wire to board connector Use Hand book.</p> |

◆Precautions

<Precautions at Time of Insertion>

Align with the connector form and press down continue pressing until there is a tactile click.

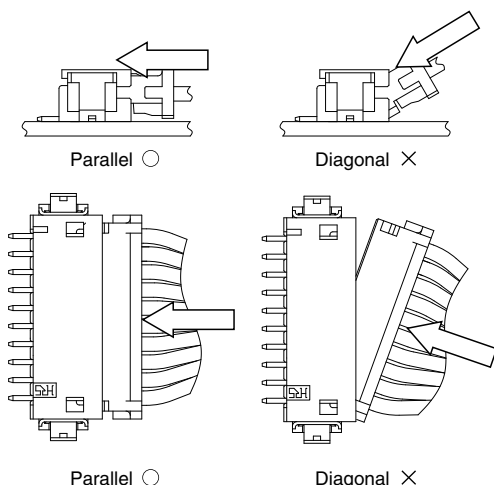
Handing

Method : Lightly grasping the base the cable, press the connector with your finger and insert it.

Insertion Angle

Caution : Do not insert at an angle of 30° or greater. Doing so will cause contact deformation or case damage.

Method : Insert with the connector parallel.



<Precautions at Time of Disconnection>

Align with the connector form and press down continue pressing until there is a tactile click.

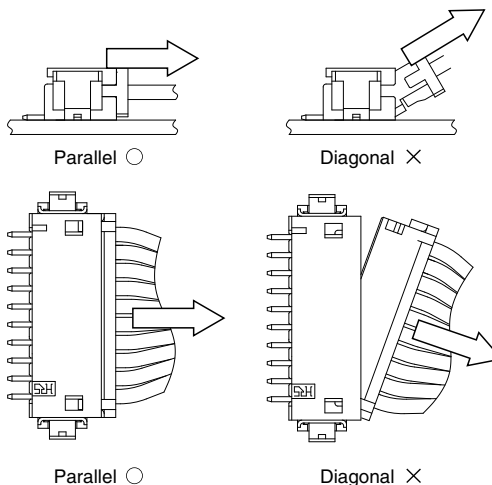
Handing

Method : Grasp the cable so that the entire cable is pulled evenly and it out.

Angle of Removal

Caution : Do not remove at an angle of 30° or greater. Doing so will cause contact deformation or case damage.

Method : Remove with the connector parallel.



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