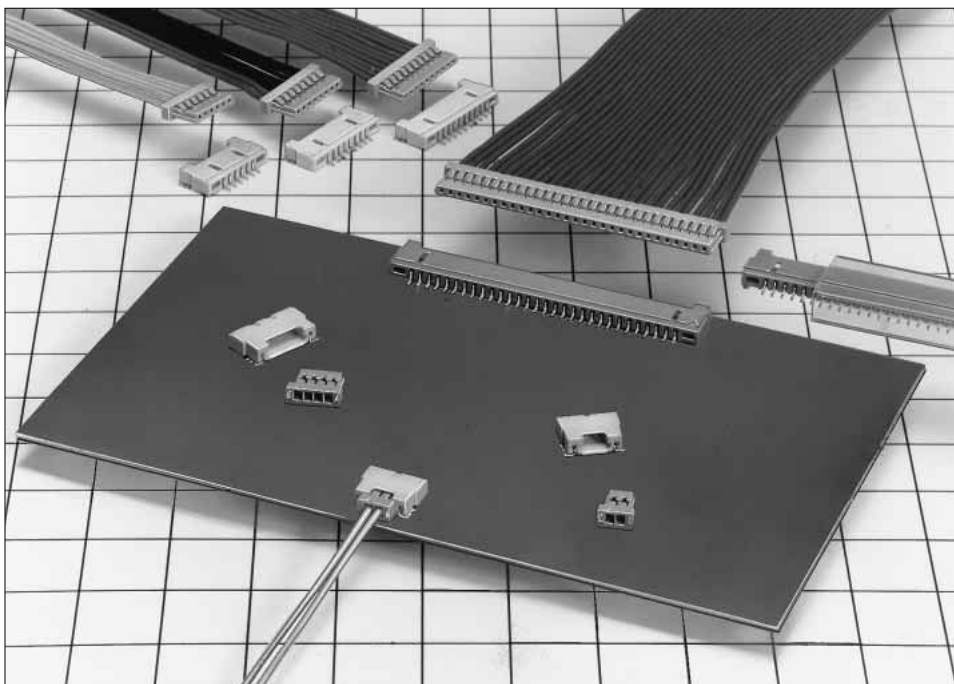


# 1.25mm Pitch Super Low profile Crimping Connector

## DF14 Series



### ■Features

#### 1. Super Low Profile

This is a connector special for right angle which has pursued a low profile on the board.

Board mounting height: **2.5mm**

A signal can be fetched from the area where there is no board to board space. (Refer to fig.1)

Offset type is available.

Board mounting height: **1.6mm** (Refer to fig.2)

#### 2. Correspond to Automatic Mounting

The header has the vacuum mount face which enables the vacuum absorption and the automatic mounting by the embossed tape packaging. In addition, the tube packaging can be selected.

#### 3. Four Wall Type Without Friction to Board by Socket

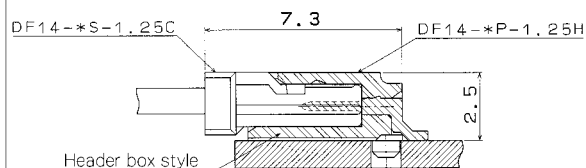
The header has the box structure to prevent from being twisted and has the perfect mis-insertion prevention method. Moreover the header has the wall on the board side and doesn't have any trouble resulted from the friction to board by socket.

In addition, the metal fitting is attached to prevent the solder peel.

### ■Applications

LCD, Note PC, Mobile Terminal Small business equipment, Video camera

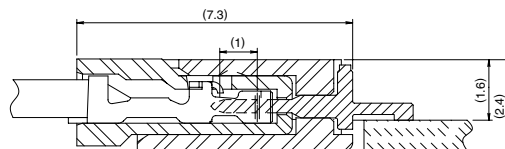
Board Mounting Figure



DF14(A)

fig.1

Board Mounting Figure



DF14H

fig.2

## Product Specifications

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

| Item                             | Specification                                                         | Condition                                                                                       |
|----------------------------------|-----------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| 1. Insulation Resistance         | 500M ohms Min                                                         | 100V DC                                                                                         |
| 2. Withstanding voltage          | No flashover or insulation breakdown.                                 | 500V AC/1 minute                                                                                |
| 3. Contact Resistance            | 30m ohms Max                                                          | 100mA                                                                                           |
| 4. Insertion/Extraction Force    | MIN0.15N (15gf), MAX3N (300gf)                                        | Measure at the square steel pin of 0.3±0.002mm                                                  |
| 5. 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.       |
| 6. Humidity (Steady state)       | Contact resistance: 30m ohms Max Insulation resistance: 500M ohms Min | 96 hours at temperature of 40°C and humidity of 90% to 95%                                      |
| 7. Temperature Cycle             | Contact resistance: 30m ohms Max Insulation resistance: 500M ohms Min | (-25°C: 30 minutes→+5 to 35°C: 10 minutes→+85°C: 30 minutes→<br>5 to 35°C: 10 minutes) 5 cycles |
| 8. Durability (Mating/un-mating) | Contact resistance: 30m ohms Max                                      | Tin plating: 30 cycles Gold plating: 50 cycles                                                  |
| 9. Resistance to Soldering heat  | No deformation of components affecting performance.                   | 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: Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

## Material

| Product                     | Part      | Material        | Finish                           | Remarks |
|-----------------------------|-----------|-----------------|----------------------------------|---------|
| Crimping Socket             | Insulator | Polyamide       | Beige                            | UL94V-0 |
| Crimping Contact for Socket | Contact   | Phosphor Copper | Tin-copper plated or gold plated | ————    |
| Pin Header                  | Insulator | Polyamide       | Beige                            | UL94V-0 |
|                             | Contact   | Brass           | Tin-copper plated or gold plated | ————    |
|                             | Fitting   | Phosphor copper | Tin-copper plated                | ————    |

## Ordering Information

### Connector

**DF 14 # - \* S - 1.25 C**  
 ① ② ③ ④ ⑤ ⑥

|                                                                        |                                                                      |
|------------------------------------------------------------------------|----------------------------------------------------------------------|
| ① Series Name: DF14                                                    | ④ Connector Type<br>S: Single row socket<br>P: Single row pin header |
| ② Blank: Standard, with boss<br>A: on-board, without boss<br>H: offset | ⑤ Contact Pitch: 1.25mm                                              |
| ③ Number of Contacts: 2 to 10, 15, 20, 25, 30                          | ⑥ Contact Type<br>C: Crimping socket<br>H: Right angle SMT           |

### Contact

**DF14 - 2628 SCF A**  
 ① ② ③

|                                                                   |                                                       |
|-------------------------------------------------------------------|-------------------------------------------------------|
| ① Applicable cable size<br>2628: AWG26 to 28<br>3032: AWG30 to 32 | ② Packaging Type<br>SCF: Socket contact/reel          |
|                                                                   | ③ Plating Type<br>Blank: Tin plated<br>A: Gold plated |

## DF14 Series 1.25mm Pitch Super Low profile Crimping Connector

### ■Crimping Socket

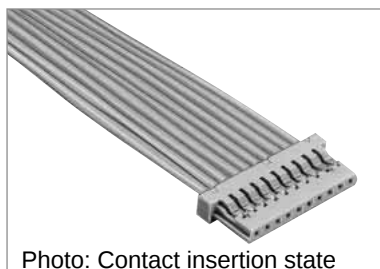
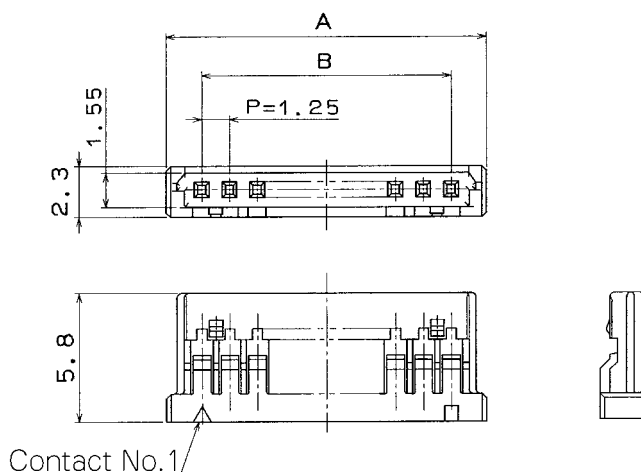


Photo: Contact insertion state



Contact No.1

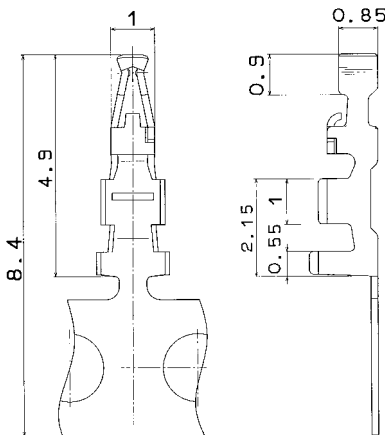
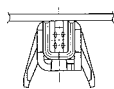
Unit: mm

| Part Number    | CL No.     | Number of Contacts | A     | B     | RoHS |
|----------------|------------|--------------------|-------|-------|------|
| DF14- 2S-1.25C | 538-0005-8 | 2                  | 4.45  | 1.25  | Yes  |
| DF14- 3S-1.25C | 538-0006-0 | 3                  | 5.70  | 2.50  |      |
| DF14- 4S-1.25C | 538-0007-3 | 4                  | 6.95  | 3.75  |      |
| DF14- 5S-1.25C | 538-0008-6 | 5                  | 8.20  | 5.00  |      |
| DF14- 6S-1.25C | 538-0009-9 | 6                  | 9.45  | 6.25  |      |
| DF14- 7S-1.25C | 538-0010-8 | 7                  | 10.70 | 7.50  |      |
| DF14- 8S-1.25C | 538-0011-0 | 8                  | 11.95 | 8.75  |      |
| DF14- 9S-1.25C | 538-0013-6 | 9                  | 13.20 | 10.00 |      |
| DF14-10S-1.25C | 538-0014-9 | 10                 | 14.45 | 11.25 |      |
| DF14-15S-1.25C | 538-0054-3 | 15                 | 20.70 | 17.50 |      |
| DF14-20S-1.25C | 538-0059-7 | 20                 | 26.95 | 23.75 |      |
| DF14-25S-1.25C | 538-0064-7 | 25                 | 33.20 | 30.00 |      |
| DF14-30S-1.25C | 538-0012-3 | 30                 | 39.45 | 36.25 |      |

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

### ■Socket Crimping Contact

| Part Number   | CL No.         | Packaging Type | Quantity | Finish      | RoHS |
|---------------|----------------|----------------|----------|-------------|------|
| DF14-2628SCF  | 538-0001-7-**- | Reel           | 10,000   | Tin plated  | Yes  |
| DF14-3032SCF  | 538-0003-2-**- | Reel           |          | Tin plated  |      |
| DF14-2628SCFA | 538-0002-0-**- | Reel           |          | Gold plated |      |
| DF14-3032SCFA | 538-0004-5-**- | Reel           |          | Gold plated |      |



#### ●Applicable Cable (Tin plating Annealed copper wire)

| Conductor Size (Wire construction) | Jacket Diameter |
|------------------------------------|-----------------|
| AWG26(7 cores/0.16mm)              | φ0.54 to φ1mm   |
| AWG28(7 cores/0.127mm)             |                 |
| AWG30(7 cores/0.1mm)               |                 |
| AWG32(7 cores/0.08mm)              |                 |

Note: If other cables are used instead of the applicable cable, contact Hirose sales department.

#### ◆Applicable Crimping Tool

| Type                 | Part Number      | CL No.     | Applicable Contact |
|----------------------|------------------|------------|--------------------|
| Applicator           | AP105-DF14-2628S | 901-4548-1 | DF14-2628SCF/SCFA  |
|                      | AP105-DF14-3032S | 901-4544-0 | DF14-3032SCF/SCFA  |
| Press Main Unit      | CM-105           | 901-0005-4 | —                  |
| Manual Crimping Tool | DF14-2628/CR-HT  | 550-0261-1 | DF14-2628SCF/SCFA  |
|                      | DF14-3032/CR-HT  | 550-0262-4 | DF14-3032SCF/SCFA  |

Note 1. If a trouble has occurred due to tools, which are not designated by Hirose, Hirose won't guarantee any product.

Note 2. Use the reel contact sequentially cut for manual crimping tool.

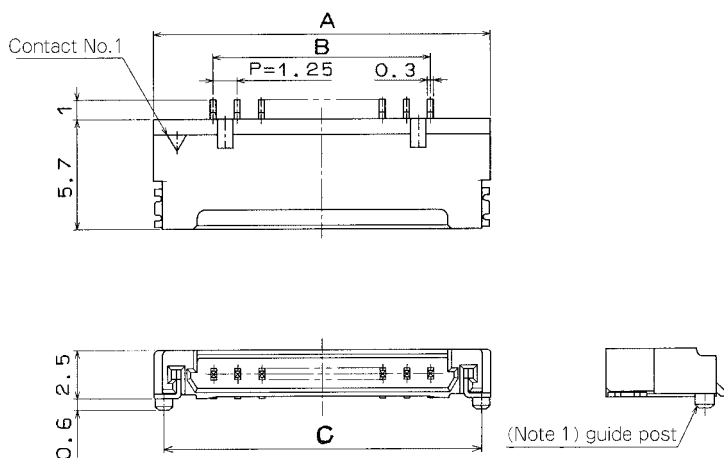
#### ●Recommended Cable

UL1571

#### ●Strip Length

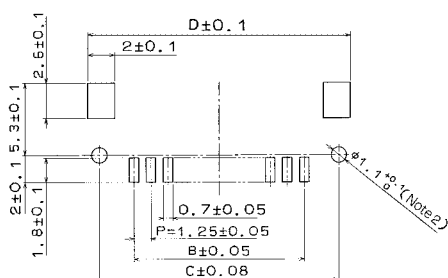
1.2 to 1.9mm

## Right Angle Pin Header (SMT)



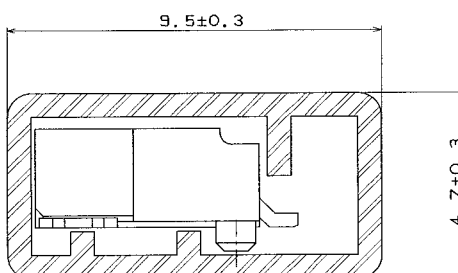
Note 1: "Without boss" indicates the style with no boss.

## PCB mounting pattern



Note 2: "Without boss" indicates that no hole is needed.

## Tube Packaging Dimensions



[Specific No.]—\*\*,(\*\*)  
 (25): Tin-copper plated tube packaging  
 (26): Tin-copper plated embossed tape packaging  
 (55): Gold plated tube packaging  
 (56): Gold plated embossed tape packaging

Unit: mm

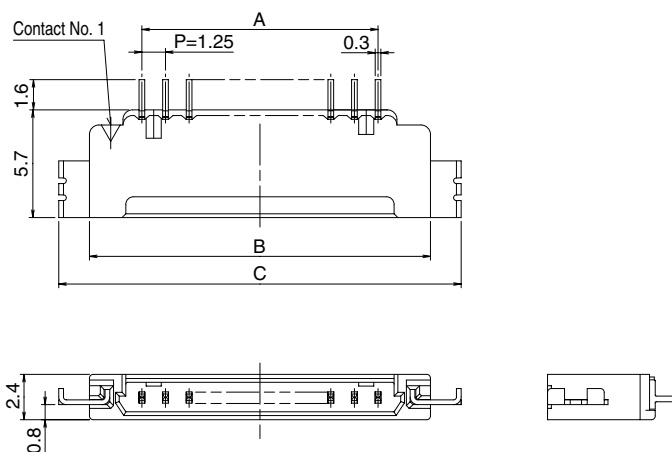
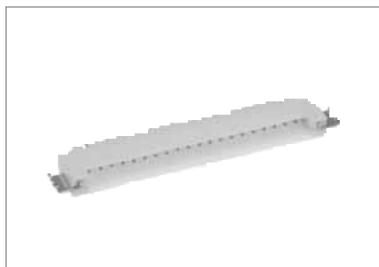
| With boss          |                | Without boss        |                | Number of Contacts | A     | B     | C     | D     | Tube Packaging Quantity | RoHS |
|--------------------|----------------|---------------------|----------------|--------------------|-------|-------|-------|-------|-------------------------|------|
| Part Number        | CL No.         | Part Number         | CL No.         |                    |       |       |       |       |                         |      |
| DF14- 2P-1.25H(**) | 538-0021-4-**- | DF14A- 2P-1.25H(**) | 538-0033-3-**- | 2                  | 7.45  | 1.25  | 6.45  | 8.05  | 66                      | Yes  |
| DF14- 3P-1.25H(**) | 538-0022-7-**- | DF14A- 3P-1.25H(**) | 538-0034-6-**- | 3                  | 8.70  | 2.50  | 7.70  | 9.30  | 56                      |      |
| DF14- 4P-1.25H(**) | 538-0023-0-**- | DF14A- 4P-1.25H(**) | 538-0035-9-**- | 4                  | 9.95  | 3.75  | 8.95  | 10.55 | 49                      |      |
| DF14- 5P-1.25H(**) | 538-0024-2-**- | DF14A- 5P-1.25H(**) | 538-0036-1-**- | 5                  | 11.20 | 5.00  | 10.20 | 11.80 | 44                      |      |
| DF14- 6P-1.25H(**) | 538-0025-5-**- | DF14A- 6P-1.25H(**) | 538-0037-4-**- | 6                  | 12.45 | 6.25  | 11.45 | 13.05 | 39                      |      |
| DF14- 7P-1.25H(**) | 538-0026-8-**- | DF14A- 7P-1.25H(**) | 538-0038-7-**- | 7                  | 13.70 | 7.50  | 12.70 | 14.30 | 36                      |      |
| DF14- 8P-1.25H(**) | 538-0027-0-**- | DF14A- 8P-1.25H(**) | 538-0039-0-**- | 8                  | 14.95 | 8.75  | 13.95 | 15.55 | 32                      |      |
| DF14- 9P-1.25H(**) | 538-0028-3-**- | DF14A- 9P-1.25H(**) | 538-0040-9-**- | 9                  | 16.20 | 10.00 | 15.20 | 16.80 | 30                      |      |
| DF14-10P-1.25H(**) | 538-0029-6-**- | DF14A-10P-1.25H(**) | 538-0041-1-**- | 10                 | 17.45 | 11.25 | 16.45 | 18.05 | 28                      |      |
| DF14-15P-1.25H(**) | 538-0084-4-**- | DF14A-15P-1.25H(**) | 538-0114-3-**- | 15                 | 23.70 | 17.50 | 22.70 | 24.30 | 20                      |      |
| DF14-20P-1.25H(**) | 538-0089-8-**- | DF14A-20P-1.25H(**) | 538-0119-7-**- | 20                 | 29.95 | 23.75 | 28.95 | 30.55 | 16                      |      |
| DF14-25P-1.25H(**) | 538-0094-8-**- | DF14A-25P-1.25H(**) | 538-0124-7-**- | 25                 | 36.20 | 30.00 | 35.20 | 36.80 | 13                      |      |
| DF14-30P-1.25H(**) | 538-0020-1-**- | DF14A-30P-1.25H(**) | 538-0045-2-**- | 30                 | 42.45 | 36.25 | 41.45 | 43.05 | 11                      |      |

Note 1. Please order the tube packaging product, multiplying the packaging quantity (pcs.).

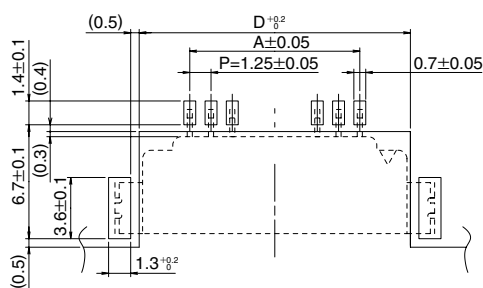
Note 2. Please order the embossed tape packaging product according to reel number. (1000 pcs./reel)

## DF14 Series 1.25mm Pitch Super Low profile Crimping Connector

### ■ Right Angle Pin Header (Offset, SMT)



### ◆ PCB mounting pattern



[Specific No.]—\*\*,(\*\*)  
 (56): Gold plated embossed tape packaging

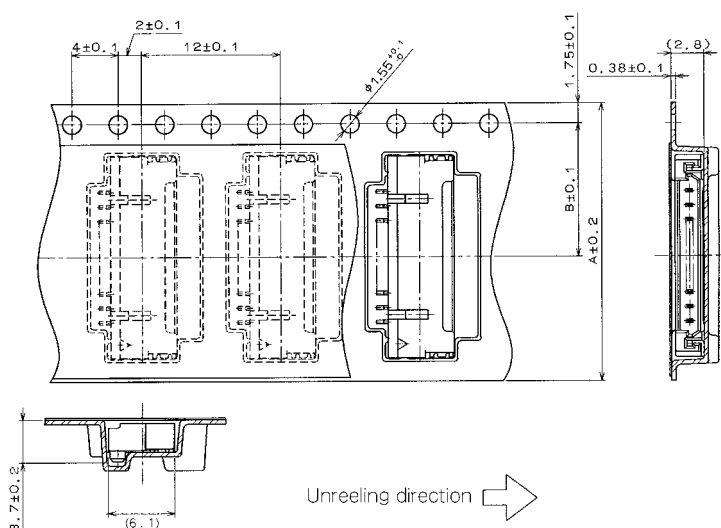
Unit: mm

| Part Number         | CL No.        | Number of Contacts | A     | B    | C    | D    | RoHS |
|---------------------|---------------|--------------------|-------|------|------|------|------|
| DF14H- 2P-1.25H(**) | 538-0177-3-** | 2                  | 1.25  | 6.8  | 10.1 | 7.2  | Yes  |
| DF14H-20P-1.25H(**) | 538-0167-0-** | 30                 | 23.75 | 29.3 | 32.6 | 29.7 |      |
| DF14H-30P-1.25H(**) | 538-0188-0-** | 30                 | 36.25 | 41.8 | 45.1 | 42.2 |      |

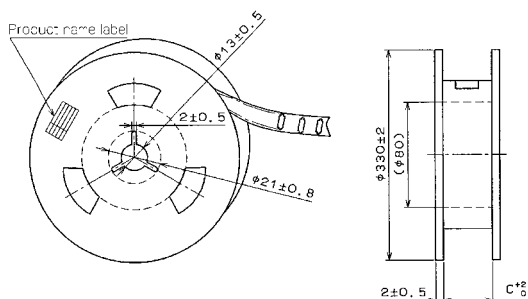
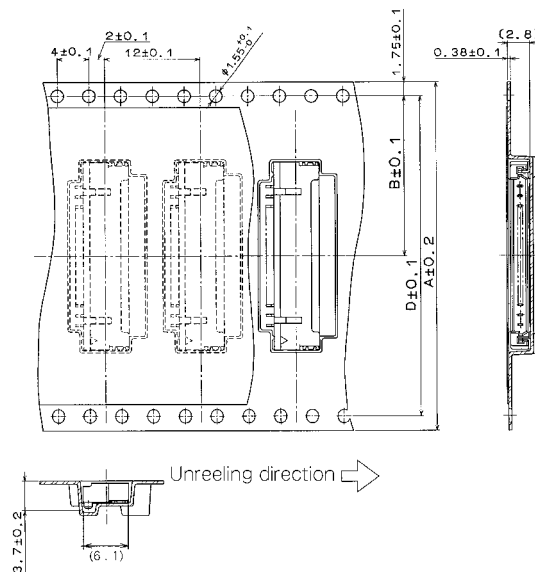
Note 1. Please order the embossed tape packaging product according to reel number. (1000 pcs./reel)

## ◆ Embossed Carrier Tape Dimensions (JIS-C-0806)

### ■ 2 to 10 Contacts



### ■ 15, 20, 25, 30 Contacts



Unit: mm

| Inserted Connector | Number of Contacts | A  | B    | C    | D    |
|--------------------|--------------------|----|------|------|------|
| DF14/14A- 2P-1.25H | 2                  | 16 | 7.5  | 16.4 | —    |
| DF14/14A- 3P-1.25H | 3                  | 16 | 7.5  | 16.4 | —    |
| DF14/14A- 4P-1.25H | 4                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A- 5P-1.25H | 5                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A- 6P-1.25H | 6                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A- 7P-1.25H | 7                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A- 8P-1.25H | 8                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A- 9P-1.25H | 9                  | 24 | 11.5 | 24.4 | —    |
| DF14/14A-10P-1.25H | 10                 | 24 | 11.5 | 24.4 | —    |
| DF14/14A-15P-1.25H | 15                 | 44 | 20.2 | 44.4 | 40.4 |
| DF14/14A-20P-1.25H | 20                 | 44 | 20.2 | 44.4 | 40.4 |
| DF14/14A-25P-1.25H | 25                 | 56 | 26.2 | 56.4 | 52.4 |
| DF14/14A-30P-1.25H | 30                 | 56 | 26.2 | 56.4 | 52.4 |

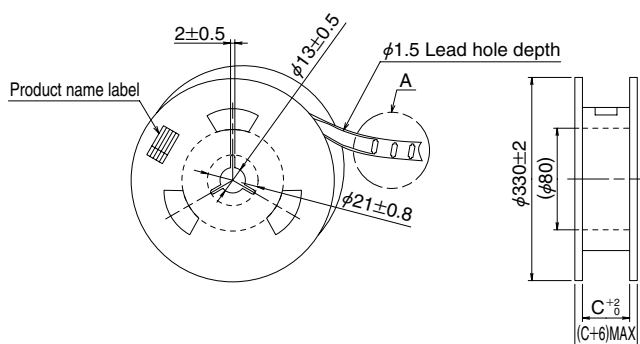
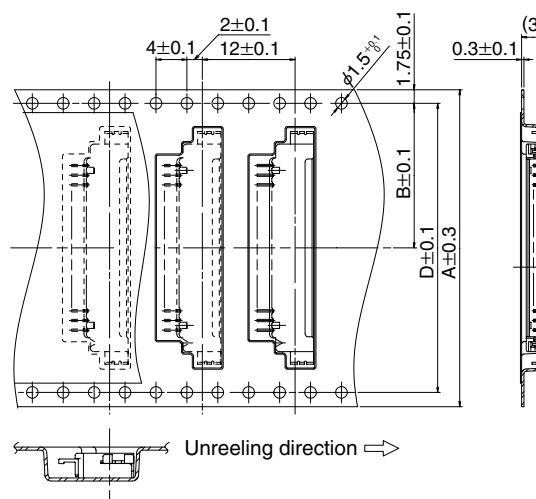
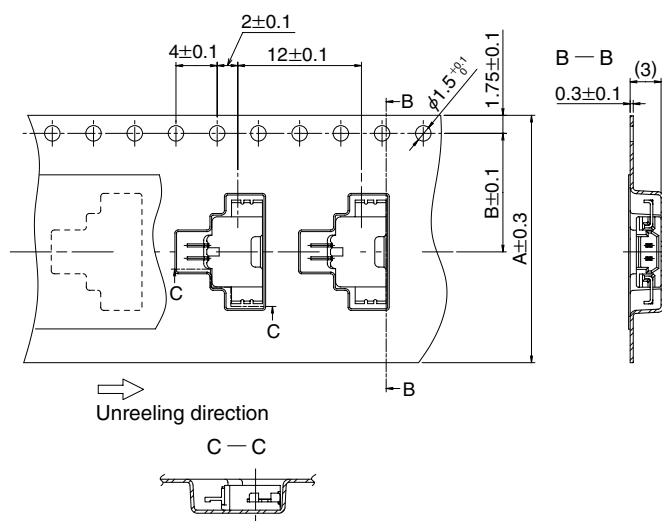
## DF14 Series 1.25mm Pitch Super Low profile Crimping Connector

### ◆ Embossed Carrier Tape Dimensions (JIS-C-0806)

DF14H-\*P- 1.25H

■ 2 Contacts

■ 20, 30 Contacts



Unit: mm

| Inserted Connector | Number of Contacts | A  | B    | C    | D    |
|--------------------|--------------------|----|------|------|------|
| DF14H- 2P-1.25H    | 2                  | 24 | 11.5 | 24.4 | —    |
| DF14H- 20P-1.25H   | 20                 | 44 | 20.2 | 44.4 | 40.4 |
| DF14H- 30P-1.25H   | 30                 | 56 | 26.2 | 56.4 | 52.4 |

◆Precautions

|                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                 |                             |                |                         |  |                            |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------------|----------------|-------------------------|--|----------------------------|
| 1. Recommended Temperature Profile (SMT)        | <div><p>Temperature</p><p>10s max.</p><p>Max. 240</p><p>220</p><p>60s max.</p><p>Soldering</p><p>60 to 120s</p><p>Preheating</p><p>250°C</p><p>200°C</p><p>150°C</p><p>100°C</p><p>Time</p><p>IR reflow condition</p><table><tr><td>Preheating area</td><td>150°C for 60 to 120 seconds</td></tr><tr><td>Soldering area</td><td>250 for 10 seconds max.</td></tr><tr><td></td><td>220°C min. 60 seconds max.</td></tr></table><p>Note 1.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.</p><p>Note 2.The temperature profile indicates the board surface temperature at the point of contacts with the connector terminals.</p></div> | Preheating area | 150°C for 60 to 120 seconds | Soldering area | 250 for 10 seconds max. |  | 220°C min. 60 seconds max. |
| Preheating area                                 | 150°C for 60 to 120 seconds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                 |                             |                |                         |  |                            |
| Soldering area                                  | 250 for 10 seconds max.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |                             |                |                         |  |                            |
|                                                 | 220°C min. 60 seconds max.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                 |                             |                |                         |  |                            |
| 2. Recommended Manual Soldering Condition (SMT) | Manual soldering: 290°C for 2 seconds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                 |                             |                |                         |  |                            |
| 3. Recommended Screen Thickness (SMT)           | 0.15 to 0.2mm                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                 |                             |                |                         |  |                            |
| 4. Board Sled (SMT)                             | Max 0.03mm at the connector center area, based on both connector edges                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                 |                             |                |                         |  |                            |
| 5. Cleaning Condition                           | Refer to Nylon Connector Use Hand book.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |                             |                |                         |  |                            |
| 6. Connection Condition                         | Refer to Nylon Connector Use Hand book.<br>■Be careful to carry out the crimping operation according to the "Crimping Condition Sheet" and "Crimping Quality Reference", because the crimping contact style is too small.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                 |                             |                |                         |  |                            |
| 7. Precautions                                  | Refer to Nylon Connector Use Hand book.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                 |                             |                |                         |  |                            |
| 8. Cautions                                     | ■Be careful for an excessive scoop insertion/extraction, which will cause damage to the product.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                 |                             |                |                         |  |                            |

◆Precautions

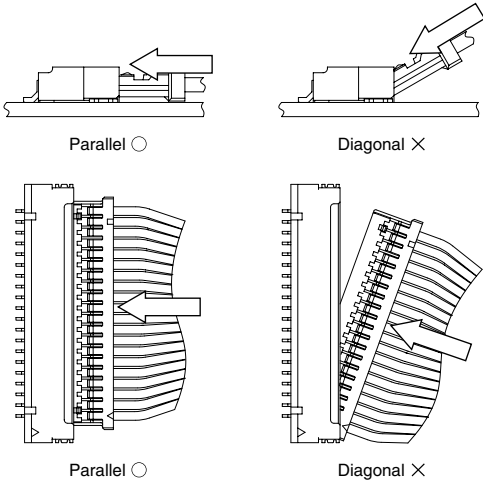
◀Precautions at Time of Insertion▶

Handling

Method: Lightly grasping the base of 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▶

Handling

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

