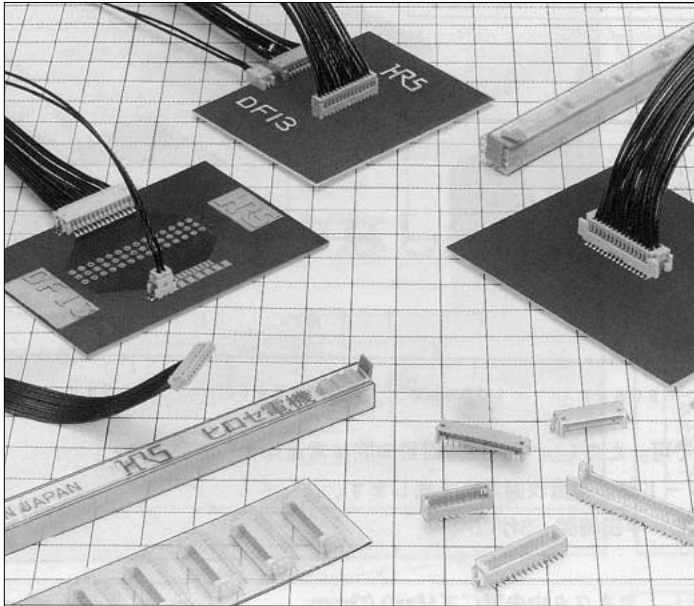


# 1.25mm Pitch Miniature Crimping Connector

## DF13 Series



|                  | Type | Mounting Type | Mounting Height |
|------------------|------|---------------|-----------------|
| 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.

### 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.

## ■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.

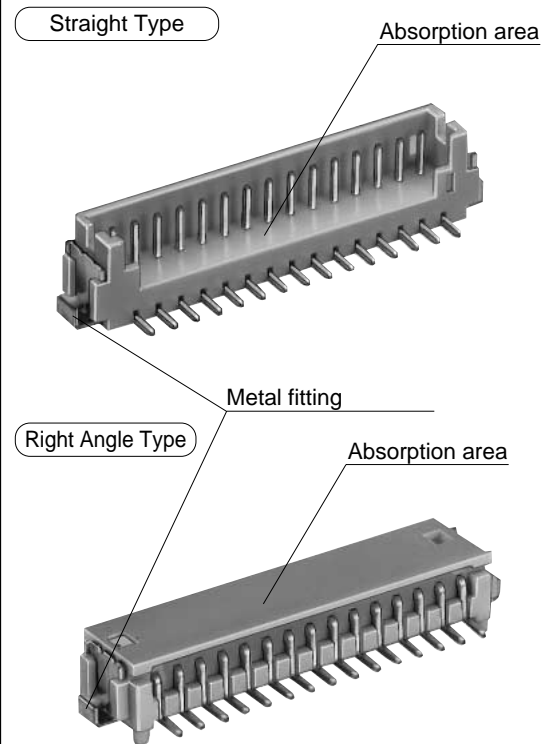


Figure 1

## ■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. Single Insertion/Extraction Force | 0.3N (30gf) min., 3N (300gf) max.                                       | Measured at the square steel pin of 0.35±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. | (-55°C: 30 minutes → 5 to 35°C: 10 minutes → 85°C: 30 minutes → 5 to 35°C: 10 minutes) 5 cycles |
| 8. Operating Life                    | Contact resistance: 30m ohms max.                                       | Tin plating: 30 cycles<br>Gold plating: 50 cycles   |
| 9. 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.

## ■Material

| Product                     | Part          | Material        | Finish                      | Remarks |
|-----------------------------|---------------|-----------------|-----------------------------|---------|
| Crimping Socket             | Insulator     | Polyamide       | Beige                       | UL94V-0 |
| Crimping Contact for Socket | Contact       | Phosphor copper | Tin plating or gold plating | ——      |
| Pin Header (DIP)            | Insulator     | Polyamide       | Beige                       | UL94V-0 |
|                             | Contact       | Brass           | Tin plating                 | ——      |
| Pin Header (SMT)            | Insulator     | Polyamide       | Beige                       | UL94V-0 |
|                             | Contact       | Brass           | Tin plating or gold plating | ——      |
|                             | Metal Fitting | Phosphor copper | Tin plating                 | ——      |

## ■Ordering Information

### ●Connector

DF13  
①
#  
②
-
\*  
③
S  
④
-
1.25  
⑤
C  
⑥

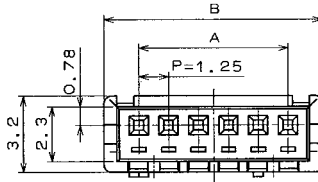
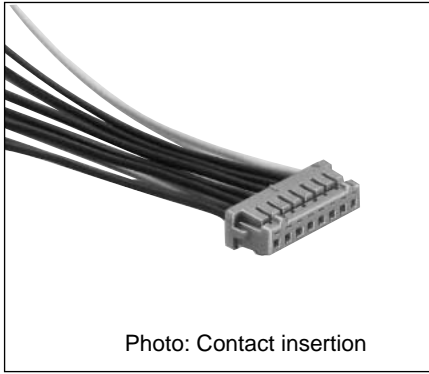
|  |  |  |
|--|--|--|
| ① Series Name : DF13   | ③ Number of Contacts<br>Single row: 2 to 12, 14, 15<br>Double row: 10, 20, 30, 40  | ⑤ Contact Pitch: 1.25mm  |
| ② Style Symbol : None: With boss<br>A: Without boss<br>V Type — B: Without boss, embossed tape type<br>— C: Without boss, embossed tape type | ④ Connector Type<br>S: Single row socket / P: Single row pin header<br>DS: Double row socket / DP: Double row pin header | ⑥ Contact Type<br>C : Crimping socket / DSA : Straight DIP<br>DS : Right angle DIP / V : Straight SMT<br>H : Right angle SMT |

### ●Contact

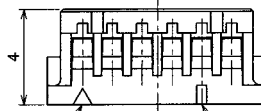
DF 13
-
2630  
①
SCF  
②
A  
③

|   |  |
|---|--|
| ① Applicable Cable Size 2630: AWG26 to 30 | ③ Plating Type None: Tin plating<br>A : Gold plating |
| ② Packaging Type SCF: Socket Contact/Reel |  |

## Single Row Socket



[Specific No.] - \*\*, (\*\*)  
None: 1 bag: 100 pcs.



Contact No.1 mark

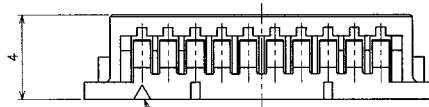
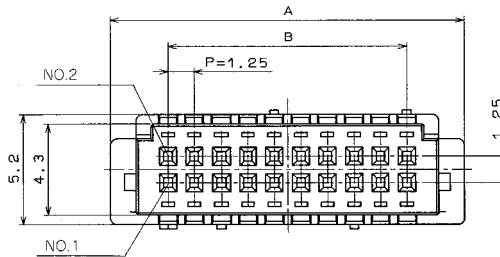
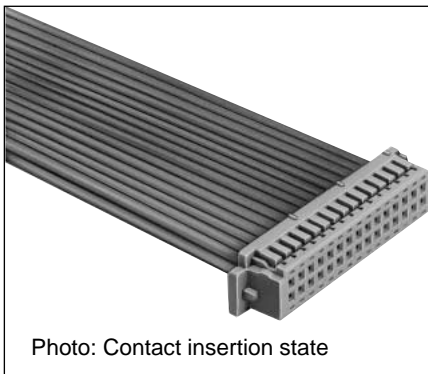
Marking per 5 contacts

Unit: mm

| Part Number       | CL No.        | Number of Contacts | A    | B     | Part Number        | CL No.        | Number of Contacts | A     | B     |
|-------------------|---------------|--------------------|------|-------|--------------------|---------------|--------------------|-------|-------|
| DF13-2S-1.25C(**) | 536-0001-4-** | 2                  | 1.25 | 4.15  | DF13- 9S-1.25C(**) | 536-0008-3-** | 9                  | 10.00 | 12.90 |
| 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  | DF13-14S-1.25C(**) | 536-0013-3-** | 14                 | 16.25 | 19.15 |
| DF13-7S-1.25C(**) | 536-0006-8-** | 7                  | 7.50 | 10.40 | DF13-15S-1.25C(**) | 536-0014-6-** | 15                 | 17.50 | 20.40 |
| DF13-8S-1.25C(**) | 536-0007-0-** | 8                  | 8.75 | 11.65 |                    |               |                    |       |       |

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

## Double Row Socket



Contact No.1 mark

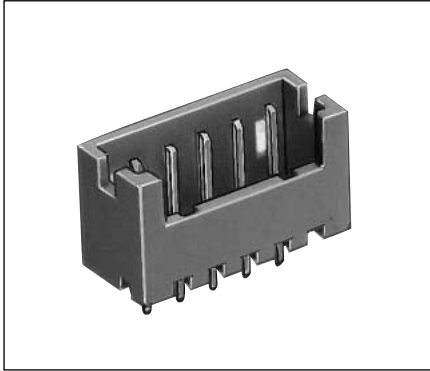
Unit: mm

[Specific No.] - \*\*, (\*\*)  
None: 1 bag: 100 pcs.

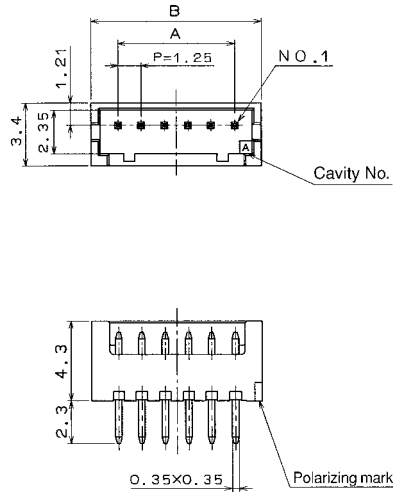
| Part Number         | CL No.        | Number of Contacts | A     | B     |
|---------------------|---------------|--------------------|-------|-------|
| DF13-10DS-1.25C(**) | 536-0550-2-** | 10                 | 10.40 | 5.00  |
| DF13-20DS-1.25C(**) | 536-0555-6-** | 20                 | 16.65 | 11.25 |
| 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 at the specific No. "None" is delivered per bag (100pcs). If needed, please select and order the products per bag.

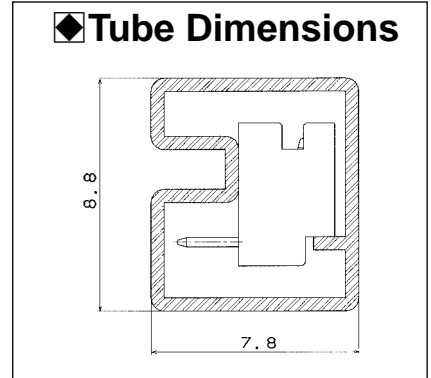
## Single Row Straight Pin Header (DIP)



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



[Specific No.] – \*\*, (\*\*)  
None: Tin plating  
20: Tin plated, tube packaging

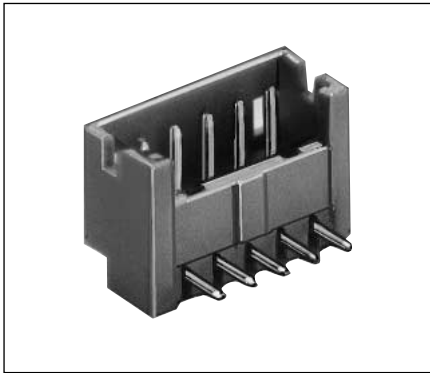


Unit: mm

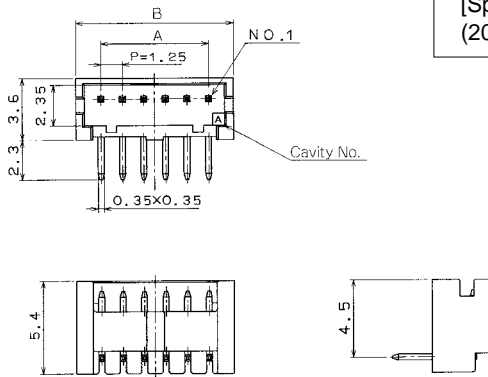
| Part Number         | CL No.         | Number of Contacts | A    | B     | Part Number          | CL No.         | Number of Contacts | A     | B     |
|---------------------|----------------|--------------------|------|-------|----------------------|----------------|--------------------|-------|-------|
| DF13-2P-1.25DSA(**) | 536-0101-9-**- | 2                  | 1.25 | 4.15  | DF13- 9P-1.25DSA(**) | 536-0108-8-**- | 9                  | 10.00 | 12.90 |
| DF13-3P-1.25DSA(**) | 536-0102-1-**- | 3                  | 2.50 | 5.40  | DF13-10P-1.25DSA(**) | 536-0109-0-**- | 10                 | 11.25 | 14.15 |
| DF13-4P-1.25DSA(**) | 536-0103-4-**- | 4                  | 3.75 | 6.65  | DF13-11P-1.25DSA(**) | 536-0110-0-**- | 11                 | 12.50 | 15.40 |
| DF13-5P-1.25DSA(**) | 536-0104-7-**- | 5                  | 5.00 | 7.90  | DF13-12P-1.25DSA(**) | 536-0111-2-**- | 12                 | 13.75 | 16.65 |
| DF13-6P-1.25DSA(**) | 536-0105-0-**- | 6                  | 6.25 | 9.15  | DF13-13P-1.25DSA(**) | 536-0112-5-**- | 13                 | 15.00 | 17.90 |
| DF13-7P-1.25DSA(**) | 536-0106-2-**- | 7                  | 7.50 | 10.40 | DF13-14P-1.25DSA(**) | 536-0113-8-**- | 14                 | 16.25 | 19.15 |
| DF13-8P-1.25DSA(**) | 536-0107-5-**- | 8                  | 8.75 | 11.65 | DF13-15P-1.25DSA(**) | 536-0114-0-**- | 15                 | 17.50 | 20.40 |

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

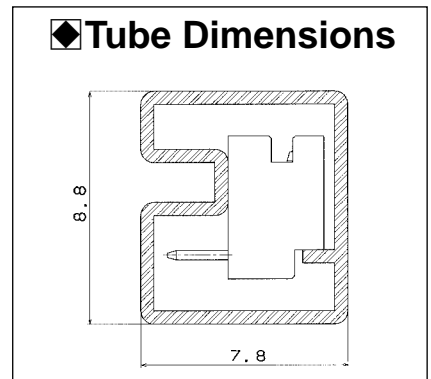
## Single Row Right Angle Pin Header (DIP)



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



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

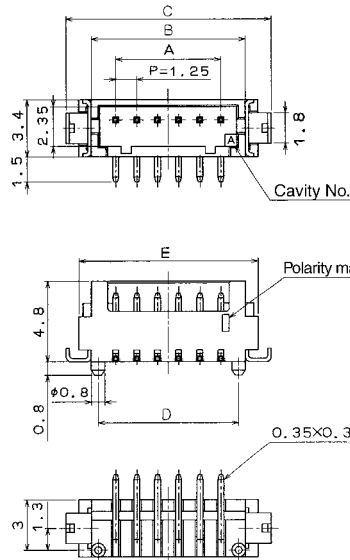
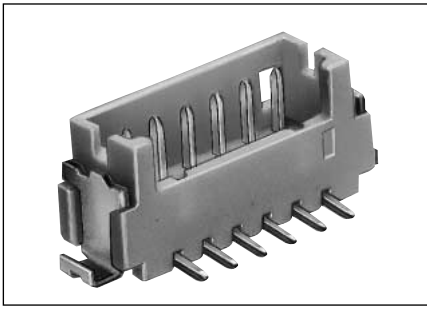


Unit: mm

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

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

## ◆ Single Row Straight Pin Header (SMT)



[Specific No.] – \*\*, (\*\*\*)  
 (20): Tin plated tube package  
 (50): Gold plated tube package

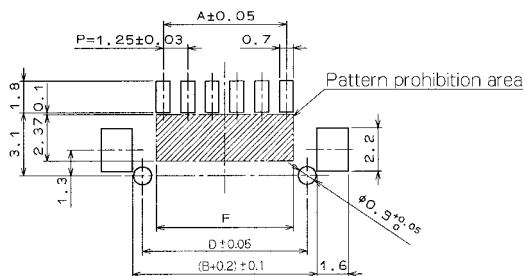
This pin header is a box type style. Therefore, the header has neither vacuum absorption face nor embossed tape packaging specification.

Unit: mm

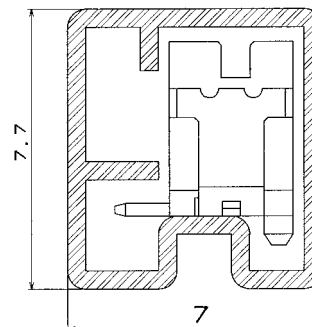
| Part Number        | CL No.         | Number of Contacts | A     | B     | C     | D     | E     | F     | Tube Package Quantity | Remark     |
|--------------------|----------------|--------------------|-------|-------|-------|-------|-------|-------|-----------------------|------------|
| DF13- 2P-1.25V(**) | 536-0201-3-**- | 2                  | 1.25  | 4.15  | 7.15  | 3.35  | 5.65  | 1.95  | 67pcs.                | Guide post |
| DF13- 3P-1.25V(**) | 536-0202-6-**- | 3                  | 2.50  | 5.40  | 8.40  | 4.60  | 6.90  | 3.20  | 57                    |            |
| DF13- 4P-1.25V(**) | 536-0203-9-**- | 4                  | 3.75  | 6.65  | 9.65  | 5.85  | 8.15  | 4.45  | 49                    |            |
| DF13- 5P-1.25V(**) | 536-0204-1-**- | 5                  | 5.00  | 7.90  | 10.90 | 7.10  | 9.40  | 5.70  | 44                    |            |
| DF13- 6P-1.25V(**) | 536-0205-4-**- | 6                  | 6.25  | 9.15  | 12.15 | 8.35  | 10.65 | 6.95  | 39                    |            |
| DF13- 7P-1.25V(**) | 536-0206-7-**- | 7                  | 7.50  | 10.40 | 13.40 | 9.60  | 11.90 | 8.20  | 36                    |            |
| DF13- 8P-1.25V(**) | 536-0207-0-**- | 8                  | 8.75  | 11.65 | 14.65 | 10.85 | 13.15 | 9.45  | 33                    |            |
| DF13- 9P-1.25V(**) | 536-0208-2-**- | 9                  | 10.00 | 12.90 | 15.90 | 12.10 | 14.40 | 10.70 | 30                    |            |
| DF13-10P-1.25V(**) | 536-0209-5-**- | 10                 | 11.25 | 14.15 | 17.15 | 13.35 | 15.65 | 11.95 | 28                    |            |
| DF13-11P-1.25V(**) | 536-0210-4-**- | 11                 | 12.50 | 15.40 | 18.40 | 14.60 | 16.90 | 13.20 | 26                    |            |
| DF13-12P-1.25V(**) | 536-0211-7-**- | 12                 | 13.75 | 16.65 | 19.65 | 15.85 | 18.15 | 14.45 | 24                    |            |
| DF13-14P-1.25V(**) | 536-0213-2-**- | 14                 | 16.25 | 19.15 | 22.15 | 18.35 | 20.65 | 16.95 | 21                    |            |
| DF13-15P-1.25V(**) | 536-0214-5-**- | 15                 | 17.50 | 20.40 | 23.40 | 19.60 | 21.90 | 18.20 | 20                    |            |

Note: Please order the tube packaging products, multiplying the tube packaging quantity.

## ◆ PCB mounting pattern

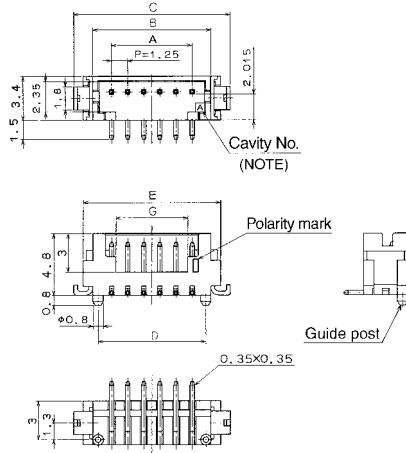
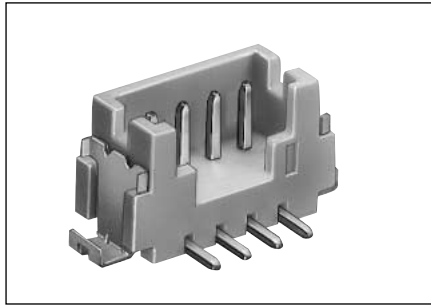


## ◆ Tube Dimensions



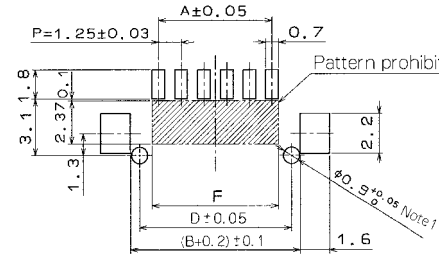
Note: If the pattern exists in the shaded area, and isn't treated with resist, it could touch the connector contact.

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



Note: "No guide post" indicates the style with no boss.

## PCB mounting pattern



Note 1. This hole isn't needed for "No guide post".  
Note 2. If the pattern exists in the shaded area, and isn't treated with resist, it could touch the connector contact.

[Specific No.] – \*\*, (\*\*)  
(20): Tin plating tube packaging  
(21): Tin plating embossed tape packaging  
(50): Gold plating tube packaging  
(51): Gold plating embossed tape packaging

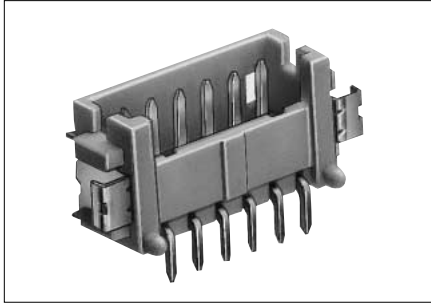
Unit: mm

| Part Number         | CL No.       | Number of Contacts | A     | B     | C     | D     | E     | F     | G     | Tube Packaging Quantity | Emboss Width | Remarks   |              |
|---------------------|--------------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------------------------|--------------|-----------|--------------|
| DF13B- 2P-1.25V(**) | 536-0051-2** | 2                  | 1.25  | 4.15  | 7.15  | 3.35  | 5.65  | 1.95  | 2.20  | 67pcs                   | 16           | With boss |              |
| DF13B- 3P-1.25V(**) | 536-0052-5** | 3                  | 2.50  | 5.40  | 8.40  | 4.60  | 6.90  | 3.20  | 3.45  | 57                      | 16           |           |              |
| DF13B- 4P-1.25V(**) | 536-0053-8** | 4                  | 3.75  | 6.65  | 9.65  | 5.85  | 8.15  | 4.45  | 3.10  | 49                      | 24           |           |              |
| DF13B- 5P-1.25V(**) | 536-0054-0** | 5                  | 5.00  | 7.90  | 10.90 | 7.10  | 9.40  | 5.70  | 4.35  | 44                      | 24           |           |              |
| DF13B- 6P-1.25V(**) | 536-0055-3** | 6                  | 6.25  | 9.15  | 12.15 | 8.35  | 10.65 | 6.95  | 5.60  | 39                      | 24           |           |              |
| DF13B- 7P-1.25V(**) | 536-0056-6** | 7                  | 7.50  | 10.40 | 13.40 | 9.60  | 11.90 | 8.20  | 6.85  | 36                      | 24           |           |              |
| DF13B- 8P-1.25V(**) | 536-0057-9** | 8                  | 8.75  | 11.65 | 14.65 | 10.85 | 13.15 | 9.45  | 8.10  | 33                      | 24           |           |              |
| DF13B- 9P-1.25V(**) | 536-0058-1** | 9                  | 10.00 | 12.90 | 15.90 | 12.10 | 14.40 | 10.70 | 9.35  | 30                      | 24           |           |              |
| DF13B-10P-1.25V(**) | 536-0059-4** | 10                 | 11.25 | 14.15 | 17.15 | 13.35 | 15.65 | 11.95 | 10.60 | 28                      | 24           |           |              |
| DF13B-11P-1.25V(**) | 536-0060-3** | 11                 | 12.50 | 15.40 | 18.40 | 14.60 | 16.90 | 13.20 | 11.85 | 26                      | 32           |           |              |
| DF13B-12P-1.25V(**) | 536-0061-6** | 12                 | 13.75 | 16.65 | 19.65 | 15.85 | 18.15 | 14.45 | 13.10 | 24                      | 32           |           |              |
| DF13B-14P-1.25V(**) | 536-0063-1** | 14                 | 16.25 | 19.15 | 22.15 | 18.35 | 20.65 | 16.95 | 15.60 | 21                      | 32           |           |              |
| DF13B-15P-1.25V(**) | 536-0064-4** | 15                 | 17.50 | 20.40 | 23.40 | 19.60 | 21.90 | 18.20 | 16.85 | 20                      | 44           |           |              |
| DF13C- 2P-1.25V(**) | 536-0401-2** | 2                  | 1.25  | 4.15  | 7.15  | –     | 5.65  | 1.95  | 2.20  | 67pcs                   | 16           |           | Without boss |
| DF13C- 3P-1.25V(**) | 536-0402-5** | 3                  | 2.50  | 5.40  | 8.40  | –     | 6.90  | 3.20  | 3.45  | 57                      | 16           |           |              |
| DF13C- 4P-1.25V(**) | 536-0403-8** | 4                  | 3.75  | 6.65  | 9.65  | –     | 8.15  | 4.45  | 3.10  | 49                      | 24           |           |              |
| DF13C- 5P-1.25V(**) | 536-0404-0** | 5                  | 5.00  | 7.90  | 10.90 | –     | 9.40  | 5.70  | 4.35  | 44                      | 24           |           |              |
| DF13C- 6P-1.25V(**) | 536-0405-3** | 6                  | 6.25  | 9.15  | 12.15 | –     | 10.65 | 6.95  | 5.60  | 39                      | 24           |           |              |
| DF13C- 7P-1.25V(**) | 536-0406-6** | 7                  | 7.50  | 10.40 | 13.40 | –     | 11.90 | 8.20  | 6.85  | 36                      | 24           |           |              |
| DF13C- 8P-1.25V(**) | 536-0407-9** | 8                  | 8.75  | 11.65 | 14.65 | –     | 13.15 | 9.45  | 8.10  | 33                      | 24           |           |              |
| DF13C- 9P-1.25V(**) | 536-0408-1** | 9                  | 10.00 | 12.90 | 15.90 | –     | 14.40 | 10.70 | 9.35  | 30                      | 24           |           |              |
| DF13C-10P-1.25V(**) | 536-0409-4** | 10                 | 11.25 | 14.15 | 17.15 | –     | 15.65 | 11.95 | 10.60 | 28                      | 24           |           |              |
| DF13C-11P-1.25V(**) | 536-0410-3** | 11                 | 12.50 | 15.40 | 18.40 | –     | 16.90 | 13.20 | 11.85 | 26                      | 32           |           |              |
| DF13C-12P-1.25V(**) | 536-0411-6** | 12                 | 13.75 | 16.65 | 19.65 | –     | 18.15 | 14.45 | 13.10 | 24                      | 32           |           |              |
| DF13C-14P-1.25V(**) | 536-0413-1** | 14                 | 16.25 | 19.15 | 22.15 | –     | 20.65 | 16.95 | 15.60 | 21                      | 32           |           |              |
| DF13C-15P-1.25V(**) | 536-0414-4** | 15                 | 17.50 | 20.40 | 23.40 | –     | 21.90 | 18.20 | 16.85 | 20                      | 44           |           |              |

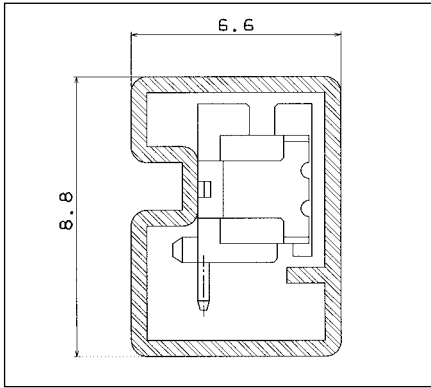
Note 1. Please order the tube packaging product, multiplying the tube packaging quantity.

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

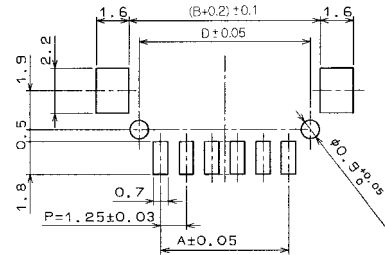
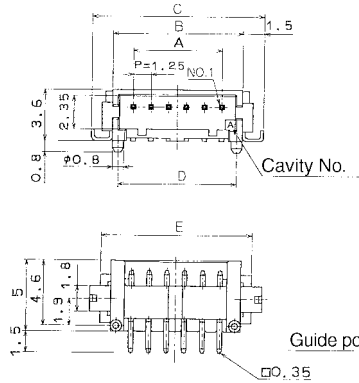
# Single Row Right Angle Pin Header (SMT) (Four-Wall/Correspond to Emboss Absorption)



## Tube Dimensions



## PCB mounting pattern



Note This hole isn't needed for "No guide post".

Note: "without boss" indicates the style with no boss.

[Specific No.] – \*\*, (\*\*)  
 (20): Tin plating tube packaging  
 (21): Tin plating embossed tape packaging  
 (50): Gold plating tube packaging  
 (51): Gold plating embossed tape packaging

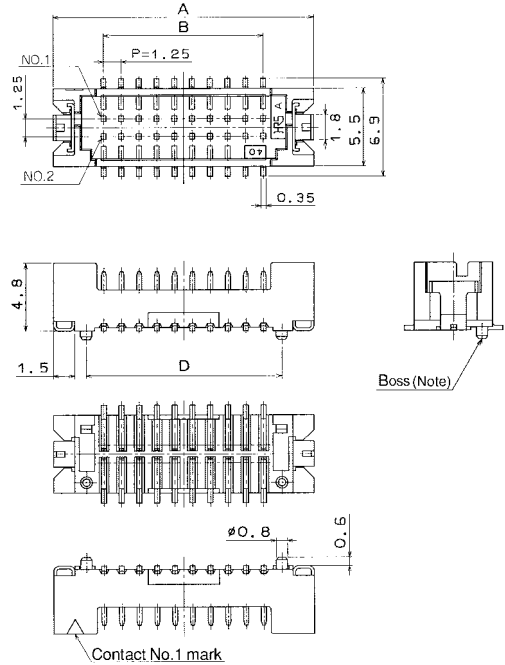
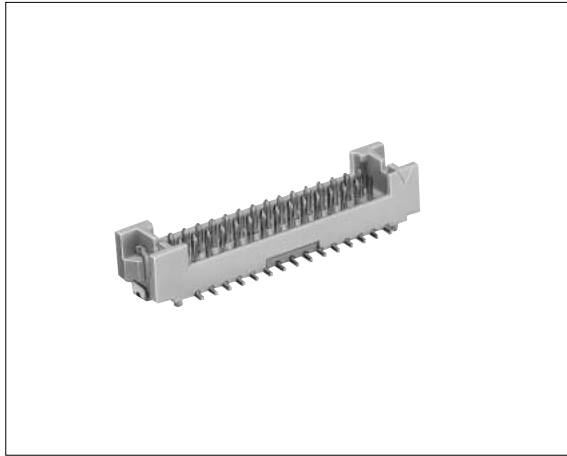
Unit: mm

| Part Number         | CL No.        | Number of Contacts | A     | B     | C     | D     | E     | Tube Packaging Quantity | Emboss Width | Remarks   |              |
|---------------------|---------------|--------------------|-------|-------|-------|-------|-------|-------------------------|--------------|-----------|--------------|
| DF13- 2P-1.25H(**)  | 536-0251-1-** | 2                  | 1.25  | 4.15  | 7.15  | 3.35  | 5.65  | 67pcs                   | 16           | With boss |              |
| DF13- 3P-1.25H(**)  | 536-0252-4-** | 3                  | 2.50  | 5.40  | 8.40  | 4.60  | 6.90  | 57                      | 16           |           |              |
| DF13- 4P-1.25H(**)  | 536-0253-7-** | 4                  | 3.75  | 6.65  | 9.65  | 5.85  | 8.15  | 49                      | 24           |           |              |
| DF13- 5P-1.25H(**)  | 536-0254-0-** | 5                  | 5.00  | 7.90  | 10.90 | 7.10  | 9.40  | 44                      | 24           |           |              |
| DF13- 6P-1.25H(**)  | 536-0255-2-** | 6                  | 6.25  | 9.15  | 12.15 | 8.35  | 10.65 | 39                      | 24           |           |              |
| DF13- 7P-1.25H(**)  | 536-0256-5-** | 7                  | 7.50  | 10.40 | 13.40 | 9.60  | 11.90 | 36                      | 24           |           |              |
| DF13- 8P-1.25H(**)  | 536-0257-8-** | 8                  | 8.75  | 11.65 | 14.65 | 10.85 | 13.15 | 33                      | 24           |           |              |
| DF13- 9P-1.25H(**)  | 536-0258-0-** | 9                  | 10.00 | 12.90 | 15.90 | 12.10 | 14.40 | 30                      | 24           |           |              |
| DF13-10P-1.25H(**)  | 536-0259-3-** | 10                 | 11.25 | 14.15 | 17.15 | 13.35 | 15.65 | 28                      | 24           |           |              |
| DF13-11P-1.25H(**)  | 536-0260-2-** | 11                 | 12.50 | 15.40 | 18.40 | 14.60 | 16.90 | 26                      | 32           |           |              |
| DF13-12P-1.25H(**)  | 536-0261-5-** | 12                 | 13.75 | 16.65 | 19.65 | 15.85 | 18.15 | 24                      | 32           |           |              |
| DF13-14P-1.25H(**)  | 536-0263-0-** | 14                 | 16.25 | 19.15 | 22.15 | 18.35 | 20.65 | 21                      | 32           |           |              |
| DF13-15P-1.25H(**)  | 536-0264-3-** | 15                 | 17.50 | 20.40 | 23.40 | 19.60 | 21.90 | 20                      | 44           |           |              |
| DF13A- 2P-1.25H(**) | 536-0301-8-** | 2                  | 1.25  | 4.15  | 7.15  | –     | 5.65  | 67pcs                   | 16           |           | Without boss |
| DF13A- 3P-1.25H(**) | 536-0302-0-** | 3                  | 2.50  | 5.40  | 8.40  | –     | 6.90  | 57                      | 16           |           |              |
| DF13A- 4P-1.25H(**) | 536-0303-3-** | 4                  | 3.75  | 6.65  | 9.65  | –     | 8.15  | 49                      | 24           |           |              |
| DF13A- 5P-1.25H(**) | 536-0304-6-** | 5                  | 5.00  | 7.90  | 10.90 | –     | 9.40  | 44                      | 24           |           |              |
| DF13A- 6P-1.25H(**) | 536-0305-9-** | 6                  | 6.25  | 9.15  | 12.15 | –     | 10.65 | 39                      | 24           |           |              |
| DF13A- 7P-1.25H(**) | 536-0306-1-** | 7                  | 7.50  | 10.40 | 13.40 | –     | 11.90 | 36                      | 24           |           |              |
| DF13A- 8P-1.25H(**) | 536-0307-4-** | 8                  | 8.75  | 11.65 | 14.65 | –     | 13.15 | 33                      | 24           |           |              |
| DF13A- 9P-1.25H(**) | 536-0308-7-** | 9                  | 10.00 | 12.90 | 15.90 | –     | 14.40 | 30                      | 24           |           |              |
| DF13A-10P-1.25H(**) | 536-0309-0-** | 10                 | 11.25 | 14.15 | 17.15 | –     | 15.65 | 28                      | 24           |           |              |
| DF13A-11P-1.25H(**) | 536-0310-9-** | 11                 | 12.50 | 15.40 | 18.40 | –     | 16.90 | 26                      | 32           |           |              |
| DF13A-12P-1.25H(**) | 536-0311-1-** | 12                 | 13.75 | 16.65 | 19.65 | –     | 18.15 | 24                      | 32           |           |              |
| DF13A-14P-1.25H(**) | 536-0313-7-** | 14                 | 16.25 | 19.15 | 22.15 | –     | 20.65 | 21                      | 32           |           |              |
| DF13A-15P-1.25H(**) | 536-0314-0-** | 15                 | 17.50 | 20.40 | 23.40 | –     | 21.90 | 20                      | 44           |           |              |

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

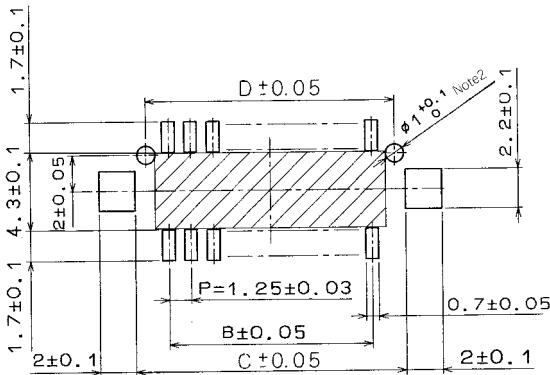
Note 2. Please order the embossed tape packaging product according to reel number. (1000 pcs. per reel)

# Double Row Straight Pin Header (SMT) (Four-Wall Type Compliant to Emboss Absorption)



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

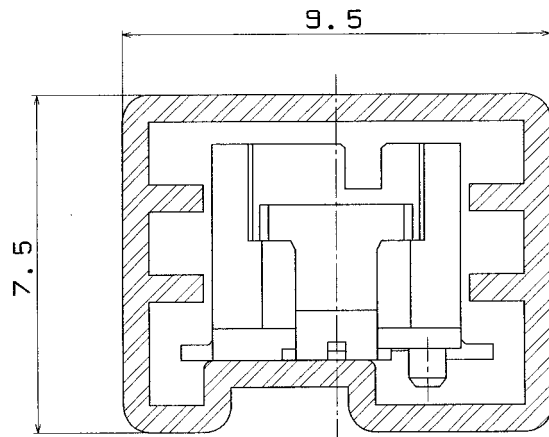
## PCB mounting pattern



Note 1. If the pattern exists in the shaded area, and isn't treated with resist, it could touch the connector contact.

Note 2. The hole isn't needed at "Without boss".

## Tube Dimensions



[Specific No.] - \*\*, (\*\*)  
 (20): Tin plating tube packaging  
 (29): Tin plating embossed tape packaging  
 (50): Gold plating tube packaging  
 (59): Gold plating embossed tape packaging

Unit: mm

| Part Number          | CL No.         | Number of Contacts | A     | B     | C     | D     | Specification (20) | Specification (29) | Specification (50) | Specification (59) | Tube Package Quantity | Emboss Width | Remarks      |
|----------------------|----------------|--------------------|-------|-------|-------|-------|--------------------|--------------------|--------------------|--------------------|-----------------------|--------------|--------------|
| DF13 -10DP-1.25V(**) | 536-0510-8-**- | 10                 | 12.1  | 5     | 8.7   | 7.5   | ○                  | ○                  | ○                  | ○                  | 40 pcs                | 24           | With boss    |
| DF13 -20DP-1.25V(**) | 536-0515-1-**- | 20                 | 18.35 | 11.25 | 14.95 | 13.75 | ○                  | ○                  | ○                  | ○                  | 26                    | 32           |              |
| DF13 -30DP-1.25V(**) | 536-0520-1-**- | 30                 | 24.6  | 17.5  | 21.2  | 20    | -                  | -                  | ○                  | ○                  | 19                    | 44           |              |
| DF13 -40DP-1.25V(**) | 536-0525-5-**- | 40                 | 30.85 | 23.75 | 27.45 | 26.25 | -                  | -                  | ○                  | ○                  | 15                    | 44           |              |
| DF13A-10DP-1.25V(**) | 536-0600-9-**- | 10                 | 12.1  | 5     | 8.7   | -     | ○                  | ○                  | ○                  | ○                  | 40                    | 24           | Without boss |
| DF13A-20DP-1.25V(**) | 536-0605-2-**- | 20                 | 18.35 | 11.25 | 14.95 | -     | ○                  | ○                  | ○                  | ○                  | 26                    | 32           |              |
| DF13A-30DP-1.25V(**) | 536-0610-2-**- | 30                 | 24.6  | 17.5  | 21.2  | -     | -                  | -                  | ○                  | ○                  | 19                    | 44           |              |
| DF13A-40DP-1.25V(**) | 536-0615-6-**- | 40                 | 30.85 | 23.75 | 27.45 | -     | -                  | -                  | ○                  | ○                  | 15                    | 44           |              |

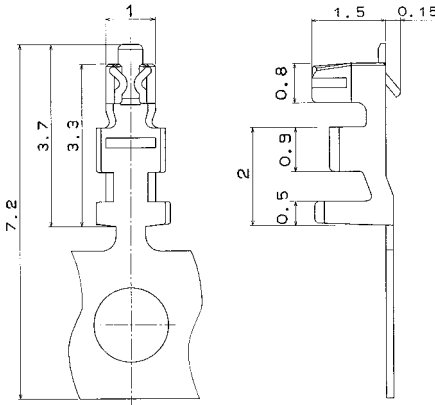
Note 1. Please order the tube packaging product, multiplying the tube packaging quantity.

Note 2. Please order the embossed tape packaging product according to reel number. (1 reel: 1000 pcs.)

Note 3. The absorption cap is attached to the embossed tape packaging product.



## ■Crimping Contact



| Part Number   | CL No.     | Packaging Type | Quantity | Finish       |
|---------------|------------|----------------|----------|--------------|
| DF13-2630SCF  | 536-0300-5 | Reel           | 10,000   | Tin plating  |
| DF13-2630SCFA | 536-0298-5 | Reel           | 10,000   | Gold plating |

### ●Applicable Cable (Tin Plating Annealed Copper Wire)

| Conductor Size (Wire construction) | Jacket Diameter |
|------------------------------------|-----------------|
| AWG26(7 cores./0.16mm)             | φ0.65 to φ1.0mm |
| AWG28(7 cores./0.127mm)            |                 |
| AWG30(7 cores./0.1mm)              |                 |

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

### ●Recommended Cable

UL1571

### ●Strip Length

1.2 to 1.9mm

## ◆Applicable Crimping Tool

| Type                 | Part Number      | CL No.     | Applicable Contact |
|----------------------|------------------|------------|--------------------|
| Applicator           | AP105-DF13-2630S | 901-4531-9 | DF13-2630SCF/SCFA  |
| Press Main Unit      | CM-105           | 901-0005-4 | —                  |
| Manual Crimping Tool | DF13-TB2630HC    | 550-0256-1 | DF13-2630SCF       |
| Extraction Tool      | DF-C-PO(B)       | 550-0179-2 | DF13-2630SCF       |

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

Note 2. The manual crimping tool is used to sequentially cut the reel contact with carrier.

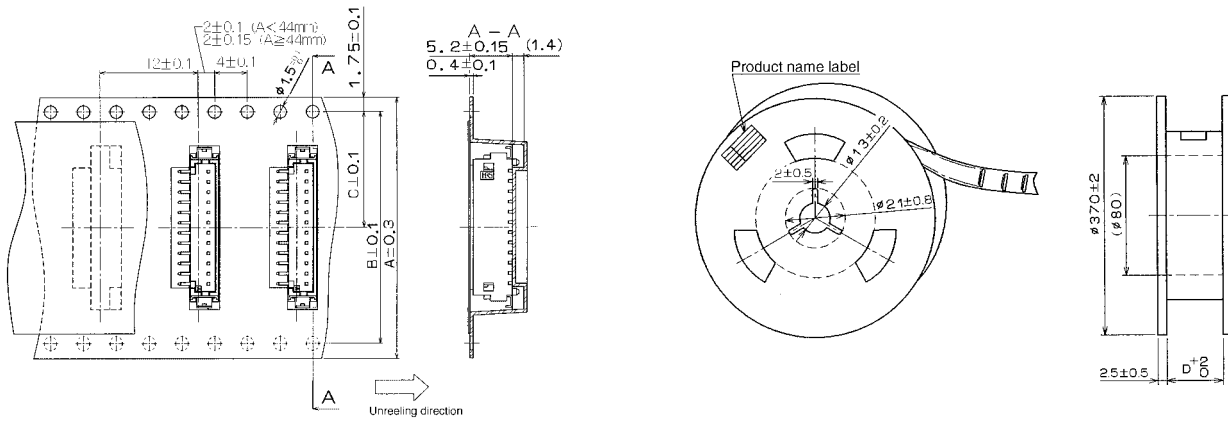
## ◆Application Pattern

|             | SMT (Single Row Product) | DIP (Single Row Product) | SMT (Double Row Product) |
|-------------|--------------------------|--------------------------|--------------------------|
| Right Angle |                          |                          |                          |
| Straight    |                          |                          |                          |

# ◆ Embossed Carrier Tape Dimensions

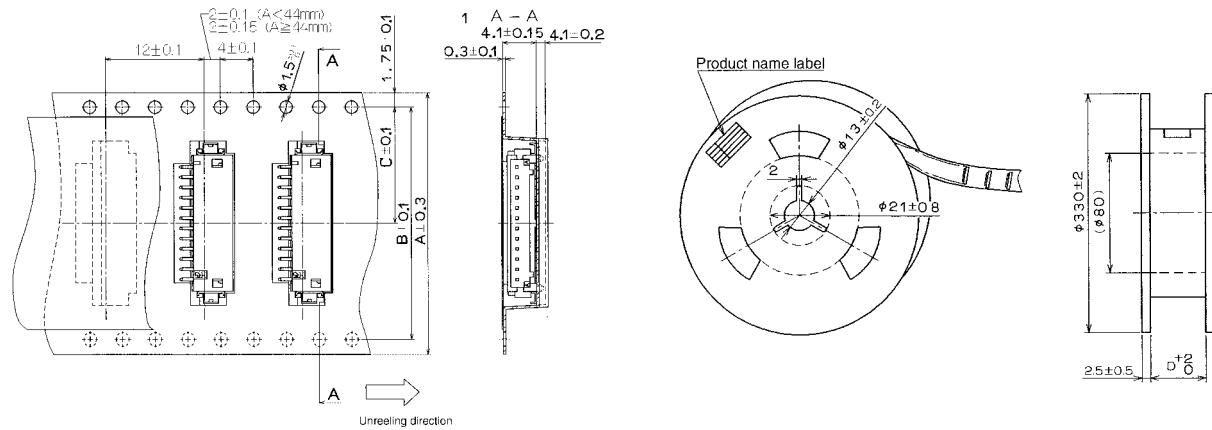
## ● DF13B-\*P-1.25V With boss

## ● DF13C-\*P-1.25V Without boss



## ● DF13-\*P-1.25H

## ● DF13A-\*P-1.25H

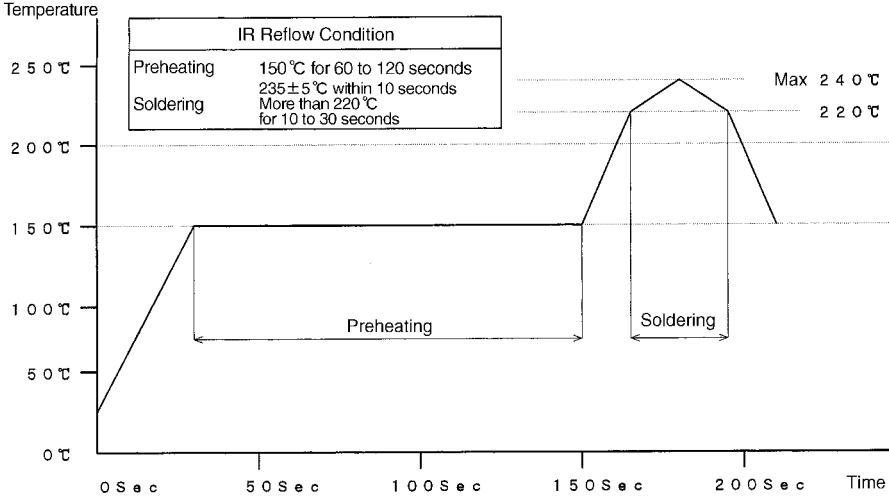


Unit: mm

| Product Type   | Number of Contacts | A  | B    | C    | D    |
|----------------|--------------------|----|------|------|------|
| DF13B-*P-1.25V | 2, 3               | 16 | —    | 7.5  | 16.4 |
| DF13C-*P-1.25V | 4 to 90            | 24 | —    | 11.5 | 24.4 |
| DF13-*P-1.25H  | 10 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.

## ◆Precautions for Use

|   |   |
|---|---|
| <p>1. Recommended Temperature Profile (SMT)</p> |  <p>Note 1. This process is allowed up to twice under the same condition.<br/>However, the interval between the first and second processes must be maintained at the room temperature.</p> <p>Note 2. The temperature indicates the board surface temperature in the connector lead area.</p> |
| <p>2. Recommended Soldering Condition (SMT)</p> | <p>Manual soldering: 290°C for 2 seconds</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 (DIP)</p> | <p>Flow: 250°C for 3 seconds<br/>Manual soldering: 290°C for 2 seconds</p>  |
| <p>6. Cleaning Condition</p>                    | <p>Refer to Nylon Connector Use Hand book.</p>  |
| <p>7. Connection Condition</p>                  | <p>Refer to Nylon Connector Use Hand book.<br/> <b>■</b>Carefully carry out the crimping operation according to "Crimping Condition Sheet" and "Crimping Quality Standard", because the crimping contact is an extremely small style.</p>   |
| <p>8. Cautions</p>                              | <p><b>■</b>Be careful for the excessive scoop insertion/extraction, which will cause damage to the product.</p>   |