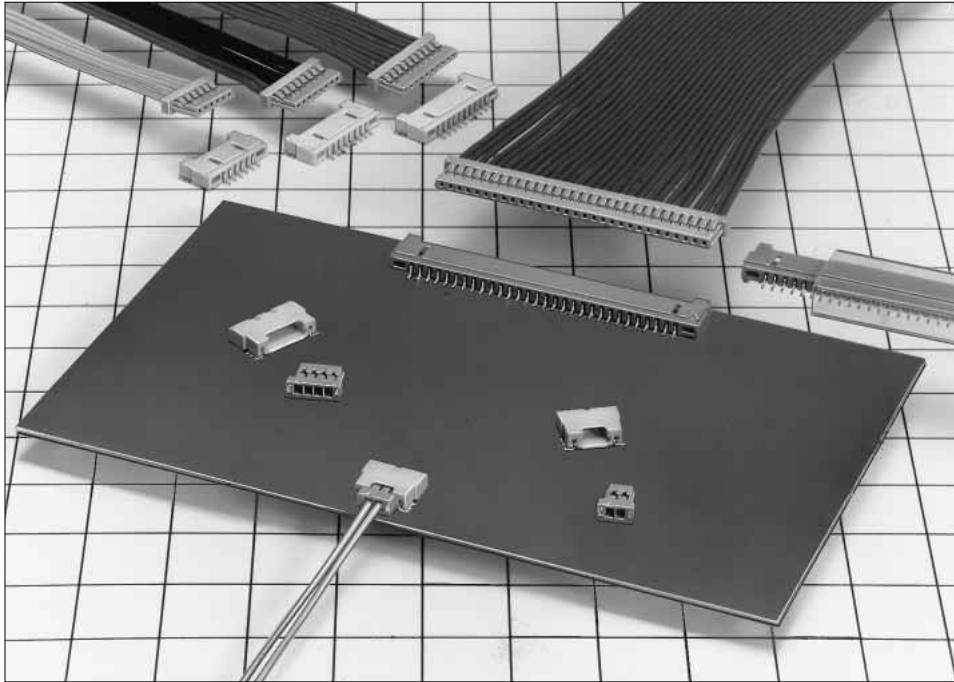


# 1.25mm Pitch Super Low profile Crimping Connector

## 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

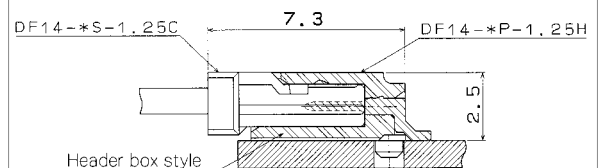
The header has the box structure to prevent from being twisted and has the perfect mis-insertion prevention method. Moreover the header has the wall on the board side and doesn't have any trouble resulted from the friction to board by socket.

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

### ■ Applications

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

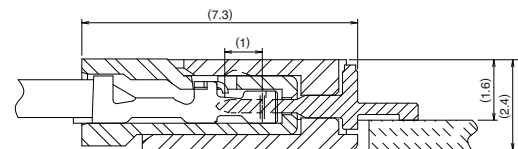
Board Mounting Figure



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	500MΩ Min	100V DC
2. Withstanding voltage	No flashover or insulation breakdown.	500V AC/1 minute
3. Contact Resistance	30mΩ 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 55Hz, single amplitude of 0.75mm, 2 hours in each of the 3 directions.
6. Humidity (Steady state)	Contact resistance : 30mΩ Max Insulation resistance : 500MΩ Min	96 hours at temperature of 40°C and humidity of 90% to 95%
7. Temperature Cycle	Contact resistance : 30mΩ Max Insulation resistance : 500MΩ Min	(-25°C : 30 minutes → 5 to 35°C : 10 minutes → 85°C : 30 minutes → 5 to 35°C : 10 minutes) 5 cycles
8. Durability (Mating/un-mating)	Contact resistance : 30mΩ 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.

## Material / Finish

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	————

## 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

**DF 14 # - \* S - 1.25 C**

①      ②      ③      ④      ⑤      ⑥

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

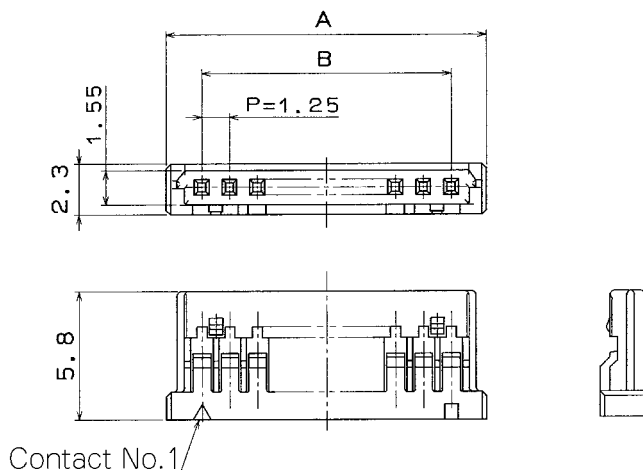
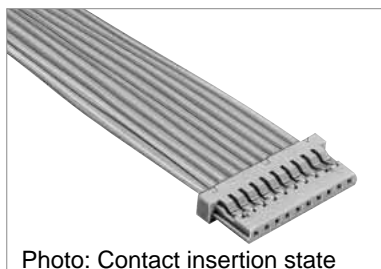
### ● Contact

**DF14 - 2628 SCF A**

①      ②      ③

① Applicable cable size 2628 : 26 to 28 AWG 3032 : 30 to 32 AWG	② Packaging Type SCF : Socket contact/reel
	③ Plating Type Blank : Tin plated A : Gold plated

## ■Crimping Socket



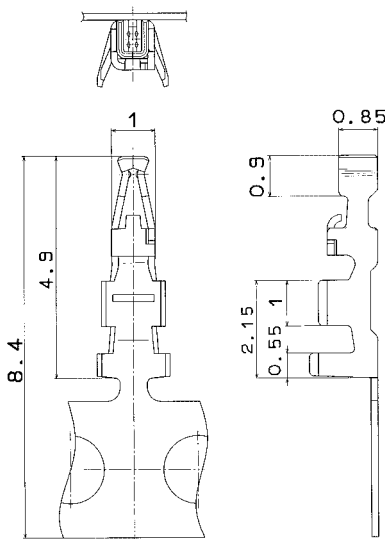
Unit : mm

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



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

Conductor Size (Wire construction)	Jacket Diameter
26 AWG (7 cores/0.16mm)	φ0.54 to φ1mm
28 AWG (7 cores/0.127mm)	
30 AWG (7 cores/0.1mm)	
32 AWG (7 cores/0.08mm)	

### ●Recommended Cable

UL1571

### ●Strip Length

1.2 to 1.9mm

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

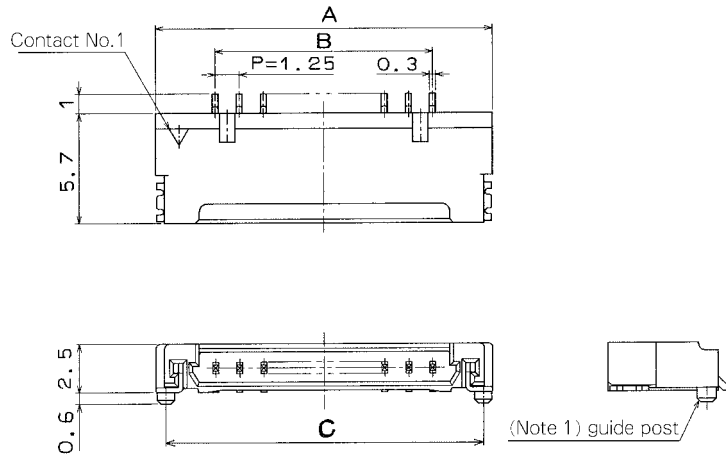
### ◆Applicable Crimping Tool

Type	Part No.	HRS 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-105C	901-0001-0	_____
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.

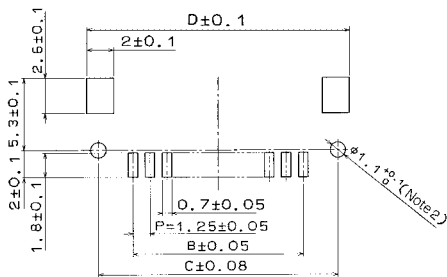
Note 2 : Use the reel contact sequentially cut for manual crimping tool.

## Right Angle Pin Header (SMT)



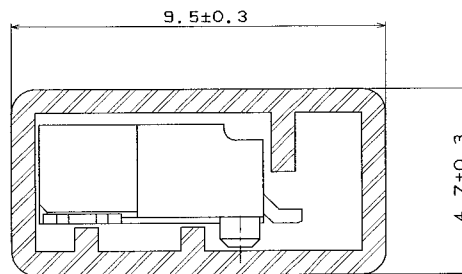
Note 1 : "Without boss" indicates the style with no boss.

## PCB mounting pattern



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

## Tube Packaging Dimensions



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

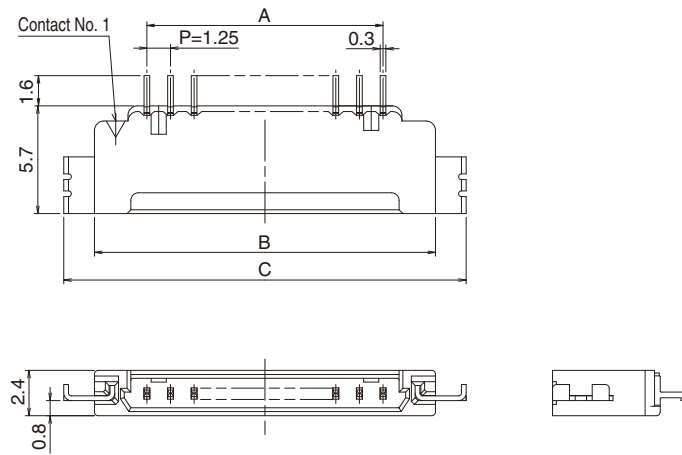
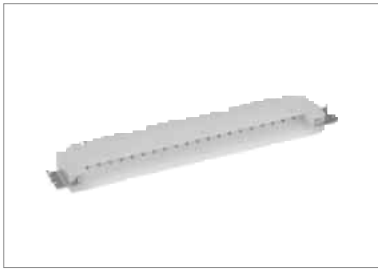
Unit : mm

With boss		Without boss		No. of Contacts	A	B	C	D	Tube Packaging Quantity	RoHS
Part No.	HRS No.	Part No.	HRS 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	

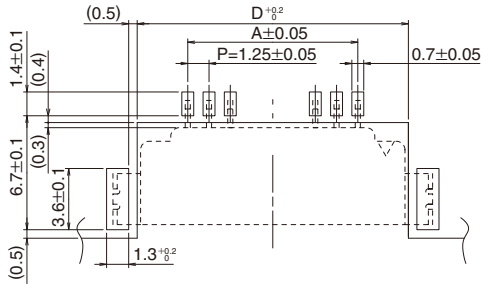
Note 1 : Please order the tube packaging product, multiplying the packaging quantity (pcs.).

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

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



## ◆PCB mounting pattern



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

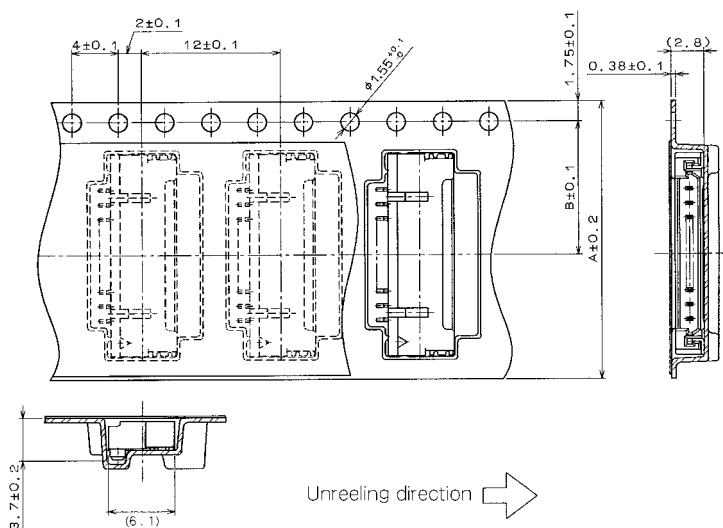
Unit : mm

Part No.	HRS No.	No. 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	

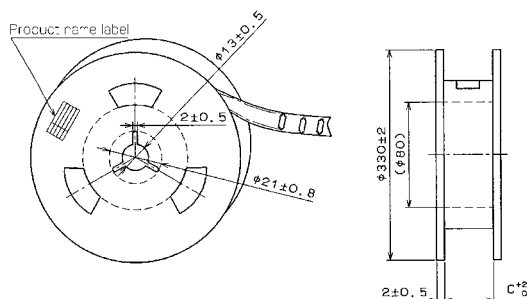
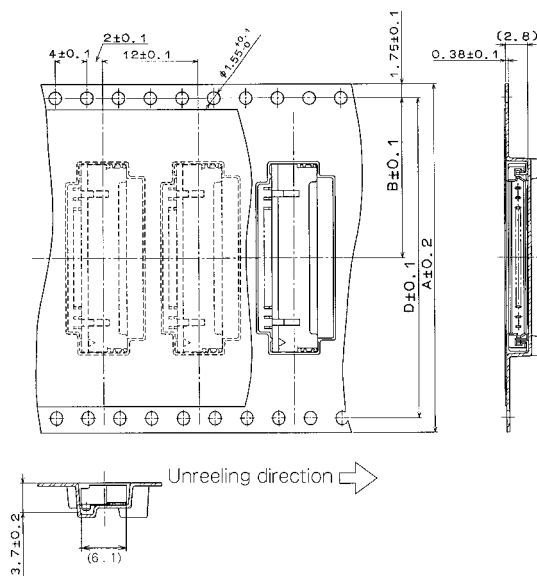
Note 1 : Please order the embossed tape packaging product according to reel number. (1000 pcs./reel)

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

### ■ 2 to 10 Contacts



### ■ 15, 20, 25, 30 Contacts



Unit : mm

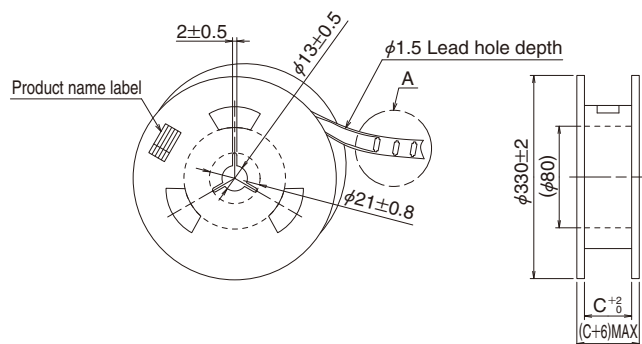
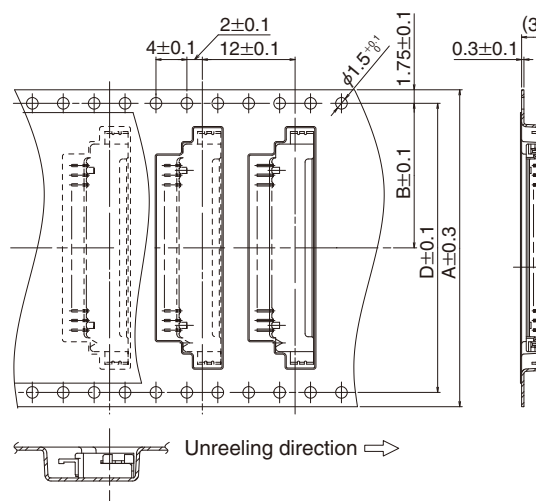
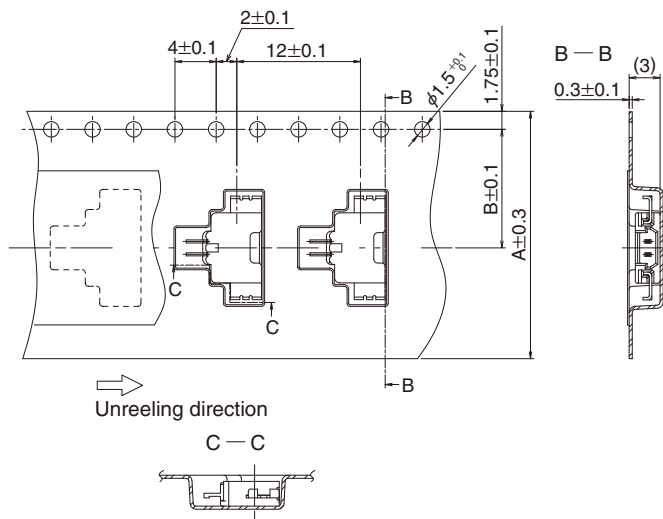
Inserted Connector	No. of Contacts	A	B	C	D
DF14/14A- 2P-1.25H	2	16	7.5	16.4	—
DF14/14A- 3P-1.25H	3	16	7.5	16.4	—
DF14/14A- 4P-1.25H	4	24	11.5	24.4	—
DF14/14A- 5P-1.25H	5	24	11.5	24.4	—
DF14/14A- 6P-1.25H	6	24	11.5	24.4	—
DF14/14A- 7P-1.25H	7	24	11.5	24.4	—
DF14/14A- 8P-1.25H	8	24	11.5	24.4	—
DF14/14A- 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

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

DF14H- \*P- 1.25H

■ 2 Contacts

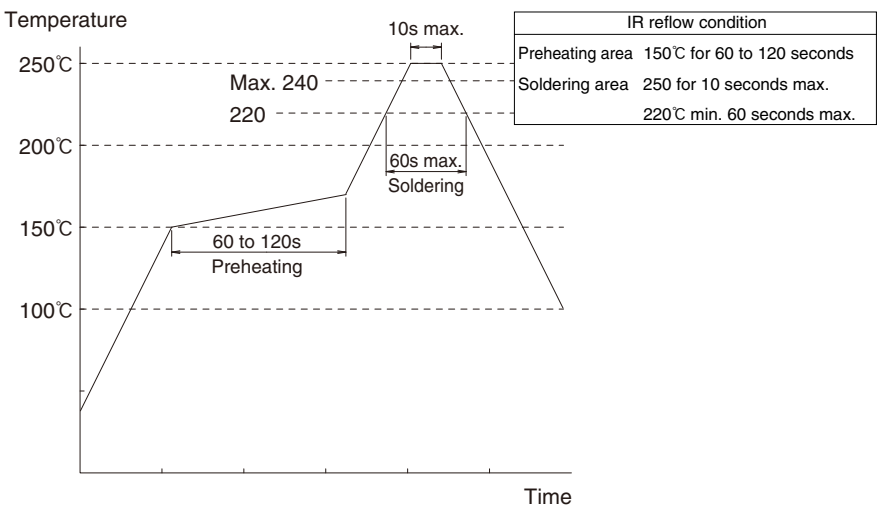
■ 20, 30 Contacts



Unit : mm

Inserted Connector	No. 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

<p>1. Recommended Temperature Profile (SMT)</p>	 <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>
<p>2. Recommended Manual 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 Sled (SMT)</p>	<p>Max 0.03mm at the connector center area, based on both connector edges</p>
<p>5. Cleaning Condition</p>	<p>Refer to Wire-to-Board Use Hand book.</p>
<p>6. Connection Condition</p>	<p>Refer to Wire-to-Board Use Hand book.                  ■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.</p>
<p>7. Precautions</p>	<p>Refer to Wire-to-Board Use Hand book.</p>
<p>8. Cautions</p>	<p>■Be careful for an excessive scoop insertion/extraction, which will cause damage to the product.</p>

## ◆ Precautions

### <Precautions at Time of Insertion>

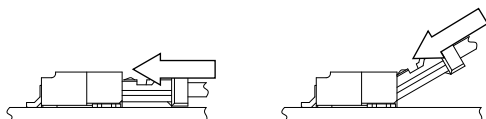
#### Handling

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

#### Insertion Angle

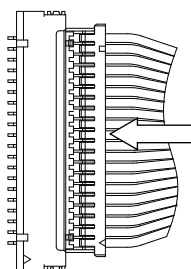
[Caution] Do not insert at an angle of 30° or greater. Doing so will cause contact deformation or case damage.

Method : Insert with the connector parallel.



Parallel ○

Diagonal ×



Parallel ○

Diagonal ×

### <Precautions at Time of Disconnection>

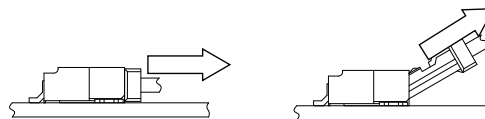
#### Handling

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

#### Angle of Removal

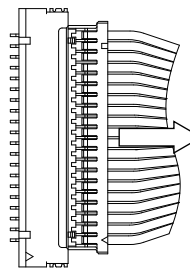
[Caution] Do not remove at an angle of 30° or greater. Doing so will cause contact deformation or case damage.

Method : Remove with the connector parallel.



Parallel ○

Diagonal ×



Parallel ○

Diagonal ×