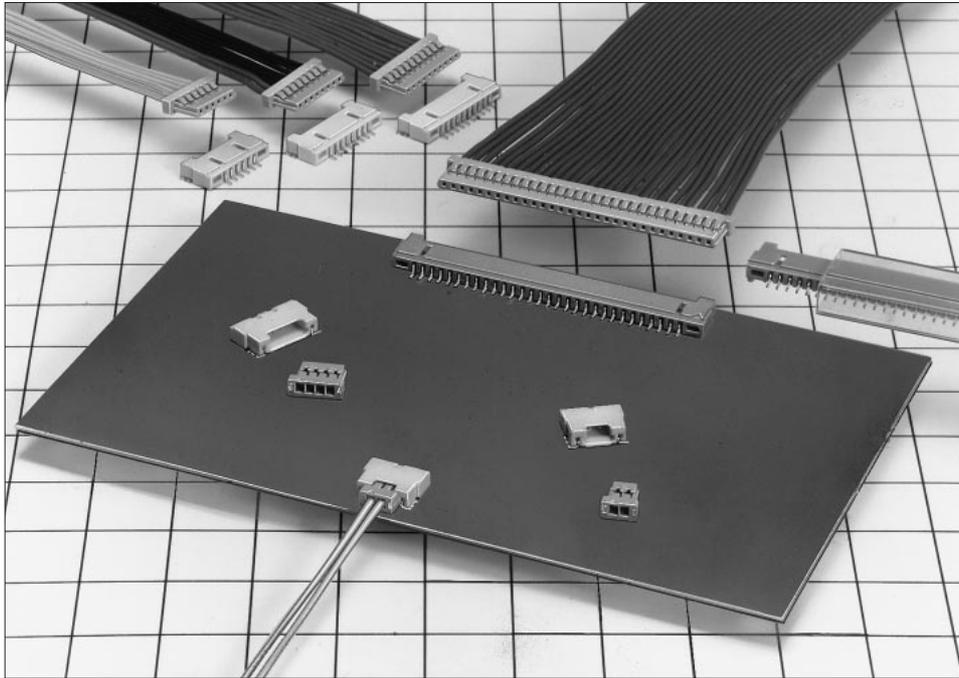


DF14 SERIES

1.25 mm Pitch Ultra-Low Profile Crimp Connectors



■ Features

1. Ultra-low profile

Designed to have a low profile on board, only right-angle models available.

Package height on a board: **2.5mm**

Allows you to pick up signals from a very small space between boards.

(See the figure 1 on the right.)

2. Compatible with automatic packaging

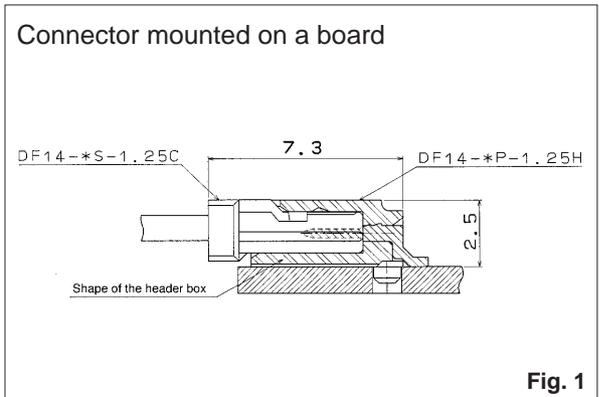
Vacuum-operated header allows automatic emboss packaging.

Can be packed in magazines for delivery.

3. Four-wall type prevents the sockets from rubbing the board.

Box construction prevents prying out, completely preventing mis-insertion. Also, the wall on the board side prevents the socket from rubbing the board.

Reinforcement prevents separation of solder connections.



■ Application

LCD, notebook computers, portable information terminals, compact OA equipment, and various consumer equipment such as videomovies.

Product Standard

Rating	Rated current Rated voltage	1A AC150V	Operating temp. Operating humidity	-35~85°C(Note 1) 40~80%	Storage temp. Storage humidity	-10~60°C (Note 2) 40~70% (Note 2)
--------	--------------------------------	--------------	---------------------------------------	----------------------------	-----------------------------------	--------------------------------------

Item	Standard	Conditions		
1. Insulation resistance	500 MΩ or more	Measured at 100 VDC		
2. Withstand voltage	No flashover or dielectric breakdown allowed	AC500V 1 minute		
3. Contact resistance	30 mΩ or less	Measured at 100 mA		
4. Insertion and withdrawals force	MIN 0.3 N(30gf), MAX 3 N(300gf)	To be measured with a steel pin of □0.3±0.002mm		
5. Vibration resistance	No electrical discontinuity of 1 μs or more allowed	Frequency: 10 - 55 Hz, single-side amplitude: 0.75 mm, 3 directions for 2 hours		
6. Moisture resistance	Contact resistance: 30 mΩ or less, insulation resistance: 500MΩ or more	Temperature: 40±2°C, humidity: 90 - 95%, allow 96 hours before measurement		
7. Temperature cycle	Contact resistance: 30 mΩ or less, insulation resistance: 500 MΩ or more	(-55°C for 30 min. → 5 - 35°C for 10 min. → 85°C for 30 min. → 5 - 35°C for 10 min.) 5 cycles		
8. Insertion/extraction life	Contact resistance: 30 mΩ or less	Solder-plated: 30 insertions/extractions		
9. Solder heat resistance	No melting of resin affecting the connector performance allowed	SMT type	Reflow: At recommended temperature profile	Manual soldering: solder temperature: 300°C for 3 seconds

Note 1: Includes temperature rise when power is on.

Note 2: "Storage" refers to a long period of storage without use of the product before being mounted on a board.

The operating temperature and humidity ranges apply to the connectors mounted on a board when turned off, and connectors under temporary storage such as those being transported.

Note 3: The above standards are typical for the DF14 series. The formal standards are stated in the delivery specifications.

Material

Product	Part	Material	Processing	UL Rating
Crimp socket	Insulation	Polyamide resin	Beige	UL94V-0
Crimp socket terminal	Terminal	Phosphor bronze	Tin-plated	
Pin header	Insulation	Polyamide resin (Note 1)	Beige	UL94V-0
	Terminal	Brass	Tin-plated	
	Fittings	Phosphor bronze	Tin-plated	

Note 1: Only the 30-pin models use the pin header insulation of PPS resin (light brown).

Note 2: Our tin plating is protected from whiskers.

Structure of the product number

The product specifications can be determined from the product number.

When ordering, select products using the product numbers listed in this catalog 57 to 59 pages.

● Connector

DF14 - *S - 1.25C
① ② ③ ④ ⑤ ⑥

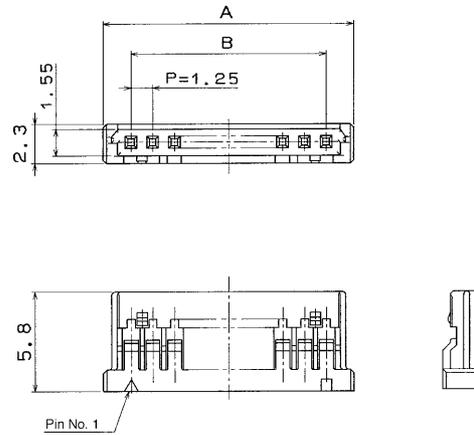
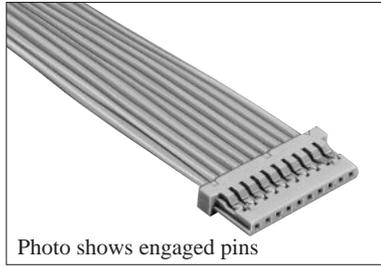
① Series Name : DF	⑤ Contact pitch : 1.25mm
② Series No. : 14	⑥ Connection form/Shape of terminal
③ No. of contact : 2~10, 15, 20, 25, 30	C : Crimp case
④ Type of connector	H : Right angle SMT
S : Single-row socket	
P : Single-row pin header	

● Terminal

DF14 - 2628SCF
① ②

① Series Name : DF 2628 : AWG26~28 3032 : AWG30~32	② Type of form/Type of packaging SCF : Socket contact · Reel
--	---

■ Crimp socket



Unit : mm

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

[Specification No.]: -**,(**)
 Blank : 100 pcs. per pack
 (40) : 500 pcs. per package
 (41) : 1000 pcs. per package

Note 1: Minimum order quantity of the models without a number specified is one pack containing 100 sockets.

Note 2: 500 and 1000 pieces per pack should be ordered in quantity of sockets. Order in multiples of order units, e.g., 500, 1000, 1500,-- .

■ Crimp socket terminal

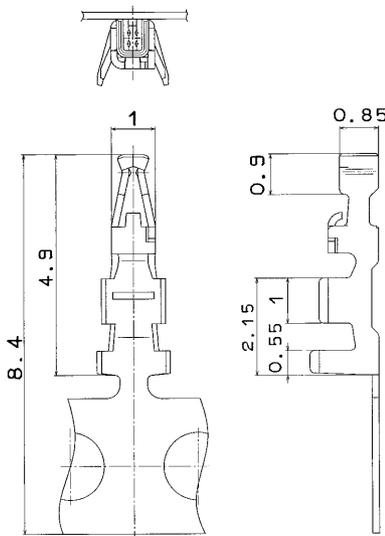
HRS No.	Product No.	Type	Quantity	Processing
538-0001-7-**-	DF14-2628SCF	Reel terminal	10,000 units per reel	Tin-plated
538-0003-2-**-	DF14-3032SCF	Reel terminal		

- Applicable wire (Tin-plated annealed copper wire)
- Recommended wire UL1571

Conductor size (core construction)	Coating diameter
AWG 26 (7cores/0.16mm)	ø0.54~ø1mm
AWG 28 (7cores/0.127mm)	
AWG 30 (7cores/0.1mm)	
AWG 32 (7cores/0.08mm)	

Note: Contact our sales department for unspecified wires.

- Strip length 1.2~1.9mm



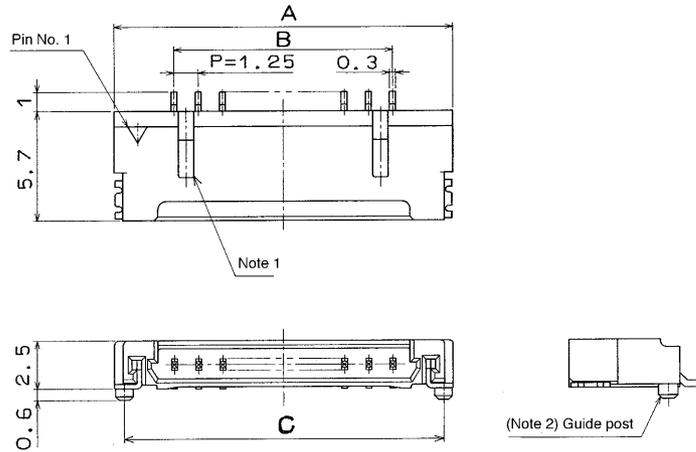
❖ Applicable crimping tool

Type	HRS No.	Product No.	Applicable contact
Applicator	901-4548-1	AP105-DF14-2628S	DF14-2628SCF
	901-4544-0	AP105-DF14-3032S	DF14-3032SCF
Press body	901-0005-4	CM-105	---
Manual crimping tool	550-0261-1	DF14-2628/CR-HT	DF14-2628SCF
	550-0262-4	DF14-3032/CR-HT	DF14-3032SCF

Note 1: Any problem caused by using a tool not approved by HIROSE is out of warranty.

Note 2: The manual crimping tool consecutively cuts carrier-fitted reel terminals.

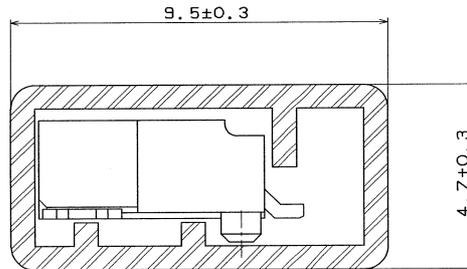
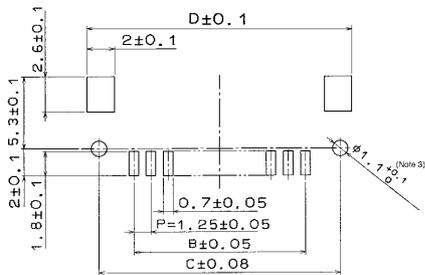
Right-angle pin header (SMT)



Note 1: 2 ~ 5-pin models have no lock hole.
 Note 2: The hole is not required for products without the guide boss.

Recommended board pattern

Magazine dimensional drawing



Note 3: The hole is not required for products without the guide.

[Specification No.]: -**, (**)
 (20) : Tin-plated, magazine packaging
 (21) : Tin-plated, embossed packaging

Unit : mm

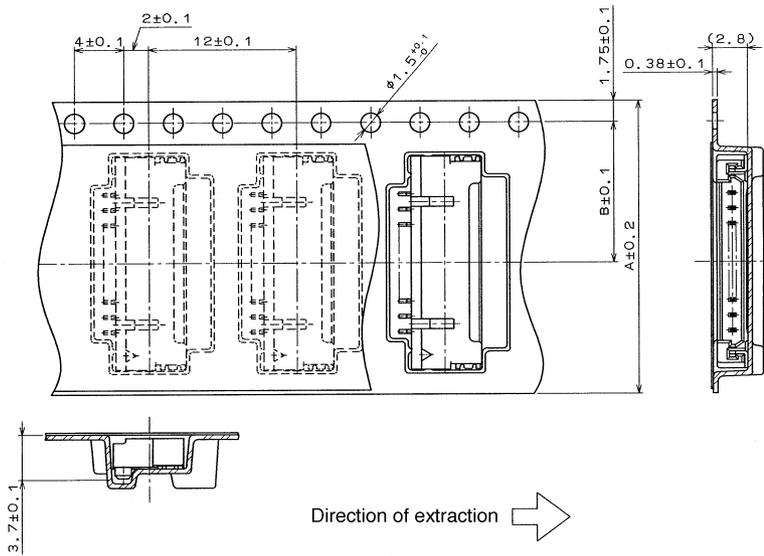
Guide post - provided		Guide post - not provided		No. of contacts	A	B	C	D	No. of products in a magazine/ pcs./magazine
HRS No.	Product No.	HRS No.	Product No.						
538-0021-4-**	DF14- 2P-1.25H (**)	538-0033-3-**	DF14A- 2P-1.25H (**)	2	7.45	1.25	6.45	8.05	66
538-0022-7-**	DF14- 3P-1.25H (**)	538-0034-6-**	DF14A- 3P-1.25H (**)	3	8.70	2.50	7.70	9.30	56
538-0023-0-**	DF14- 4P-1.25H (**)	538-0035-9-**	DF14A- 4P-1.25H (**)	4	9.95	3.75	8.95	10.55	49
538-0024-2-**	DF14- 5P-1.25H (**)	538-0036-1-**	DF14A- 5P-1.25H (**)	5	11.20	5.00	10.20	11.80	44
538-0025-5-**	DF14- 6P-1.25H (**)	538-0037-4-**	DF14A- 6P-1.25H (**)	6	12.45	6.25	11.45	13.05	39
538-0026-8-**	DF14- 7P-1.25H (**)	538-0038-7-**	DF14A- 7P-1.25H (**)	7	13.70	7.50	12.70	14.30	36
538-0027-0-**	DF14- 8P-1.25H (**)	538-0039-0-**	DF14A- 8P-1.25H (**)	8	14.95	8.75	13.95	15.55	32
538-0028-3-**	DF14- 9P-1.25H (**)	538-0040-9-**	DF14A- 9P-1.25H (**)	9	16.20	10.00	15.20	16.80	30
538-0029-6-**	DF14-10P-1.25H (**)	538-0041-1-**	DF14A-10P-1.25H (**)	10	17.45	11.25	16.45	18.05	28
538-0084-4-**	DF14-15P-1.25H (**)	538-0114-3-**	DF14A-15P-1.25H (**)	15	23.70	17.50	22.70	24.30	20
538-0089-8-**	DF14-20P-1.25H (**)	538-0119-7-**	DF14A-20P-1.25H (**)	20	29.95	23.75	28.95	30.55	16
538-0094-8-**	DF14-25P-1.25H (**)	538-0124-7-**	DF14A-25P-1.25H (**)	25	36.20	30.00	35.20	36.80	13
538-0020-1-**	DF14-30P-1.25H (**)	538-0045-2-**	DF14A-30P-1.25H (**)	30	42.45	36.25	41.45	43.05	11

Note 1: Order magazine packaged products in multiples of the number in one magazine.

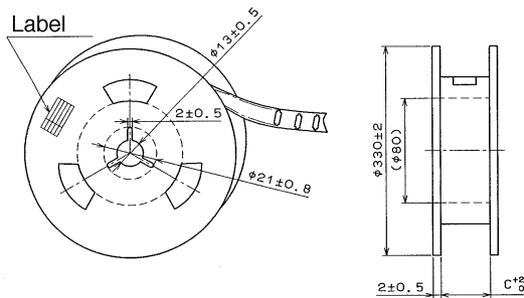
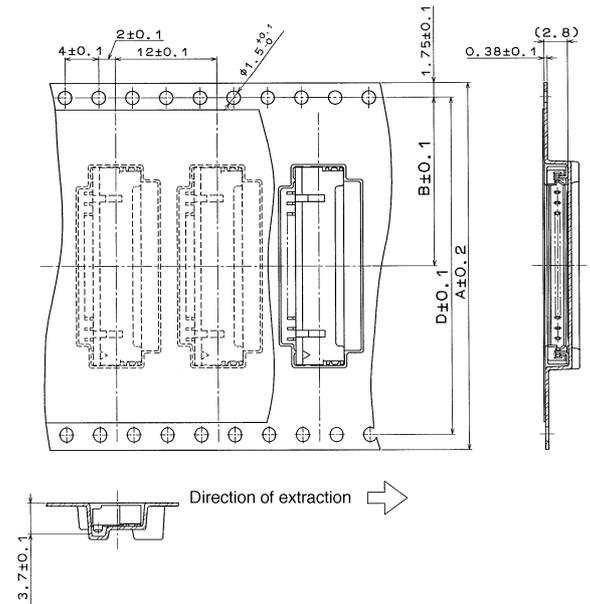
Note 2: Order embossed packaged product in reels (1,000 pcs. per reel).

❖ Embossed tape carrier dimensional drawing (complies with JIS-C-0806)

■ 2 ~10 contacts



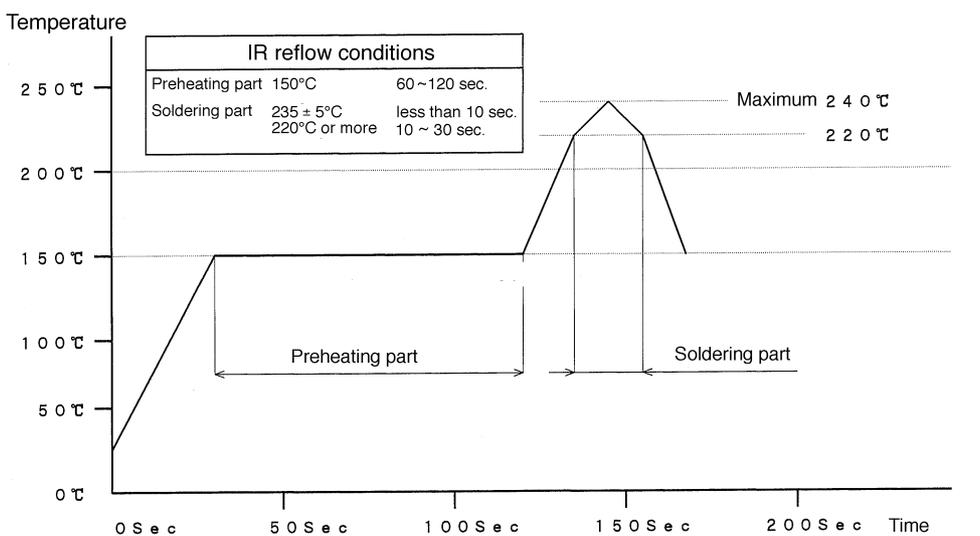
■ 15, 20, 25, 30 contacts



Unit : mm

Insertion 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

❖ Notes on use

<p>1. Recommended temperature profile (SMT)</p>	 <p>Temperature</p> <table border="1" data-bbox="630 252 1005 367"> <thead> <tr> <th colspan="3">IR reflow conditions</th> </tr> </thead> <tbody> <tr> <td>Preheating part</td> <td>150°C</td> <td>60~120 sec.</td> </tr> <tr> <td>Soldering part</td> <td>235±5°C</td> <td>less than 10 sec.</td> </tr> <tr> <td></td> <td>220°C or more</td> <td>10~30 sec.</td> </tr> </tbody> </table> <p>Maximum 240℃ 220℃</p> <p>Preheating part</p> <p>Soldering part</p> <p>0 Sec 50 Sec 100 Sec 150 Sec 200 Sec Time</p> <p>Note 1: You can solder a product up to two times under the same conditions, provided that the product is allowed to cool back to room temperature before the second soldering. Note 2: The above temperature refers to the board surface temperature of the connector lead.</p>	IR reflow conditions			Preheating part	150°C	60~120 sec.	Soldering part	235±5°C	less than 10 sec.		220°C or more	10~30 sec.
IR reflow conditions													
Preheating part	150°C	60~120 sec.											
Soldering part	235±5°C	less than 10 sec.											
	220°C or more	10~30 sec.											
<p>2. Recommended soldering conditions (SMT)</p>	<p>Soldering iron temperature: 290±10°C, soldering time: less than 3 seconds</p>												
<p>3. Recommended screen thickness (SMT)</p>	<p>0.15mm~0.2mm</p>												
<p>4. Warp in board (SMT)</p>	<p>0.03 mm or less at the center of the connector with the connector ends as the reference.</p>												
<p>5. Cleaning conditions</p>	<p>See "GUIDE TO HIROSE NYLON CONNECTORS."</p>												
<p>6. Connecting conditions</p>	<p>See "GUIDE TO HIROSE NYLON CONNECTORS." ■ Because the crimp terminals are very small, use utmost care when crimping them in accordance with the "Crimping conditions list" and "crimping quality standards."</p>												
<p>7. PRECAUTIONS</p>	<p>■ When inserting or extracting the connectors, do not pry them forcibly, to prevent them from being damaged.</p>												