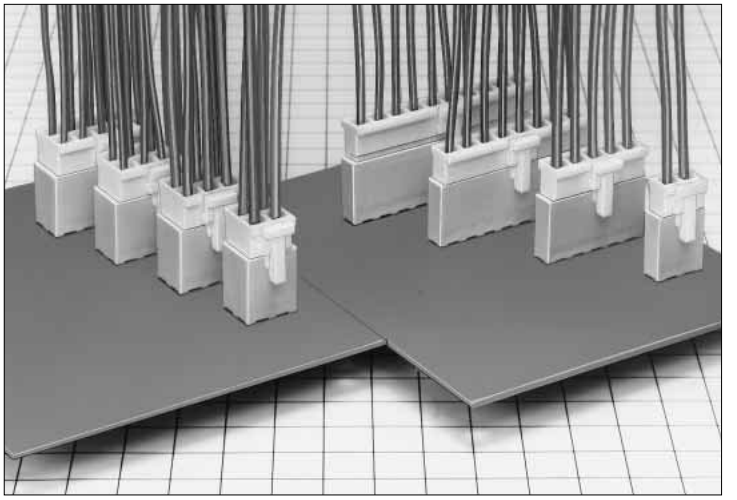
The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information.
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5mm Pitch Miniature Potting Connector for Secondary Power Supply

DF5 Series



■Features

1. Potting Product

This connector is capable of potting 9mm maximum, and 22.5mm mounting height is a low profile. (Figure 1).

Single row type

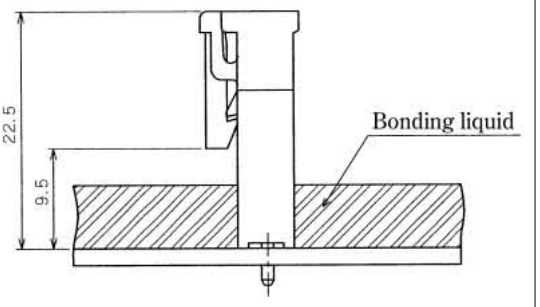


Figure 1-1

2. Prevent Mis-insertion

When the socket and pin header are mated, this connector is equipped with a mechanism to prevent reverse insertion or dissimilar contact insertion.

3. Means to Prevent Solder Cracks

The pin header employs glass enforced resin, and takes countermeasures to prevent solder cracks due to heat shrinkage.

4. Prevent Reverse Insertion in Printed Board

Boss is added to the pin header, and prevents reverse insertion in the printed board.

Double row type

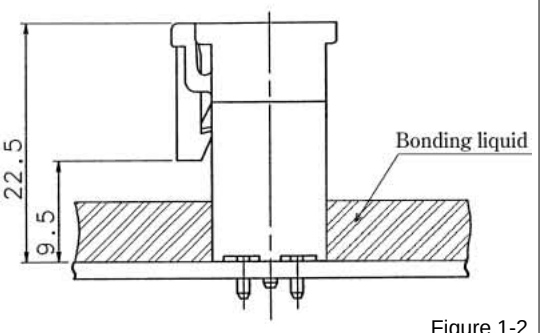


Figure 1-2

5. Full Lock Mechanism

The outer lock system employs full lock mechanism.

6. Current Capacity of 8A

Power can be supplied at 8 A maximum. Specification will change according to applicable cable, number of contacts, number of rows. For further information, refer to product specifications as listed on next page.

■Applications

Business machines, industrial equipment, consumer appliances (hot water supply, washing machines, refrigerator) etc.

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■Product Specifications

Rating	Current rating	No. of rows	No. of contacts	AWG#18	AWG#20	AWG#22	Operating Temperature Range Operating Moisture Range	–35 to +85℃(Note 1) 40 to 80%
		Single row	2 to 10	8A	6A	5A		
		Double row	4	8A	6A	5A		
			6	8A	6A	5A		
			8	7A	6A	5A		
			10	7A	6A	5A	Storage Temperature Range Storage Humidity Range	–10 to +60℃(Note 2) 40 to 70%(Note 2)
			12	7A	6A	4A		
			14	7A	5A	4A		
			16	7A	5A	4A		
	Voltage rating	500V AC						

Item	Specification	Condition
1. Insulation Resistance	1000M ohms min.	500V DC
2. Withstanding voltage	No flashover or insulation breakdown.	1500V AC/1 minute
3. Contact Resistance	30m ohms max.	100mA
4. Single Insertion/ Extraction Force	0.3N (30gt) min., 4.5N (450gt) max.	Measured with 1.14±0.002mm steel pin
5. Vibration	No electrical discontinuity of 10μs 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℃ and humidity of 90% to 95%
7. Temperature Cycle	Contact resistance: 30m ohms max., Insulation resistance: 1000M ohms min.	(–55℃: 30 minutes→15 to 35℃: 10 minutes→85℃: 30 minutes→5 to 35℃: 10 minutes) 5 cycles
8. Durability (Mating/un-mating)	Contact resistance: 30m ohms max.	30 cycles
9.Resistance to Soldering heat	No deformation of components affecting performance.	Flow: 260℃ for 10 seconds
		Manual soldering: 350℃ 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	White	UL94V-0
Crimping Contact for Socket	Contact	Phosphor bronze	Tin plated	————
Pin header	Insulator	Polyamide	Beige	UL94V-0
	Contact	Brass	Tin plated	————

■Ordering Information

●Connector

DF5A - ＊ S - 5 C
❶ ❷ ❸ ❹ ❺

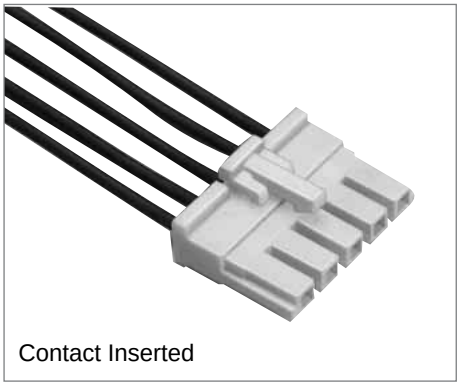
❶ Series Name: DF5A	❹ Contact Pitch: 5mm
❷ Number of contacts: Single row: 2 to 10 Double row: 4 to 16	❺ Contact type C : Crimping Socket DSA: Straight pin header
❸ Connector type S : Single row socket DS : Double row socket P : Single row header DP : Double row header	

●Contact

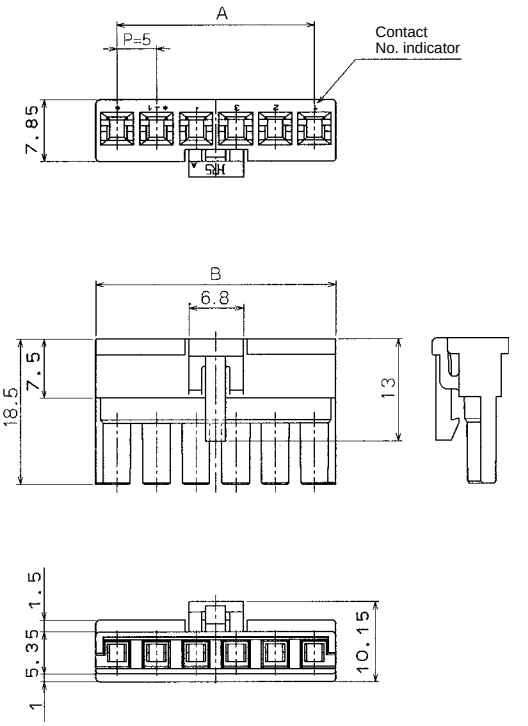
DF5A - 1822 SCF
❶ ❷ ❸

❶ Applicable cable type None: UL 1007 equivalent (jacket diameter 1.5 to 2.2mm) A: UL 1015 equivalent (jacket diameter 2.2 to 2.9mm)	❸ packaging type SCF : Socket contact, reel packaging SC : Socket contact, bag packaging
❷ Applicable cable size 1822: AWG#18~#22	

■Single Row Socket



Contact Inserted

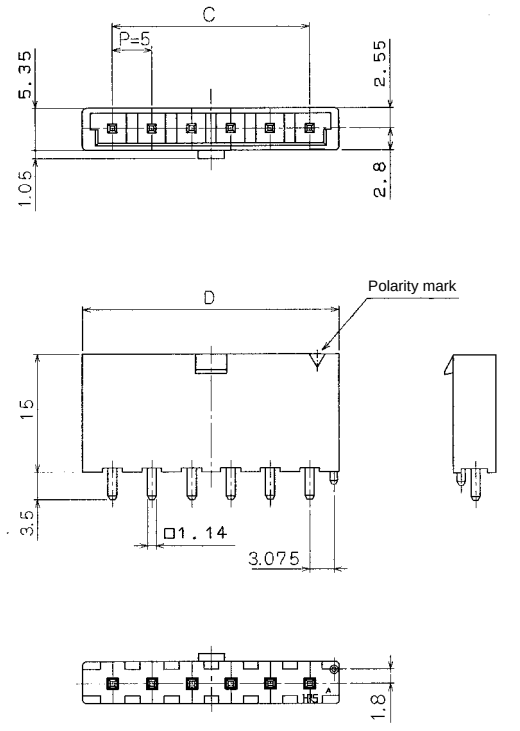


Product No	CL No.	Number of Contacts	A	B	RoHS
DF5A- 2S-5C	676-0007-8	2	5.0	10.5	YES
DF5A- 3S-5C	676-0008-0	3	10.0	15.5	
DF5A- 4S-5C	676-0009-3	4	15.0	20.5	
DF5A- 5S-5C	676-0010-2	5	20.0	25.5	
DF5A- 6S-5C	676-0011-5	6	25.0	30.5	
DF5A- 7S-5C	676-0012-8	7	30.0	35.5	
DF5A- 8S-5C	676-0013-0	8	35.0	40.5	
DF5A- 9S-5C	676-0014-3	9	40.0	45.5	
DF5A-10S-5C	676-0015-6	10	45.0	50.5	

Note: A packaging quantity is delivered by the bag unit (100 pcs.).

■Single Row Pin Header



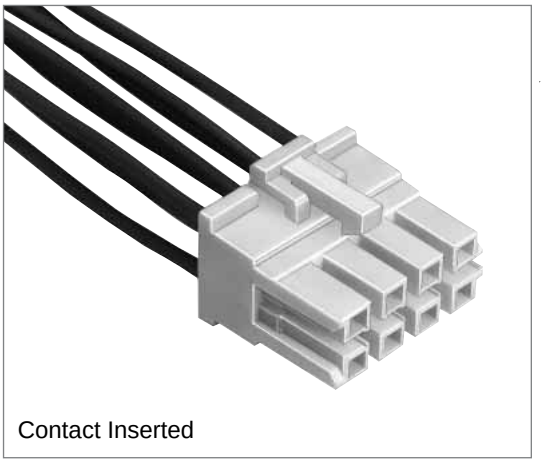


Part Number	CL No.	Number of Contacts	C	D	RoHS
DF5A- 2P-5DSA(05)	676-0016-9-05	2	5.0	12.5	YES
DF5A- 3P-5DSA(05)	676-0017-1-05	3	10.0	17.5	
DF5A- 4P-5DSA(05)	676-0018-4-05	4	15.0	22.5	
DF5A- 5P-5DSA(05)	676-0019-7-05	5	20.0	27.5	
DF5A- 6P-5DSA(05)	676-0020-6-05	6	25.0	32.5	
DF5A- 7P-5DSA(05)	676-0021-9-05	7	30.0	37.5	
DF5A- 8P-5DSA(05)	676-0022-1-05	8	35.0	42.5	
DF5A- 9P-5DSA(05)	676-0023-4-05	9	40.0	47.5	
DF5A-10P-5DSA(05)	676-0024-7-05	10	45.0	52.5	

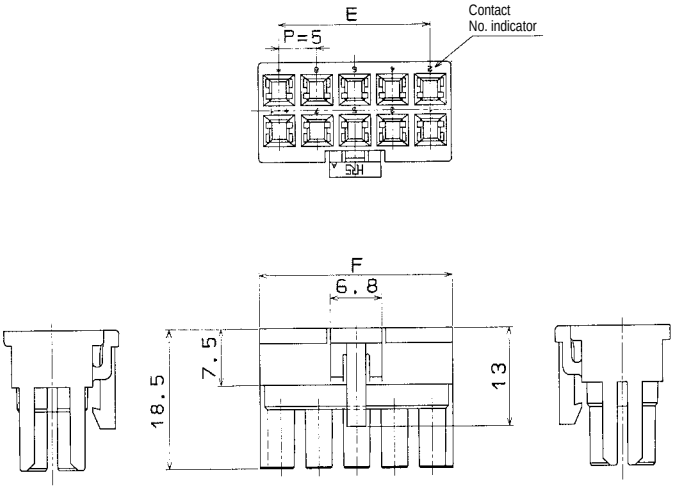
Note: A packaging quantity is delivered by the bag unit (100 pcs.).

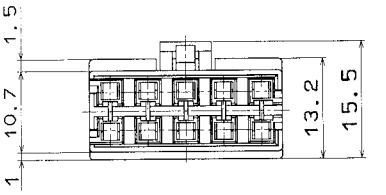
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■Double Row Socket



Contact Inserted



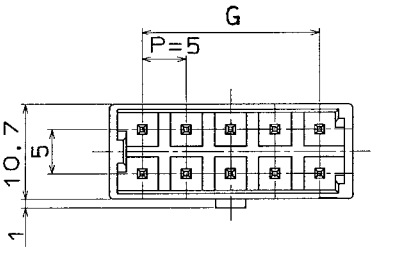


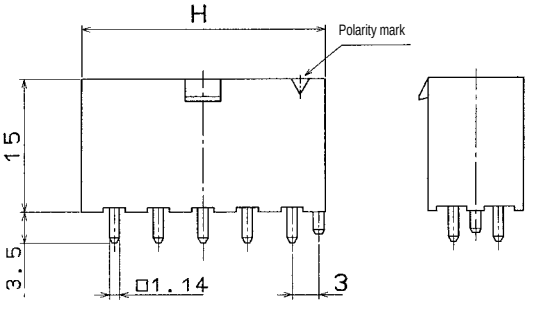
Part Number	CL No.	Number of Contacts	E	F	RoHS
DF5A- 4DS-5C	676-0025-0	4	5.0	10.5	YES
DF5A- 6DS-5C	676-0026-2	6	10.0	15.5	
DF5A- 8DS-5C	676-0027-5	8	15.0	20.5	
DF5A-10DS-5C	676-0028-8	10	20.0	25.5	
DF5A-12DS-5C	676-0036-6	12	25.0	30.5	
DF5A-14DS-5C	676-0037-9	14	30.0	35.5	
DF5A-16DS-5C	676-0038-1	16	35.0	40.5	

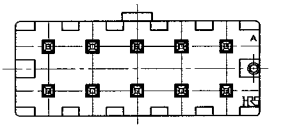
Note: A packaging quantity is delivered by the bag unit (100 pcs.).

■Double Row Pin Header





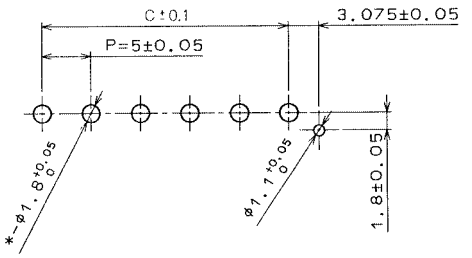




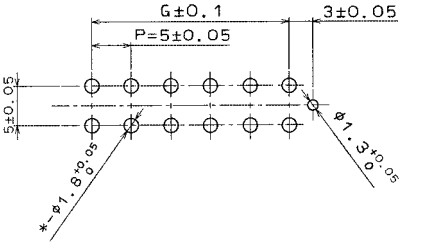
Part Number	CL No.	Number of Contacts	G	H	RoHS
DF5A- 4DP-5DSA(05)	676-0029-0-05	4	5.0	12.5	YES
DF5A- 6DP-5DSA(05)	676-0030-0-05	6	10.0	17.5	
DF5A- 8DP-5DSA(05)	676-0031-2-05	8	15.0	22.5	
DF5A-10DP-5DSA(05)	676-0032-5-05	10	20.0	27.5	
DF5A-12DP-5DSA(05)	676-0033-8-05	12	25.0	32.5	
DF5A-14DP-5DSA(05)	676-0034-0-05	14	30.0	37.5	
DF5A-16DP-5DSA(05)	676-0035-3-05	16	35.0	42.5	

Note: A packaging quantity is delivered by the bag unit (100 pcs.).

◆PCB mounting pattern (Board thickness = 1.6±0.1)



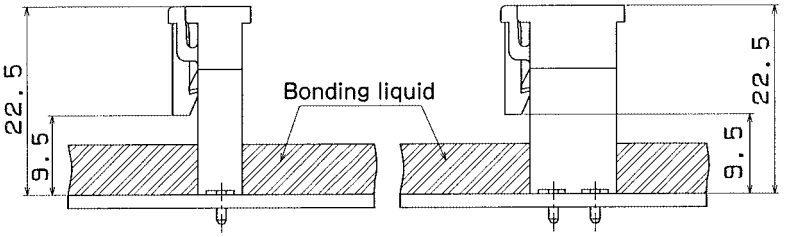
DF5A-✻P-5DSA (05)



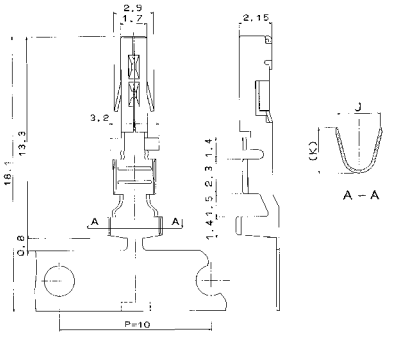
DF5A-✻DP-5DSA (05)

Note 1. For C and G sizes, please refer to pages where individual product patterns are shown.

◆Application Pattern



■Socket Crimping Contact



Part Number	HRS. No.	Applicable Cable				Packaging Type	Quantity	J	K	RoHS
		UL style	Jacket dia.	AWG size	Contact construction					
DF5-1822SCF	676-0001-1	1007	1.5 to 2.2	AWG#18	43 cores/0.16mm	Reel	5,000	2.8	3	YES
DF5-1822SC	676-0002-4			AWG#20	21 cores/0.18mm	Bag	100			
DF5A-1822SCF	676-0003-7	1015	2.2 to 3.2	AWG#22	17 cores/0.16mm	Reel	5,000	3.8	4	
DF5A-1822SC	676-0004-0					Bag	100			

Note 1. The applicable cable conductor is a tin plated and annealed copper wire.

Note 2. If other cables are used instead of the applicable cable, contact the HRS Sales Department.

Strip length: 3 to 4mm

◆Applicable Crimping Tools

Type	Item	Part Number	CL No.	Applicable Contact
Auto-matic	Press unit	CM-105	901-0005-4	————————
	Applicator	AP105-DF5-1822S	901-4542-5	DF5-1822SCF
		AP105-DF5A-1822S	901-4546-6	DF5A-1822SCF
Manual	Manual crimping tool	DF5-1822/CR-HT	550-0264-0	DF5-1822SC
		DF5A-1822/CR-HT	550-0265-2	DF5A-1822SC
—	Extraction tool	RP13-PC-TP	150-0021-5	DF5/DF5A-1822SCF

Note: If any trouble has been caused due to other tools, which are not designated by Hirose, Hirose won't guarantees any product.

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Precautions

1. Recommended soldering condition	Flow: 260℃ for 10 seconds Manual soldering: 350℃ for 3 seconds
2. Cleaning condition	Refer to the "Nylon Connector Use Hand book"
3. Connecting condition	Refer to the "Nylon Connector Use Hand book"
4. Cautions	■The color phase of this product may be slightly differ from that of the formed product according to the manufacturing lot, and consequent storage condition, however, the difference affects no performance.
5. Precautions	Refer to the "Nylon Connector Use Hand book"

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