The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-RoHS products have been discontinued, or will be discontinued soon. Please check the products status on the Hirose website RoHS search at www.hirose-connectors.com, or contact your Hirose sales representative.

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).

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.

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.





		No. of rows	No. of contacts	AWG#18	AWG#20	AWG#22				
		Single row	2 to 10	8A	6A	5A	Operating Temperature Range	–35 to +85℃(Note 1)		
			4	8A	6A	5A	Operating Moisture Range	40 to 80%		
			6	8A	6A	5A				
Rating	Current rati	ng	8	7A	6A	5A				
		Double row	10	7A	6A	5A				
			12	7A	6A	4A	Storage Temperature Range	–10 to +60℃(Note 2)		
			14	7A	5A	4A	Storage Humidity Range	40 to 70%(Note 2)		
			16	7A	5A	4A				
	Voltage rati	ing		500V AC						
Item Specification				Condition						
1. Insulation Res	sistance 10	00M ohms	min.		500V D	500V DC				
2. Withstanding	voltage No	flashover	or insulation bre	akdown.	1500V	1500V AC/1 minute				
3. Contact Resi	istance 30	m ohms m	ax.		100mA	100mA				
4. Single Inse	ertior/				Maaa	Macourad with 1.1110.000mm stack nin				
Extraction	Force	sin (30gl) n	nin., 4.5N (450gt	.) max.	weasu	Measured with 1.14±0.002mm steel pin				
5. Vibratior	n No	electrical	discontinuity of 1	$0\mu s$ or more	Frequency	Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions				
6. Humidity (Stea	ady state) Con	tact resistance: 30	m ohms max., Insulation res	istance: 500M ohms	min. 96 hour	96 hours at temperature of 40°C and humidity of 90% to 95%				
7. Temperature		tact resistance: 30	n ohms max., Insulation resis	stance: 1000M ohms	min. (-55°C: 30					
8. Durability (Mating/	(un-mating) Co	ontact resis	tance: 30m ohm	is max.	30 cycl	30 cycles				
9.Resistand	ce to No	deformatio	on of		Flow: 2	Flow: 260°C for 10 seconds				
Soldering	heat co	mponents a	affecting perform	ance.	Manual	soldering: 3	350℃ for 3 seconds	3		

Product Specifications

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
Finneader	Contact	Brass	Tin plated	

Ordering Information

Connector	
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		DF5A -	* :	5 - 5 C
		0	2	
0	Series Nam	ne: DF5A	4	Contact Pitch: 5mm
2	Number of contacts: Single row: 2 to 10			Contact type
	Double row: 4 to 16			C : Crimping Socket
3	Connector type			DSA: Straight pin header
	S	: Single row socket		
	DS	: Double row socket		
	Р	: Single row header		
	DP	: Double row header		

Contact

DF5A - 1822 SCF

A: UL 1015 equivalent (jacket diameter 2.2 to 2.9mm) SC : Socket contact, bag packa		Ũ	2	6
A: UL 1015 equivalent (jacket diameter 2.2 to 2.9mm) SC : Socket contact, bag packa	0	Applicable cable type	6	packaging type
		None: UL 1007 equivalent (jacket diameter 1.5 to 2.2mm)		SCF: Socket contact, reel packaging
Applicable cable size		A: UL 1015 equivalent (jacket diameter 2.2 to 2.9mm)		SC : Socket contact, bag packaging
Applicable cable size	2	Applicable cable size	1	
1822: AWG#18~#22		1822: AWG#18~#22		

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Single Row Socket







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Product No CL No. Number of Contacts А в RoHS DF5A- 2S-5C 676-0007-8 2 5.0 10.5 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 20.0 5 25.5 DF5A- 6S-5C 676-0011-5 6 25.0 30.5 YES 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

Single Row Pin Header



Part Number	CL No.	Number of Contacts	С	D	RoHS
DF5A- 2P-5DSA(05)	676-0016-9-05	2	5.0	12.5	
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	YES
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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Contact No. indicator

Part Number	CL No.	Number of Contacts	Е	F	RoHS
DF5A- 4DS-5C	676-0025-0	4	5.0	10.5	
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	YES
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	





Double Row Pin Header



CL No.

F	G



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

DF5A- 4DP-5DSA(05)	676-0029-0-05	4	5.0	12.5	
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	YES
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	

Number of Contacts

G

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RoHS

Part Number

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● 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	Quantity	-	ĸ	RoHS	
Fait Number	TIK5. NO.	UL style	Jacket dia.	AWG size	Contact construction	Туре	Quantity	J	К 3	10110
DF5-1822SCF	676-0001-1	1007	1 5 to 2 2	AWG#18	43 cores/0.16mm	Reel	5,000	2.8	2	
DF5-1822SC	676-0002-4	1007	1.5 10 2.2	AWG#18 AWG#20	21 cores/0.18mm	Bag	100	2.0	3	YES
DF5A-1822SCF	676-0003-7	1015	2.2 to 3.2			Reel	5,000	3.8	4	
DF5A-1822SC	676-0004-0	1015	2.2 10 3.2	AVIG#22	Tr coles/0.10mm	Bag	100	5.0	4	

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

Туре	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	Flow: 260°C for 10 seconds		
condition	Manual soldering: 350°C 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"		