

■Features

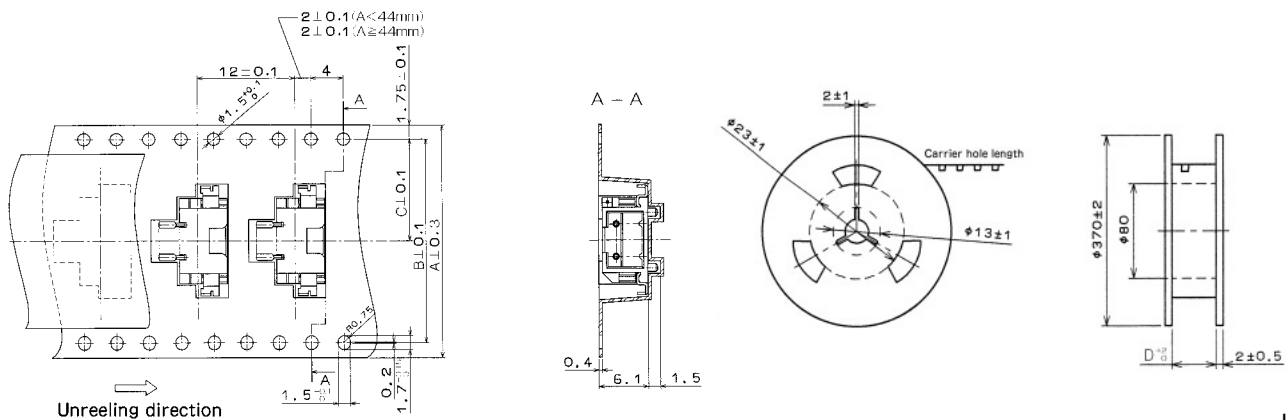
Correspond to Board Design in Wide Variation

- ID Socket
 - (1) Low profile design with the mounting height of 6.8mm
 - (2) Achieves the multi-harness by the full automatic ID machine in combination with the DF11 series ID type.
(DF11 series represents the 2mm pitch single-row product.Please refer to page A266 to A277.)
- Crimp Socket
 - (1) Low profile design with mounting height 7.5mm.
(Please refer to the application pattern figure on page A256 for details.)
 - (2) Provide the contact crimping area with the sufficient space, and secures the stable crimping operation.
- Receptacle
 - (1) The board can be connected horizontally or vertically in combination with the straight header with the right angle header.
 - (2) For horizontal connection, the board to board size is the low profile of 6.6mm.
(Please refer to the application pattern on page A256 for details.)
 - (3) Compatibility with the in-line plug allows the receptacle to set the board side to the receptacle and the cable side to the plug in the board to cable connection.
- Pin Header
 - (1) The board pre-fixed kink is treated with the post pin.
 - (2) The style employs a scoop-proof and stubborn box type.
 - (3) The type corresponding to SMT is available, using the heat-proof resin.
This SMT header is equipped with the metal tab to prevent peeling in the solder joint area.
- In-line Plug
 - (1) The crimping in-line plug consists of two types, one type, which has pursued after space merits, and the other employs the panel lock type, which can be fixed to the panel.
 - (2) The in-line adapter is available to insert and in-line the ID socket from both sides.

■Applications

Business equipment such as copy machine and printer

◆ Embossed Carrier Tape Dimensions

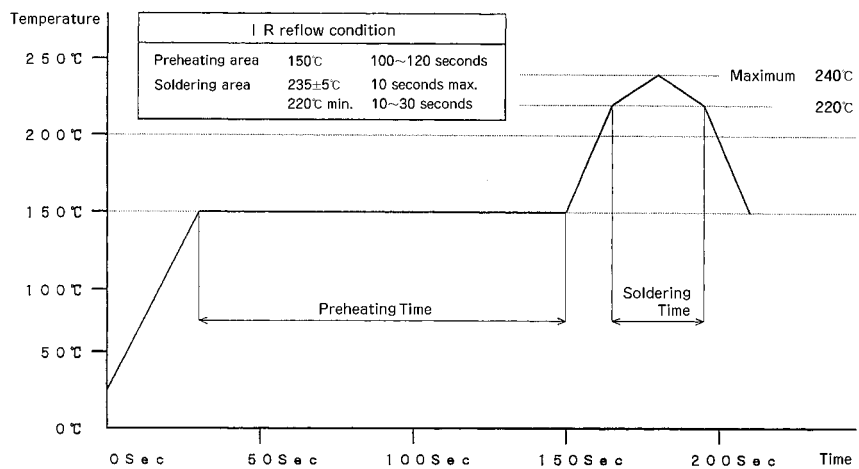


Unit: mm

| Product Type | Size | Number of Contacts | A | B | C | D |
|--------------|----------|--------------------|------|------|------|---|
| DF3/3D-*P-2H | 2 to 4 | 24 | — | 11.5 | 24.4 | |
| | 5 to 7 | 32 | 28.4 | 14.2 | 32.4 | |
| | 8 to 12 | 44 | 40.4 | 20.2 | 44.4 | |
| | 13 to 15 | 56 | 52.4 | 26.2 | 56.4 | |

◆ Precautions

1. Recommended Temperature Profile (SMT)



Note1: Maximum twice action is allowed under the same condition. However, the interval between the first and second actions must be maintained at room temperature.

Note2: The temperature indicates the board surface temperature on the connector lead area.

| | |
|---|--|
| 2. Recommended Manual Soldering Condition (SMT) | Soldering iron temperature: 290±10°C, Soldering time: Within 2 seconds |
| 3. Recommended Screen Thickness (SMT) | 0.15 to 0.2mm |
| 4. Board Warpage (SMT) | Based on both connector edges, 0.03mm max. in the connector center portion |
| 5. Recommended Soldering Condition (DIP) | <ul style="list-style-type: none"> ■ Flow Condition with Automatic Soldering Tool. Soldering temperature: 250±5°C, Soldering time: Within 3 seconds ■ Manual Soldering Condition. Soldering iron temperature: 290±10°C, Soldering time: Within 2 seconds |
| 6. Cleaning Condition | Refer to the "Nylon Connector Use Hand book". |
| 7. Connection Condition | Refer to the "Nylon Connector Use Hand book". |

■Product Specifications

| | | | | | | |
|--------|--------------------------|----------|--------------------|---|-----------------------------|---------------------------|
| Rating | Current rating Note 1 | Crimping | Wire size | AWG 22 to 24:3A AWG 26 :2A AWG 28 :1A | Operating Temperature Range | -30°C to +85°C Note 2. |
| | | IDC | Wire size | AWG 26, 28:1A | Operating Humidity Range | 40% to 80% |
| | Voltage rating AC100V | Crimping | Press-fit: 250V AC | IDC | Press-connect: 100V AC | Storage Temperature Range |
| | | | | | Storage Humidity Range | 40% to 70% |

| UL-CSA Safety Standard and Approved specification | | |
|---|---------------|----------------------------|
| Rating | Rated Current | Wire size AWG 24 to 28: 1A |
| | Rated Voltage | 30V AC |

- UL CSA Safety Standard File No.
- UL :E52653
- CSA :LR95109
- UL CSA Acquisition Objective Item
- ①DF3-*S-2C
- ②DF3/3A-*P-2DSA/DS
- ③DF3/DF3AA-*EP-2C
- ④DF3-*S-2R26/28
- ⑤DF3-*P-2H

| Item | Specification | Condition |
|-------------------------------------|---|--|
| 1. Insulation Resistance | 1000M ohms min. | 500V DC |
| 2. Withstanding voltage | No flashover or insulation breakdown. | 650V AC/1 minute |
| 3. Contact Resistance | 30m ohms max | 100mA |
| 4. Single Insertor/Extraction Force | MIN0.3N (30gf), MAX4.4N(450gf) | Measure by the square steel pin with 0.5±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: 1000M ohms min. | (-55°C: 30 minutes 5 to 35°C: 10 minutes 85°C: 30 minutes 5 to 35°C: 10minutes) 5 cycles |
| 8. Durability (Mating/un-mating) | Contact resistance: 30m ohms max. | Tin plating: 30 cycles 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 2 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 | Black | UL94V-0 |
| IDC Contact for Socket | Contact | Phosphor bronze | Tin plated or gold plated | ———— |
| ID Socket | Insulator | Polyamide | Black | UL94V-0 |
| | Contact | Phosphor bronze | Tin plated or gold plated | ———— |
| Receptacle | Insulator | Polyamide | Black | UL94V-0 |
| | Contact | Phosphor bronze | Tin plated or gold plated | ———— |
| Pin Header | Insulator | Polyamide | Black | UL94V-0 |
| | Contact | Brass | Tin plated or gold plated | ———— |
| SMT Pin Header | Insulator | Polyamide | Beige | UL94V-0 |
| | Contact | Phosphor bronze | Tin plated or gold plated | ———— |
| | Metal tab | Brass | Tin plated | ———— |
| In-line Plug | Insulator | Polyamide | Black | UL94V-0 |
| In-line IDC Contact | Contact | Phosphor bronze | Tin plated or gold plated | ———— |
| In-line Adapter | Insulator | Polyamide | Black | UL94V-0 |
| | Contact | Brass | Tin plated | ———— |

Note: HRS's tin plating takes actions against whisker.

■ Ordering Information

● Connector

DF 3 - *
S -
2C

① ②
③ ④
⑤ ⑥

| | |
|---|--|
| <p>① Series Name : DF</p> <p>② Series No. : 3, 3A, 3AA</p> <p>③ Number of Contacts : 2~15</p> <p>④ Connector Type</p> <p style="padding-left: 20px;">S : Socket</p> <p style="padding-left: 20px;">P : Pin Header</p> <p style="padding-left: 20px;">EP : In-line Plug</p> <p>⑤ Contact Pitch : 2mm</p> | <p>⑥ Connection Form/Contact Style</p> <p>C : Crimp socket</p> <p>R26 : ID socket for AWG26</p> <p>R28 : ID socket for AWG28</p> <p>DSA : Straight through hole</p> <p>DS : Right angle through hole</p> <p>V : Straight SMT</p> <p>H : Right angle SMT</p> <p>A : Adapter</p> |
|---|--|

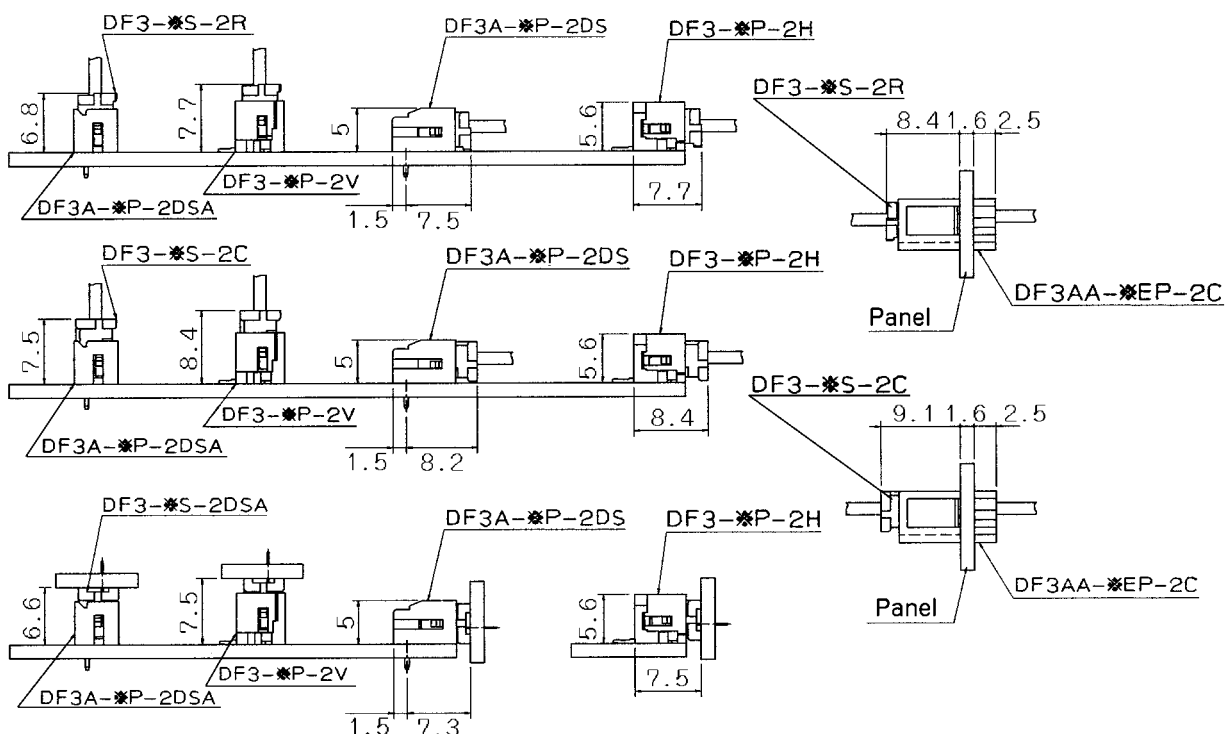
● Contact

DF3 -
EP2428PCFA

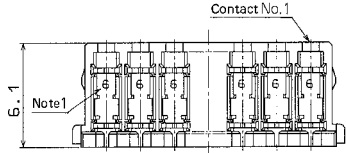
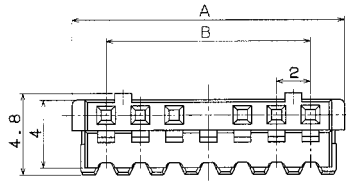
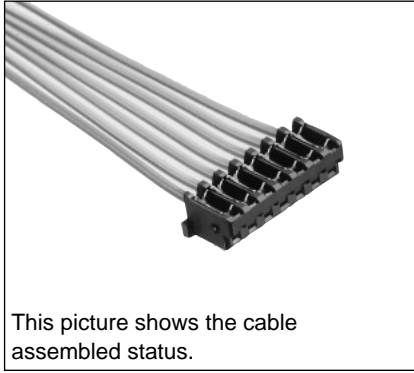
①
②
③
④

| | |
|---|--|
| <p>① Contact Type</p> <p>NONE : For socket</p> <p>EP : For in-line plug</p> <p>② Applicable Wire Size</p> <p>22 : AWG22</p> <p>2428 : AWG24 to 28</p> | <p>③ Contact Type/Packaging Type</p> <p>SCF : Socket contact, Embossed tape</p> <p>SC : Socket contact, Bag</p> <p>PCF : Plug contact, Embossed tape</p> <p>PC : Plug contact, Bag</p> <p>④ Plating Type</p> <p>Blank : Tin plated</p> <p>A : Gold plated</p> <p>C : Gold plated</p> |
|---|--|

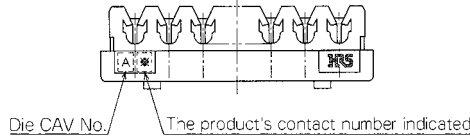
■ Application pattern



■ID Socket



[Specific No.]-** *(**)
 Blank : Tin plated, 100 pieces per bag
 (01) : Gold plated, 100 pieces per bag
 (20) : Tin plated, Tube packaging



Note 1.
 Mark to determine the socket name
 Mark6: R26, Mark8: R28

●AWG26

Unit: mm

| Part Number | CL No. | Number of Contacts | A | B | Tube packaging Quantity |
|------------------|---------------|--------------------|----|----|-------------------------|
| DF3- 2S-2R26(**) | 543-0078-7-** | 2 | 6 | 2 | 190 pieces |
| DF3- 3S-2R26(**) | 543-0079-0-** | 3 | 8 | 4 | 142 |
| DF3- 4S-2R26(**) | 543-0080-9-** | 4 | 10 | 6 | 114 |
| DF3- 5S-2R26(**) | 543-0081-1-** | 5 | 12 | 8 | 94 |
| DF3- 6S-2R26(**) | 543-0082-4-** | 6 | 14 | 10 | 80 |
| DF3- 7S-2R26(**) | 543-0083-7-** | 7 | 16 | 12 | 70 |
| DF3- 8S-2R26(**) | 543-0084-0-** | 8 | 18 | 14 | 62 |
| DF3- 9S-2R26(**) | 543-0085-2-** | 9 | 20 | 16 | 56 |
| DF3-10S-2R26(**) | 543-0086-5-** | 10 | 22 | 18 | 52 |
| DF3-11S-2R26(**) | 543-0087-8-** | 11 | 24 | 20 | 46 |
| DF3-12S-2R26(**) | 543-0088-0-** | 12 | 26 | 22 | 44 |
| DF3-13S-2R26(**) | 543-0089-3-** | 13 | 28 | 24 | 40 |
| DF3-14S-2R26(**) | 543-0090-2-** | 14 | 30 | 26 | 38 |
| DF3-15S-2R26(**) | 543-0091-5-** | 15 | 32 | 28 | 34 |

●AWG28

Unit: mm

| Part Number | CL No. | Number of Contacts | A | B | Tube packaging Quantity |
|------------------|---------------|--------------------|----|----|-------------------------|
| DF3- 2S-2R28(**) | 543-0092-8-** | 2 | 6 | 2 | 190 pieces |
| DF3- 3S-2R28(**) | 543-0093-0-** | 3 | 8 | 4 | 142 |
| DF3- 4S-2R28(**) | 543-0094-3-** | 4 | 10 | 6 | 114 |
| DF3- 5S-2R28(**) | 543-0095-6-** | 5 | 12 | 8 | 94 |
| DF3- 6S-2R28(**) | 543-0096-9-** | 6 | 14 | 10 | 80 |
| DF3- 7S-2R28(**) | 543-0097-1-** | 7 | 16 | 12 | 70 |
| DF3- 8S-2R28(**) | 543-0098-4-** | 8 | 18 | 14 | 62 |
| DF3- 9S-2R28(**) | 543-0099-7-** | 9 | 20 | 16 | 56 |
| DF3-10S-2R28(**) | 543-0100-4-** | 10 | 22 | 18 | 52 |
| DF3-11S-2R28(**) | 543-0101-7-** | 11 | 24 | 20 | 46 |
| DF3-12S-2R28(**) | 543-0102-0-** | 12 | 26 | 22 | 44 |
| DF3-13S-2R28(**) | 543-0103-2-** | 13 | 28 | 24 | 40 |
| DF3-14S-2R28(**) | 543-0104-5-** | 14 | 30 | 26 | 38 |
| DF3-15S-2R28(**) | 543-0105-8-** | 15 | 32 | 28 | 34 |

Note 2.The quantity for delivery of the specific No. "None" and (01) is determined per bag (100pcs.). If needed, please order the products per bag.

Note 3.If the Full automatic IDC machine to hit the DF11 single core,the (20) tube packaging specification will be applied.

Note 4.Order the tube packaging product, multiplying the tube packaging quantity (pieces).

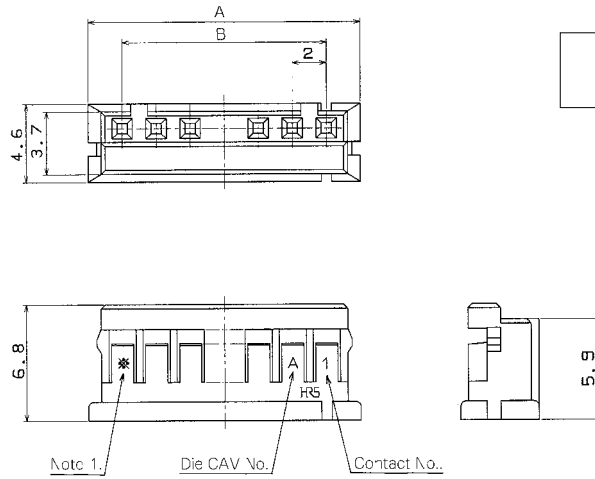
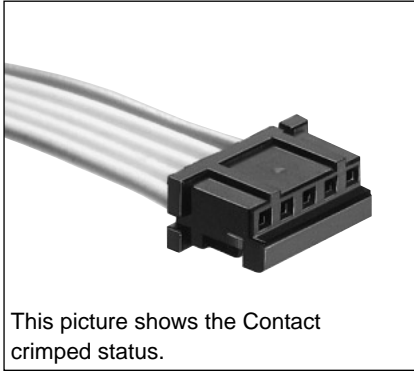
■Applicable Cable

| Part Number | Applicable Cable | Jacket Diameter |
|-------------|------------------------|-----------------|
| DF3-*S-2R26 | UL1061 AWG26 (7/0.16) | φ0.9 to 1mm |
| DF3-*S-2R28 | UL1061 AWG28 (7/0.127) | φ0.9 to 1mm |

■Applicable ID Connection Tool

| Type | Part Number | Connection Type | Remarks |
|--|--------------|--|--|
| DF11 Single Contact Punching Full Automatic ID Machine | AM700/DF11 | <ul style="list-style-type: none"> ■ Effective Harness Form <ul style="list-style-type: none"> ① DF11-Both ended, single ended ② DF11-DF11, Separation ③ DF11-DF3, Separation ■ Effective Harness Length 100 to 2,000mm ■ Conduction Inspection Mechanism Installed | Connector is the specification (20). Tube packaging applied |
| DF3 DF4 Desktop ID Machine | DF3(4)/ID-MO | <ul style="list-style-type: none"> DF3 No restriction DF4 No restriction | Desktop machine for small lot |

■Crimping Socket



[Specific No.] -* *, (* *)
Blank: 100 pieces per pack

Unit: mm

| Part Number | CL No. | Number of Contacts | A | B | Part Number | CL No. | Number of Contacts | A | B |
|---------------|---------------|--------------------|----|----|----------------|---------------|--------------------|----|----|
| DF3-2S-2C(**) | 543-0003-8-** | 2 | 6 | 2 | DF3- 9S-2C(**) | 543-0010-3-** | 9 | 20 | 16 |
| DF3-3S-2C(**) | 543-0004-0-** | 3 | 8 | 4 | DF3-10S-2C(**) | 543-0011-6-** | 10 | 22 | 18 |
| DF3-4S-2C(**) | 543-0005-3-** | 4 | 10 | 6 | DF3-11S-2C(**) | 543-0012-9-** | 11 | 24 | 20 |
| DF3-5S-2C(**) | 543-0006-6-** | 5 | 12 | 8 | DF3-12S-2C(**) | 543-0013-1-** | 12 | 26 | 22 |
| DF3-6S-2C(**) | 543-0007-9-** | 6 | 14 | 10 | DF3-13S-2C(**) | 543-0014-4-** | 13 | 28 | 24 |
| DF3-7S-2C(**) | 543-0008-1-** | 7 | 16 | 12 | DF3-14S-2C(**) | 543-0015-7-** | 14 | 30 | 26 |
| DF3-8S-2C(**) | 543-0009-4-** | 8 | 18 | 14 | DF3-15S-2C(**) | 543-0016-0-** | 15 | 32 | 28 |

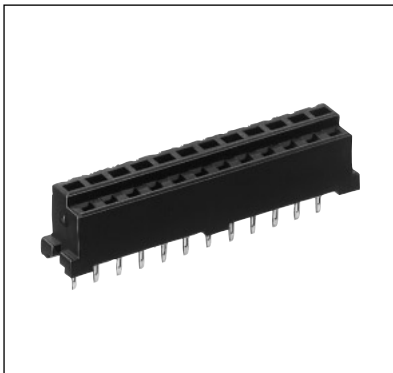
Note1: The product's contact number indicated.

Note2: The quantity for delivery of the specification No. "None" is determined per bag (100 pcs.).

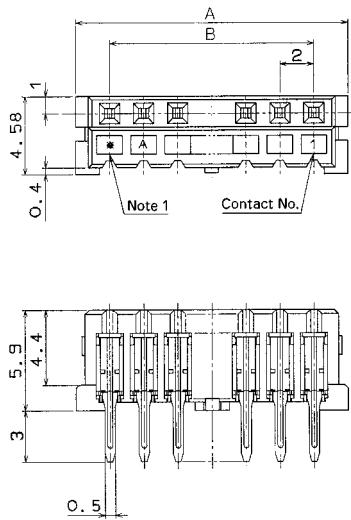
If needed, please order the products per bag.

Note3: A quantity of "500 pieces package" and "1000 pieces package" for delivery is dealt with pieces. Order example: 500, 1000, and 1500 pieces...

■Receptacle



●Board Through-hole Diameter: $\phi 0.7^{+0.1}$



[Specific No.] -* *, (* *)
(20) :Tin plated, Tube packaging
(50) :Gold plated, Tube packaging

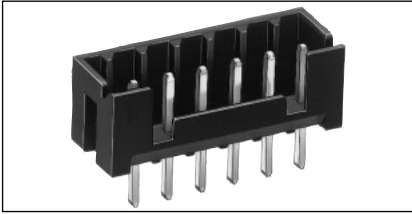
Note1: The product's contact number indicated

Unit: mm

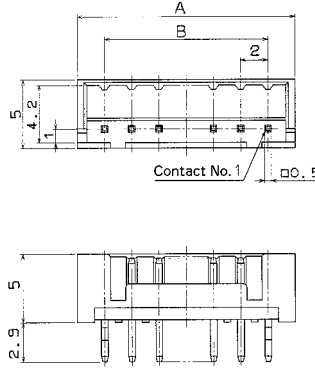
| Part Number | CL No. | Number of Contacts | A | B | Tube Package Quantity | Part Number | CL No. | Number of Contacts | A | B | Tube Package Quantity |
|-----------------|---------------|--------------------|----|----|-----------------------|------------------|---------------|--------------------|----|----|-----------------------|
| DF3-2S-2DSA(**) | 543-0048-6-** | 2 | 6 | 2 | 80 pieces | DF3- 9S-2DSA(**) | 543-0055-1-** | 9 | 20 | 16 | 24 pieces |
| DF3-3S-2DSA(**) | 543-0049-9-** | 3 | 8 | 4 | 60 | DF3-10S-2DSA(**) | 543-0056-4-** | 10 | 22 | 18 | 21 |
| DF3-4S-2DSA(**) | 543-0050-8-** | 4 | 10 | 6 | 48 | DF3-11S-2DSA(**) | 543-0057-7-** | 11 | 24 | 20 | 20 |
| DF3-5S-2DSA(**) | 543-0051-0-** | 5 | 12 | 8 | 40 | DF3-12S-2DSA(**) | 543-0058-0-** | 12 | 26 | 22 | 18 |
| DF3-6S-2DSA(**) | 543-0052-3-** | 6 | 14 | 10 | 34 | DF3-13S-2DSA(**) | 543-0059-2-** | 13 | 28 | 24 | 17 |
| DF3-7S-2DSA(**) | 543-0053-6-** | 7 | 16 | 12 | 30 | DF3-14S-2DSA(**) | 543-0060-1-** | 14 | 30 | 26 | 16 |
| DF3-8S-2DSA(**) | 543-0054-9-** | 8 | 18 | 14 | 27 | DF3-15S-2DSA(**) | 543-0061-4-** | 15 | 32 | 28 | 15 |

Note2: Please order the tube packaging at the multiplied tube packaging quantity (pieces).

■Straight Pin Header



- Board Through-hole Diameter: $\phi 0.8^{+0.1}$
- Kink Pre-fixed Effective Diameter: $\phi 0.8^{+0.05}$



Unit: mm

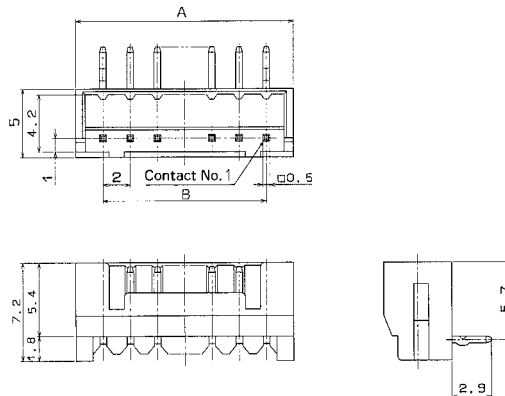
| Tin Plating | | Gold Plating | | Number of Contacts | A | B |
|---------------|------------|------------------|---------------|--------------------|----|----|
| Part Number | CL No. | Part Number | CL No. | | | |
| DF3A- 2P-2DSA | 543-0165-0 | DF3- 2P-2DSA(01) | 543-0017-2-01 | 2 | 6 | 2 |
| DF3A- 3P-2DSA | 543-0166-2 | DF3- 3P-2DSA(01) | 543-0018-5-01 | 3 | 8 | 4 |
| DF3A- 4P-2DSA | 543-0167-5 | DF3- 4P-2DSA(01) | 543-0019-8-01 | 4 | 10 | 6 |
| DF3A- 5P-2DSA | 543-0168-8 | DF3- 5P-2DSA(01) | 543-0020-7-01 | 5 | 12 | 8 |
| DF3A- 6P-2DSA | 543-0169-0 | DF3- 6P-2DSA(01) | 543-0021-0-01 | 6 | 14 | 10 |
| DF3A- 7P-2DSA | 543-0170-0 | DF3- 7P-2DSA(01) | 543-0022-2-01 | 7 | 16 | 12 |
| DF3A- 8P-2DSA | 543-0171-2 | DF3- 8P-2DSA(01) | 543-0023-5-01 | 8 | 18 | 14 |
| DF3A- 9P-2DSA | 543-0172-5 | DF3- 9P-2DSA(01) | 543-0024-8-01 | 9 | 20 | 16 |
| DF3A-10P-2DSA | 543-0173-8 | DF3-10P-2DSA(01) | 543-0025-0-01 | 10 | 22 | 18 |
| DF3A-11P-2DSA | 543-0174-0 | DF3-11P-2DSA(01) | 543-0026-3-01 | 11 | 24 | 20 |
| DF3A-12P-2DSA | 543-0175-3 | DF3-12P-2DSA(01) | 543-0027-6-01 | 12 | 26 | 22 |
| DF3A-13P-2DSA | 543-0176-6 | DF3-13P-2DSA(01) | 543-0028-9-01 | 13 | 28 | 24 |
| DF3A-14P-2DSA | 543-0177-9 | DF3-14P-2DSA(01) | 543-0029-1-01 | 14 | 30 | 26 |
| DF3A-15P-2DSA | 543-0178-1 | DF3-15P-2DSA(01) | 543-0030-0-01 | 15 | 32 | 28 |

Note : The quantity for delivery is determined per bag (100 pcs.). If needed, please order the products per bag.

■Right Angle Pin Header



- Board Through-hole Diameter: $\phi 0.8^{+0.1}$
- Kink Pre-fixed Effective Diameter: $\phi 0.8^{+0.05}$

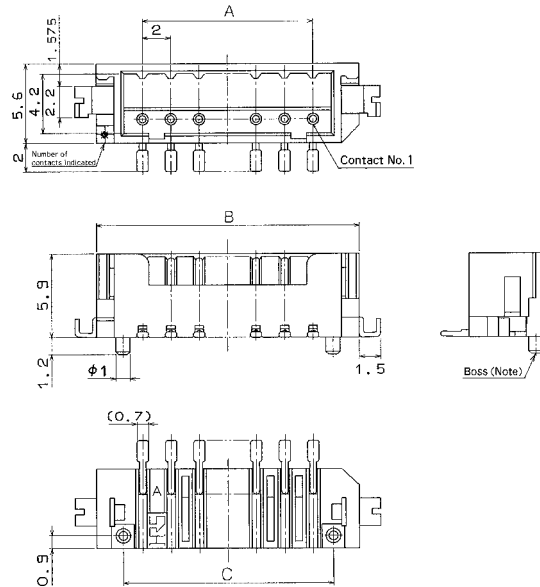
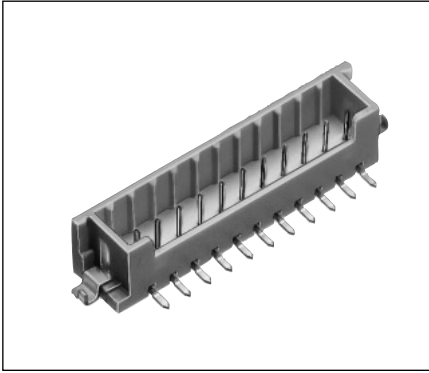


Unit: mm

| Tin Plating | | Gold Plating | | Number of Contacts | A | B |
|--------------|------------|-----------------|---------------|--------------------|----|----|
| Part Number | CL No. | Part Number | CL No. | | | |
| DF3A- 2P-2DS | 543-0179-4 | DF3- 2P-2DS(01) | 543-0031-3-01 | 2 | 6 | 2 |
| DF3A- 3P-2DS | 543-0180-3 | DF3- 3P-2DS(01) | 543-0032-6-01 | 3 | 8 | 4 |
| DF3A- 4P-2DS | 543-0181-6 | DF3- 4P-2DS(01) | 543-0033-9-01 | 4 | 10 | 6 |
| DF3A- 5P-2DS | 543-0182-9 | DF3- 5P-2DS(01) | 543-0034-1-01 | 5 | 12 | 8 |
| DF3A- 6P-2DS | 543-0183-1 | DF3- 6P-2DS(01) | 543-0035-4-01 | 6 | 14 | 10 |
| DF3A- 7P-2DS | 543-0184-4 | DF3- 7P-2DS(01) | 543-0036-7-01 | 7 | 16 | 12 |
| DF3A- 8P-2DS | 543-0185-7 | DF3- 8P-2DS(01) | 543-0037-0-01 | 8 | 18 | 14 |
| DF3A- 9P-2DS | 543-0186-0 | DF3- 9P-2DS(01) | 543-0038-2-01 | 9 | 20 | 16 |
| DF3A-10P-2DS | 543-0187-2 | DF3-10P-2DS(01) | 543-0039-5-01 | 10 | 22 | 18 |
| DF3A-11P-2DS | 543-0188-5 | DF3-11P-2DS(01) | 543-0040-4-01 | 11 | 24 | 20 |
| DF3A-12P-2DS | 543-0189-8 | DF3-12P-2DS(01) | 543-0041-7-01 | 12 | 26 | 22 |
| DF3A-13P-2DS | 543-0190-7 | DF3-13P-2DS(01) | 543-0042-0-01 | 13 | 28 | 24 |
| DF3A-14P-2DS | 543-0191-0 | DF3-14P-2DS(01) | 543-0043-2-01 | 14 | 30 | 26 |
| DF3A-15P-2DS | 543-0192-2 | DF3-15P-2DS(01) | 543-0044-5-01 | 15 | 32 | 28 |

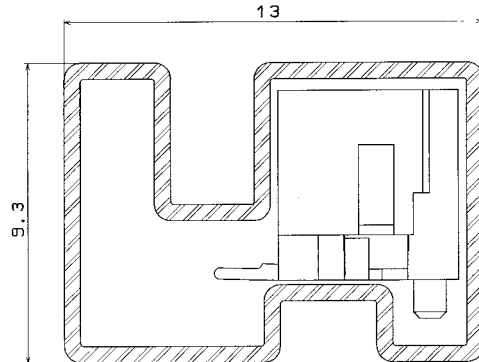
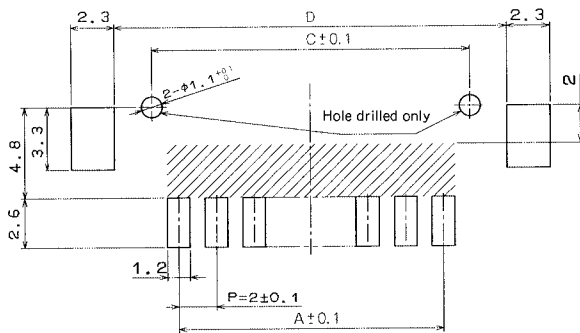
Note : The quantity for delivery is determined per bag(100 pcs.). If needed, please order the products per bag.

■Straight Pin Header (SMT)



Note: "Without Boss" indicates a pattern, not including this boss.

◆PCB mounting pattern



Note: If a pattern is included in the shaded area and is not treated with resist, it could touch the connector contact.

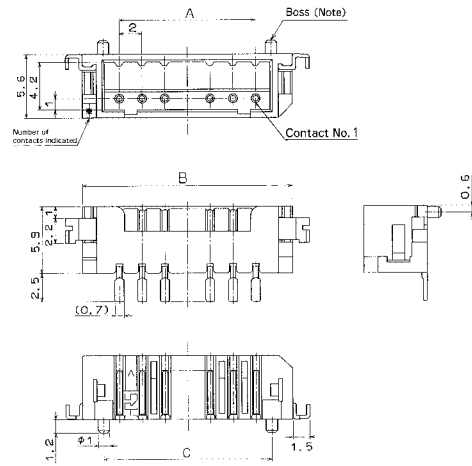
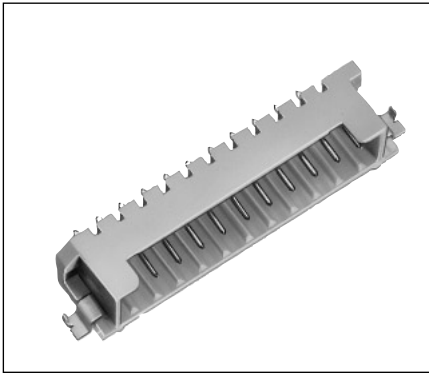
[Specific No.] -** *, (**)
 (20) :Tin plated tube packaging
 (50) :Gold plated tube packaging

Unit: mm

| With Boss | | Without Boss | | Number of Contacts | A | B | C | D | Tube Packaging Quantity |
|----------------|---------------|-----------------|---------------|--------------------|----|------|------|-------|-------------------------|
| Part Number | CL No. | Part Number | CL No. | | | | | | |
| DF3- 2P-2V(**) | 543-0121-4-** | DF3D- 2P-2V(**) | 543-0207-8-** | 2 | 2 | 8.5 | 4.8 | 8.74 | 41 pcs. |
| DF3- 3P-2V(**) | 543-0122-7-** | DF3D- 3P-2V(**) | 543-0208-0-** | 3 | 4 | 10.5 | 6.8 | 10.74 | 34 |
| DF3- 4P-2V(**) | 543-0123-0-** | DF3D- 4P-2V(**) | 543-0209-3-** | 4 | 6 | 12.5 | 8.8 | 12.74 | 30 |
| DF3- 5P-2V(**) | 543-0124-2-** | DF3D- 5P-2V(**) | 543-0210-2-** | 5 | 8 | 14.5 | 10.8 | 14.74 | 26 |
| DF3- 6P-2V(**) | 543-0125-5-** | DF3D- 6P-2V(**) | 543-0211-5-** | 6 | 10 | 16.5 | 12.8 | 16.74 | 23 |
| DF3- 7P-2V(**) | 543-0126-8-** | DF3D- 7P-2V(**) | 543-0212-8-** | 7 | 12 | 18.5 | 14.8 | 18.74 | 21 |
| DF3- 8P-2V(**) | 543-0127-0-** | DF3D- 8P-2V(**) | 543-0213-0-** | 8 | 14 | 20.5 | 16.8 | 20.74 | 19 |
| DF3- 9P-2V(**) | 543-0128-3-** | DF3D- 9P-2V(**) | 543-0214-3-** | 9 | 16 | 22.5 | 18.8 | 22.74 | 18 |
| DF3-10P-2V(**) | 543-0129-6-** | DF3D-10P-2V(**) | 543-0215-6-** | 10 | 18 | 24.5 | 20.8 | 24.74 | 17 |
| DF3-11P-2V(**) | 543-0130-5-** | DF3D-11P-2V(**) | 543-0216-9-** | 11 | 20 | 26.5 | 22.8 | 26.74 | 15 |
| DF3-12P-2V(**) | 543-0131-8-** | DF3D-12P-2V(**) | 543-0217-1-** | 12 | 22 | 28.5 | 24.8 | 28.74 | 14 |
| DF3-13P-2V(**) | 543-0132-0-** | DF3D-13P-2V(**) | 543-0218-4-** | 13 | 24 | 30.5 | 26.8 | 30.74 | 14 |
| DF3-14P-2V(**) | 543-0133-3-** | DF3D-14P-2V(**) | 543-0219-7-** | 14 | 26 | 32.5 | 28.8 | 32.74 | 13 |
| DF3-15P-2V(**) | 543-0134-6-** | DF3D-15P-2V(**) | 543-0220-6-** | 15 | 28 | 34.5 | 30.8 | 34.74 | 12 |

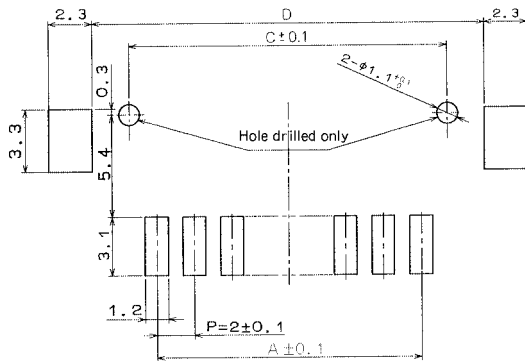
Note : Please order the tube packaging product, multiplying by tube package quantity (pcs.).

Right Angle Pin Header (SMT)

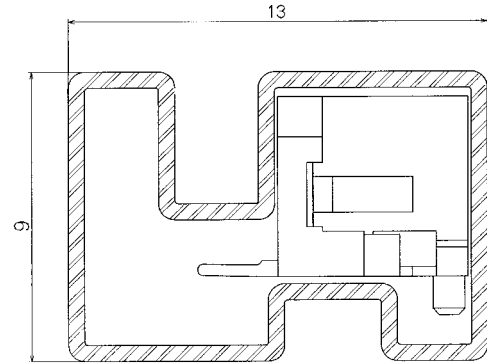


Note: "without boss" indicates a pattern, not including this boss

PCB mounting pattern



Tube Size



Number of Contacts for Embossed Packaging Available

[Specific No.] -** , (**)

- (20) : Tin plated tube packaging
- (21) : Tin plated embossed packaging
(Note the number of contacts for merchandization.)
- (50) : Gold plated tube packaging
- (51) : Gold plated embossed packaging

| | Numbers of Contacts | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|------------|---------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| DF3 -*P-2H | (21) Tin plated | ○ | ○ | ○ | ○ | ○ | × | ○ | × | ○ | ○ | ○ | × | × | ○ |
| | (51) Gold plated | ○ | ○ | ○ | × | × | ○ | × | × | ○ | ○ | ○ | × | × | ○ |
| DF3D-*P-2H | (21) Tin plated | ○ | ○ | ○ | ○ | ○ | ○ | ○ | × | ○ | ○ | ○ | ○ | × | ○ |
| | (51) Gold plated | × | ○ | ○ | ○ | ○ | ○ | ○ | × | ○ | ○ | ○ | × | × | × |

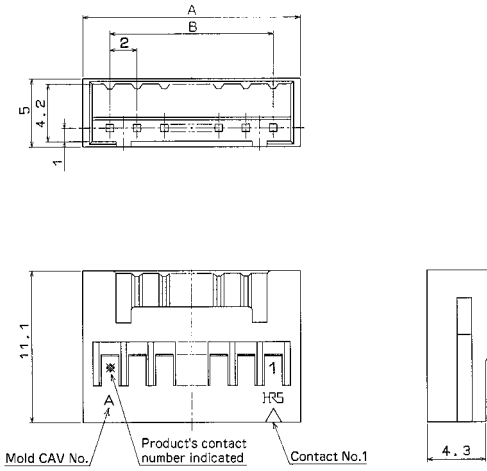
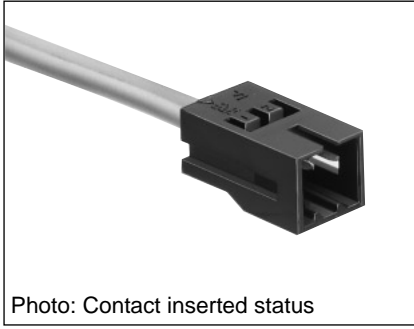
Unit: mm

| With Boss | | Without Boss | | Number of Contacts | A | B | C | D | Tube Packaging Quantity |
|----------------|---------------|-----------------|---------------|--------------------|----|------|------|-------|-------------------------|
| Part Number | CL No. | Part Number | CL No. | | | | | | |
| DF3- 2P-2H(**) | 543-0107-3-** | DF3D- 2P-2H(**) | 543-0221-9-** | 2 | 2 | 8.5 | 4.8 | 8.74 | 41 pcs. |
| DF3- 3P-2H(**) | 543-0108-6-** | DF3D- 3P-2H(**) | 543-0222-1-** | 3 | 4 | 10.5 | 6.8 | 10.74 | 34 |
| DF3- 4P-2H(**) | 543-0109-9-** | DF3D- 4P-2H(**) | 543-0223-4-** | 4 | 6 | 12.5 | 8.8 | 12.74 | 30 |
| DF3- 5P-2H(**) | 543-0110-8-** | DF3D- 5P-2H(**) | 543-0224-7-** | 5 | 8 | 14.5 | 10.8 | 14.74 | 26 |
| DF3- 6P-2H(**) | 543-0111-0-** | DF3D- 6P-2H(**) | 543-0225-0-** | 6 | 10 | 16.5 | 12.8 | 16.74 | 23 |
| DF3- 7P-2H(**) | 543-0112-3-** | DF3D- 7P-2H(**) | 543-0226-2-** | 7 | 12 | 18.5 | 14.8 | 18.74 | 21 |
| DF3- 8P-2H(**) | 543-0113-6-** | DF3D- 8P-2H(**) | 543-0227-5-** | 8 | 14 | 20.5 | 16.8 | 20.74 | 19 |
| DF3- 9P-2H(**) | 543-0114-9-** | DF3D- 9P-2H(**) | 543-0228-8-** | 9 | 16 | 22.5 | 18.8 | 22.74 | 18 |
| DF3-10P-2H(**) | 543-0115-1-** | DF3D-10P-2H(**) | 543-0229-0-** | 10 | 18 | 24.5 | 20.8 | 24.74 | 17 |
| DF3-11P-2H(**) | 543-0116-4-** | DF3D-11P-2H(**) | 543-0230-0-** | 11 | 20 | 26.5 | 22.8 | 26.74 | 15 |
| DF3-12P-2H(**) | 543-0117-7-** | DF3D-12P-2H(**) | 543-0231-2-** | 12 | 22 | 28.5 | 24.8 | 28.74 | 14 |
| DF3-13P-2H(**) | 543-0118-0-** | DF3D-13P-2H(**) | 543-0232-5-** | 13 | 24 | 30.5 | 26.8 | 30.74 | 14 |
| DF3-14P-2H(**) | 543-0119-2-** | DF3D-14P-2H(**) | 543-0233-8-** | 14 | 26 | 32.5 | 28.8 | 32.74 | 13 |
| DF3-15P-2H(**) | 543-0120-1-** | DF3D-15P-2H(**) | 543-0234-0-** | 15 | 28 | 34.5 | 30.8 | 34.74 | 12 |

Note1: Please order the tube packaging product, multipling the tube package quantity. (pcs.)

Note2: Please order the emboss packaging product by the reel number. (1 reel : 1000 pcs.)

■ In-line Plug



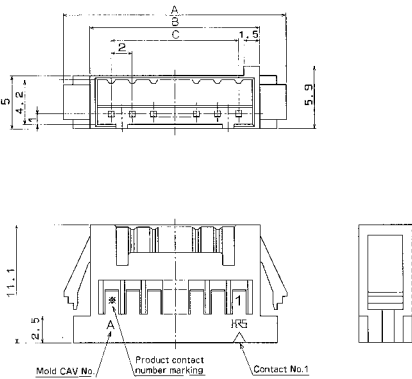
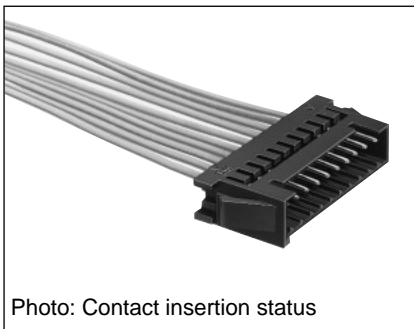
[Specific No.] -** , (**)
Blank: 1 pack

Unit: mm

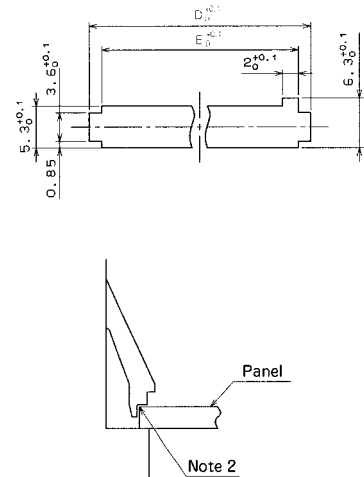
| Part Number | CL No. | Number of Contacts | A | B | Part Number | CL No. | Number of Contacts | A | B |
|-----------------|---------------|--------------------|----|----|-----------------|---------------|--------------------|----|----|
| DF3- 2EP-2C(**) | 543-0064-2-** | 2 | 6 | 2 | DF3- 9EP-2C(**) | 543-0071-8-** | 9 | 20 | 16 |
| DF3- 3EP-2C(**) | 543-0065-5-** | 3 | 8 | 4 | DF3-10EP-2C(**) | 543-0072-0-** | 10 | 22 | 18 |
| DF3- 4EP-2C(**) | 543-0066-8-** | 4 | 10 | 6 | DF3-11EP-2C(**) | 543-0073-3-** | 11 | 24 | 20 |
| DF3- 5EP-2C(**) | 543-0067-0-** | 5 | 12 | 8 | DF3-12EP-2C(**) | 543-0074-6-** | 12 | 26 | 22 |
| DF3- 6EP-2C(**) | 543-0068-3-** | 6 | 14 | 10 | DF3-13EP-2C(**) | 543-0075-9-** | 13 | 28 | 24 |
| DF3- 7EP-2C(**) | 543-0069-6-** | 7 | 16 | 12 | DF3-14EP-2C(**) | 543-0076-1-** | 14 | 30 | 26 |
| DF3- 8EP-2C(**) | 543-0070-5-** | 8 | 18 | 14 | DF3-15EP-2C(**) | 543-0077-4-** | 15 | 32 | 28 |

Note : The specific No."None" item is delivered per bag (100 pcs.). Please order products per bag unit.

■ In-line Plug with Panel Lock



◆ Panel Cutouts



Unit: mm

| Part Number | CL No. | Number of Contacts | A | B | C | D | E |
|-------------------|---------------|--------------------|----|----|----|------|------|
| DF3AA- 2EP-2C(**) | 543-0151-5-** | 2 | 11 | 6 | 2 | 9.4 | 6.3 |
| DF3AA- 3EP-2C(**) | 543-0152-8-** | 3 | 13 | 8 | 4 | 11.4 | 8.3 |
| DF3AA- 4EP-2C(**) | 543-0153-0-** | 4 | 15 | 10 | 6 | 13.4 | 10.3 |
| DF3AA- 5EP-2C(**) | 543-0154-3-** | 5 | 17 | 12 | 8 | 15.4 | 12.3 |
| DF3AA- 6EP-2C(**) | 543-0155-6-** | 6 | 19 | 14 | 10 | 17.4 | 14.3 |
| DF3AA- 7EP-2C(**) | 543-0156-9-** | 7 | 21 | 16 | 12 | 19.4 | 16.3 |
| DF3AA- 8EP-2C(**) | 543-0157-1-** | 8 | 23 | 18 | 14 | 21.4 | 18.3 |
| DF3AA- 9EP-2C(**) | 543-0158-4-** | 9 | 25 | 20 | 16 | 23.4 | 20.3 |
| DF3AA-10EP-2C(**) | 543-0159-7-** | 10 | 27 | 22 | 18 | 25.4 | 22.3 |
| DF3AA-11EP-2C(**) | 543-0160-6-** | 11 | 29 | 24 | 20 | 27.4 | 24.3 |
| DF3AA-12EP-2C(**) | 543-0161-9-** | 12 | 31 | 26 | 22 | 29.4 | 26.3 |
| DF3AA-13EP-2C(**) | 543-0162-1-** | 13 | 33 | 28 | 24 | 31.4 | 28.3 |
| DF3AA-14EP-2C(**) | 543-0163-4-** | 14 | 35 | 30 | 26 | 33.4 | 30.3 |
| DF3AA-15EP-2C(**) | 543-0164-7-** | 15 | 37 | 32 | 28 | 35.4 | 32.3 |

Note1: Applicable panel thickness is 1.6 to 1.0mm. (However, a slight backlash is considered for the thickness other than 1.6 and 1.2mm.)

Note2: Use the non-radius surface at the hooking panel edge.

Note3: Contact No. indicates 1, 4, 8, 12, and 15.

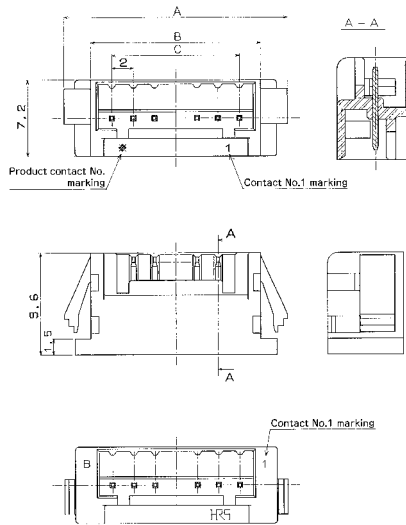
[Specific No.] -** , (**)
Blank: 100 pcs. per bag

Note : Specific No."None" item is delivered per bag (100 pcs.). Please order products per bag unit.

■ In-line Adapter with Panel Lock



Adapter to in-line by pushing 2 pcs. of socket from both sides
No.1-No.1 connection circuit type

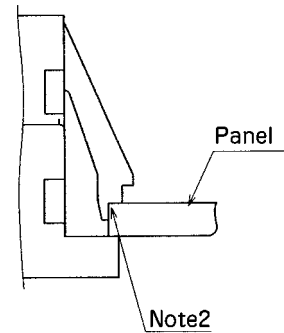
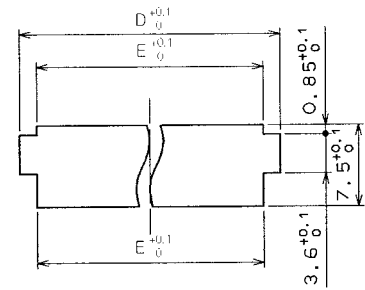


Unit: mm

| Part Number | CL No. | Number of Contacts | A | B | C | D | E |
|-----------------|---------------|--------------------|----|----|----|------|------|
| DF3- 2EP-2A(**) | 543-0267-0-** | 2 | 11 | 6 | 2 | 9.4 | 6.3 |
| DF3- 3EP-2A(**) | 543-0268-2-** | 3 | 13 | 8 | 4 | 11.4 | 8.3 |
| DF3- 4EP-2A(**) | 543-0269-5-** | 4 | 15 | 10 | 6 | 13.4 | 10.3 |
| DF3- 5EP-2A(**) | 543-0270-4-** | 5 | 17 | 12 | 8 | 15.4 | 12.3 |
| DF3- 6EP-2A(**) | 543-0271-7-** | 6 | 19 | 14 | 10 | 17.4 | 14.3 |
| DF3- 7EP-2A(**) | 543-0272-0-** | 7 | 21 | 16 | 12 | 19.4 | 16.3 |
| DF3- 8EP-2A(**) | 543-0273-2-** | 8 | 23 | 18 | 14 | 21.4 | 18.3 |
| DF3- 9EP-2A(**) | 543-0274-5-** | 9 | 25 | 20 | 16 | 23.4 | 20.3 |
| DF3-10EP-2A(**) | 543-0275-8-** | 10 | 27 | 22 | 18 | 25.4 | 22.3 |
| DF3-11EP-2A(**) | 543-0276-0-** | 11 | 29 | 24 | 20 | 27.4 | 24.3 |
| DF3-12EP-2A(**) | 543-0277-3-** | 12 | 31 | 26 | 22 | 29.4 | 26.3 |
| DF3-13EP-2A(**) | 543-0278-6-** | 13 | 33 | 28 | 24 | 31.4 | 28.3 |
| DF3-14EP-2A(**) | 543-0279-9-** | 14 | 35 | 30 | 26 | 33.4 | 30.3 |
| DF3-15EP-2A(**) | 543-0280-8-** | 15 | 37 | 32 | 28 | 35.4 | 32.3 |

Note : Specific No."None" item is delivered per bag (100 pcs.). Please order products per bag unit.

◆ Panel Cutouts

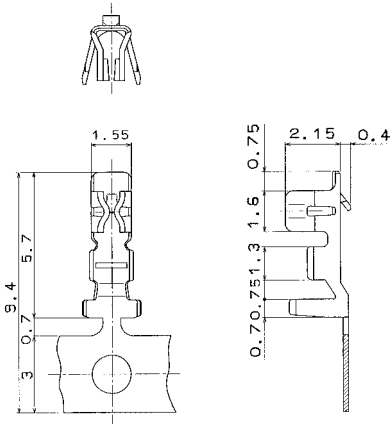


Note1: Applicable panel thickness is 1.6 to 1.0mm. (However, backlash will occur except for 1.6, 1.2mm thickness.)

Note2: Please use the non-radius surface at the hooking panel edge.

[Specific No.] - * *, (* *)
Blank : 100 pcs. per bag

■Crimping Contact for Socket



| Part Number | CL No. | Type | Quantity | Finish |
|--------------|------------|--------------|----------------------------------|-------------|
| DF3-22SCF | 543-0235-3 | Reel contact | 10000 pcs. per embossed tape bag | Tin plated |
| DF3-22SC | 543-0236-6 | Bulk contact | 100 pcs. per embossed tape bag | |
| DF3-2428SCF | 543-0001-2 | Reel contact | 10000 pcs. per embossed tape bag | |
| DF3-2428SC | 543-0002-5 | Bulk contact | 100 pcs. per embossed tape bag | |
| DF3-2428SCFC | 543-0046-0 | Reel contact | 10000 pcs. per embossed tape bag | Gold plated |
| DF3-248SCC | 543-0047-3 | Bulk contact | 100 pcs. per embossed tape bag | |

●Applicable Wire (Tin Plating Annealed Copper Wire)

| Conductor Size (Wire Configuration) | Jacket Diameter |
|-------------------------------------|------------------------------|
| AWG 22 (17pcs./0.16mm) | ϕ 1.2 to ϕ 1.45mm |
| AWG 24 (11pcs./0.16mm) | ϕ 0.75 to ϕ 1.45mm |
| AWG 26 (7pcs./0.16mm) | |
| AWG 28 (7pcs./0.127mm) | |

●Recommended Wire

UL1061, UL1007 (Note 2.)

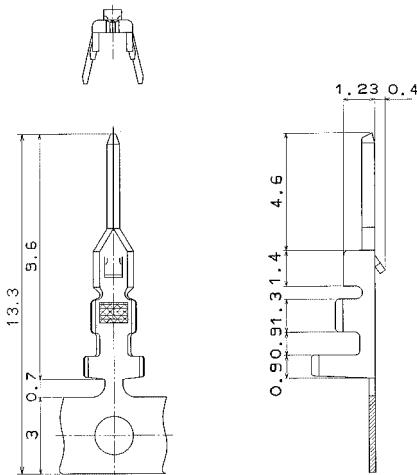
●Strip Length

1.8 to 2.3mm

Note1: If other wires are used instead of the applicable cable, please contact HRS company.

Note2: DF3-22SCF is applicable to UL1061.

■Crimping Contact for In-line Plug



| Part Number | CL No. | Type | Quantity | Finish |
|----------------|------------|--------------|---------------------|-------------|
| DF3-EP2428PCF | 543-0062-7 | Reel contact | 10000 pcs. per reel | Tin plated |
| DF3-EP2428PC | 543-0063-0 | Bulk contact | 100 pcs. per pack | |
| DF3-EP2428PCFA | 543-0149-3 | Reel contact | 10000 pcs. per reel | Gold plated |
| DF3-EP2428PCA | 543-0150-2 | Bulk contact | 100 pcs. per pack | |

●Applicable Wire (Tin Plating Annealed Copper Wire)

| Conductor Size (Wire Configuration) | Jacket Diameter |
|-------------------------------------|------------------------------|
| AWG 24 (11pcs./0.16mm) | ϕ 0.75 to ϕ 1.45mm |
| AWG 26 (7pcs./0.16mm) | |
| AWG 28 (7pcs./0.127mm) | |

●Recommended Wire

UL1061, UL1007

●Strip Length

1.9 to 2.5mm

Note1: If other wires are used instead of the applicable cable, please contact HRS company.

◆Applicable Crimping Tool

| Type | Part Number | CL No. | Applicable Contact |
|--------------------|-------------------|------------|--------------------|
| Applicator | AP105-DF3-2428S | 901-4503-3 | DF3-2428SCF/SCFC |
| | AP105-DF3-22S | 901-4549-4 | DF3-22SCF |
| | AP105-DF3-EP2428P | 901-4508-7 | DF3-EP2428PCF/PCFA |
| Press Unit | CM-105 | 901-0005-4 | ————— |
| Hand Crimping Tool | DF3-TA2428HC | 550-0164-5 | DF3-2428SC/SCC |
| | DF3EP-TA2428HC | 550-0184-2 | DF3-EP2428PC/PCA |
| | DF3-TA22HC | 550-0257-4 | DF3-22SC |
| Extraction Tool | DF-C-PO (A) | 550-0170-8 | DF3-****SCF |
| | | | DF3-EP****PCF |

Note : If any trouble has occurred due to tools other than designated tool, Hirose bears no responsibility for any trouble.