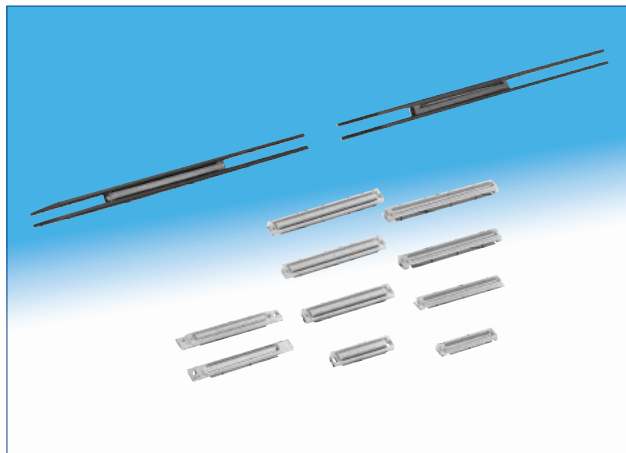
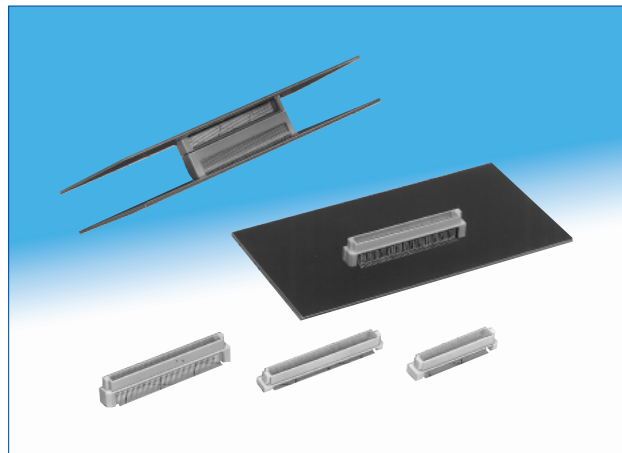


FX8 Series



FX8C Series



Note: that FX8 series and FX8C series are not mated with each other.

### ■ Features

#### 1. Stacking Height: 3mm to 16mm

Stacking height of mated connectors ranges from 3mm to 16mm. (Fig.1.2)

#### 2. SMT Coplanarity

The coplanar tolerance at the solder area is less than 0.1mm.

#### 3. Mating Guide

Built-in guide ribs and a chamfer allow for  $\pm 0.6$  mm of mis-alignmet and ensures easy mating.

#### 4. Mis-insertion Prevention

Bosses located on the bottom side of the connector differ in position and diameter to prevent mis-orientating the parts on the board.

#### 5. Dual Connected Products

In order to enhance mounting reliability and accuracy when mounting two of the same connectors at the same time, Hirose offers the option of having two connectors attached to one another by means of a spacer. Pitch between the two connectors is 11mm.

#### ● Stacking Height 3,4mm-FX8 Series

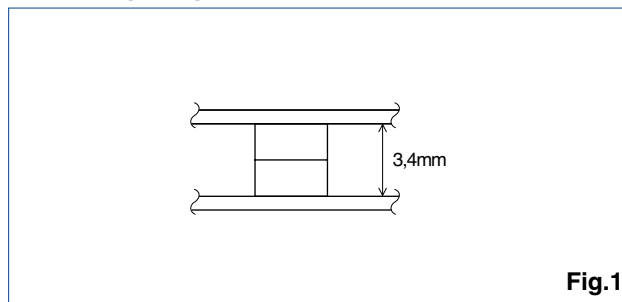


Fig.1

#### ● Stacking Height 5 to 16mm-FX8C Series

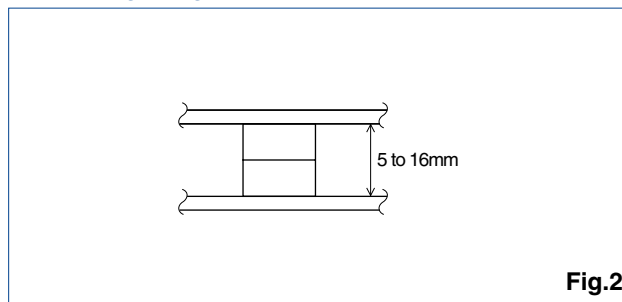


Fig.2

# FX8 Series

## Product Specifications

|        |   |   |   |
|--------|---|---|---|
| Rating | Current rating 0.4A<br>Voltage rating 100V AC | Operating Temperature Range -55°C to +85°C (Note 1)<br>Operating Humidity Range -40% to 80% | Storage Temperature Range -10°C to +60°C (Note 2)<br>Storage Humidity Range 40% to 70% (Note 2) |
|--------|---|---|---|

| Items                           | Specifications  | Conditions   |
|---------------------------------|---|--|
| 1. Insulation Resistance        | 1000MΩ min  | 250V DC  |
| 2. Withstanding voltage         | No flashover or insulation breakdown.                               | 300V AC/1 min  |
| 3. Contact Resistance           | 45mΩ max.   | 100mA  |
| 4. Vibration                    | No electrical discontinuity of 1μs or more                          | Frequency : 10 to 55Hz, single amplitude of 0.75mm, 2 hours in each of the 3 axis directions.                |
| 5. Humidity (Steady state)      | Contact resistance : 55mΩ max. : Insulation resistance : 100MΩ min. | 96 hours at 40°C and humidity of 90% to 95%  |
| 6. Temperature Cycle            | Contact resistance : 55mΩ max. : Insulation resistance : 100MΩ min. | (-55°C : 30 minutes, 15 to 35°C : 2 to 3 minutes<br>85°C : 30 minutes, 15 to 35°C : 2 to 3 minutes) 5 cycles |
| 7. Mating Cycles                | Contact resistance : 55mΩ max.                                      | 50 cycles  |
| 8. Resistance to Soldering heat | No deformation of components affecting performance.                 | Reflow : At the recommended temperature profile<br>Manual soldering : 360°C for 5 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 includes the non conducting condition in storage, shipment or during transportation.

## Material / Finish

| Part               | Material        | Finish       | Remarks      |       |
|--------------------|-----------------|--------------|--------------|-------|
| Insulator          | PPS             | Light brown  | UL94V-0      |       |
| Header Contact     | Phosphor bronze | Contact area | Gold plated  |       |
|                    |                 | Lead area    | Tin (Note 2) |       |
| Receptacle Contact |                 | Contact area | Gold plated  | _____ |
|                    |                 | Lead area    |              |       |

Note 1 : Slight color difference to the resin may occur. This will not affect fit, form or function of the connector.

Note 2 : FX8-\*P-SV is gold 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.

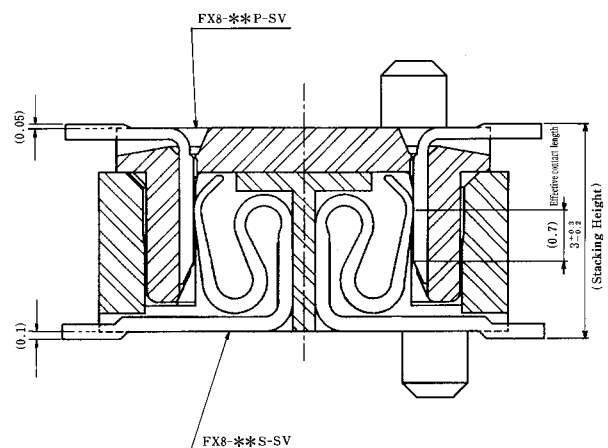
### Single Product

**FX8 - 120 P - SV 1 (92)**

①      ②      ③      ④      ⑤      ⑥

|  |
|--|
| ① Series Name : FX8  |
| ② No. of contacts : 60, 80, 90, 120, 140   |
| ③ Connector type      P : Header<br>S : Receptacle   |
| ④ Contact type      SV : Board vertical type   |
| ⑤ Product height variation : none= standard (minimum low profile)<br>1 : +1mm  |
| ⑥ Package Form<br>None, (71) : Tray package product<br>(21), (91) : Tube packaging product<br>(22), (92) : Emboss tape package product |

### Mating Sectional View

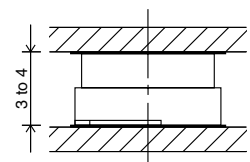


(The above illustration represents the stacking height 3mm type.)

## Stacking Height Variation

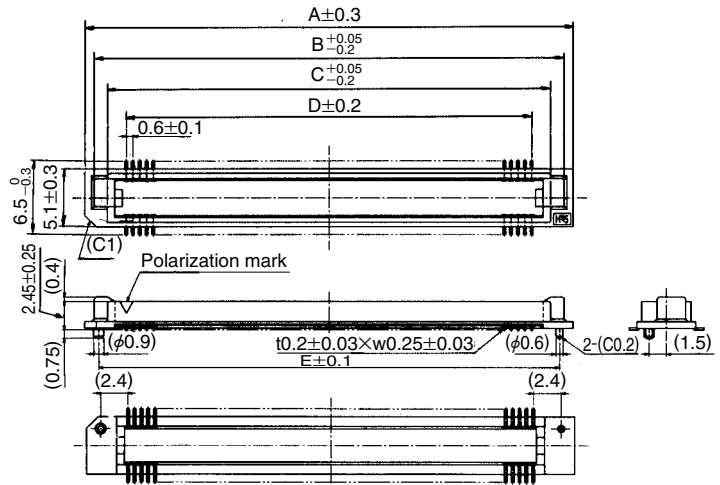
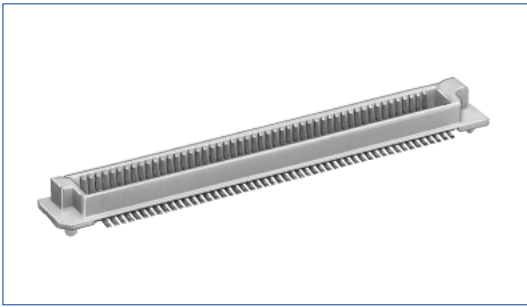
### Single Product

|             | FX8-***P-SV | FX8-***P-SV1 |
|-------------|-------------|--------------|
| FX8-***S-SV | 3mm         | 4mm          |



**Header**

**[FX8-\*\*-P-SV]**



Unit : mm

| Part No.**      | HRS No.       | No. of contacts | A     | B     | C     | D     | E     | RoHS |
|-----------------|---------------|-----------------|-------|-------|-------|-------|-------|------|
| FX8-60P-SV(**)  | 578-0001-6 ** | 60              | 24.60 | 23.00 | 20.70 | 17.40 | 22.20 | Yes  |
| FX8-80P-SV(**)  | 578-0003-1 ** | 80              | 30.60 | 29.00 | 26.70 | 23.40 | 28.20 |      |
| FX8-90P-SV(**)  | 578-0004-4 ** | 90              | 33.60 | 32.00 | 29.70 | 26.40 | 31.20 |      |
| FX8-100P-SV(**) | 578-0005-7 ** | 100             | 36.60 | 35.00 | 32.70 | 29.40 | 34.20 |      |
| FX8-120P-SV(**) | 578-0006-0 ** | 120             | 42.60 | 41.00 | 38.70 | 35.40 | 40.20 |      |
| FX8-140P-SV(**) | 578-0007-2 ** | 140             | 48.60 | 47.00 | 44.70 | 41.40 | 46.20 |      |

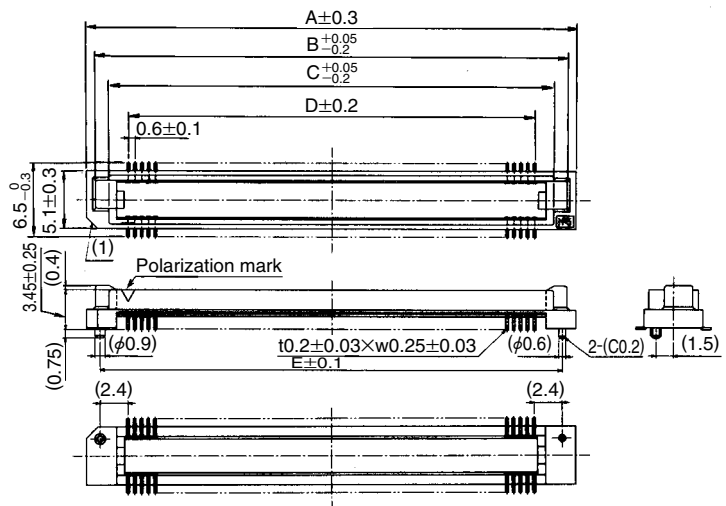
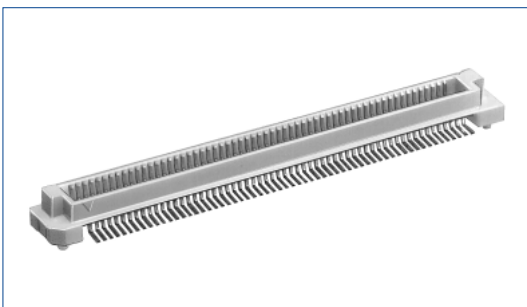
\*\* 71 : Tray packaging, 91 : Tube packaging, 92 : Embossed tape packaging

Note 1 : Please place orders in full magazine/tube quantities.

Note 2 : Reels are sold containing 1,000 pcs/reel. Please refer to the delivery form on page 6 for details.

Note 3 : Please note that tray packaged parts are not suitable for use with automatic mounting processes.

**[FX8-\*\*\*P-SV1]**



Unit : mm

| Part No.**       | HRS No.       | No. of contacts | A     | B     | C     | D     | E     | RoHS |
|------------------|---------------|-----------------|-------|-------|-------|-------|-------|------|
| FX8-60P-SV1(**)  | 578-0041-0 ** | 60              | 24.60 | 23.00 | 20.70 | 17.40 | 22.20 | Yes  |
| FX8-80P-SV1(**)  | 578-0043-6 ** | 80              | 30.60 | 29.00 | 26.70 | 23.40 | 28.20 |      |
| FX8-90P-SV1(**)  | 578-0044-9 ** | 90              | 33.60 | 32.00 | 29.70 | 26.40 | 31.20 |      |
| FX8-100P-SV1(**) | 578-0045-1 ** | 100             | 36.60 | 35.00 | 32.70 | 29.40 | 34.20 |      |
| FX8-120P-SV1(**) | 578-0046-4 ** | 120             | 42.60 | 41.00 | 38.70 | 35.40 | 40.20 |      |
| FX8-140P-SV1(**) | 578-0047-7 ** | 140             | 48.60 | 47.00 | 44.70 | 41.40 | 46.20 |      |

\*\* 71 : Tray packaging, 91 : Tube packaging, 92 : Embossed tape packaging

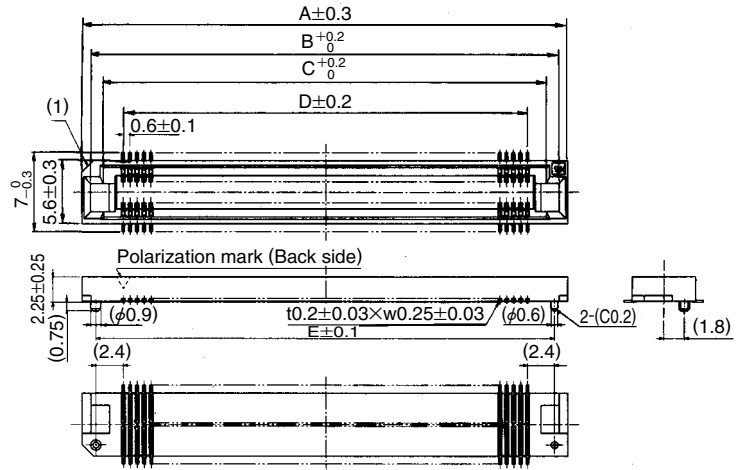
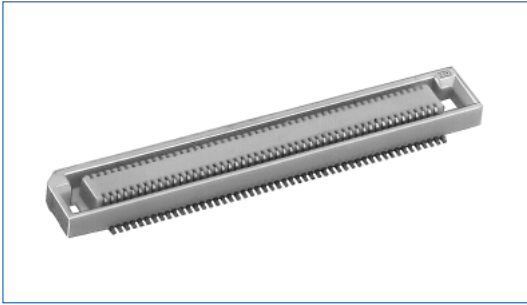
Note 1 : Please place orders in full magazine/tube quantities.

Note 2 : The embossed tape packaged parts are available for all pin counts, except the 140 pin count. Reels are sold containing 1,000 pcs/reel. Please refer to the delivery form on page 15 for details.

Note 3 : Please note that tray packaged parts are not suitable for use with automatic mounting processes.

## ■ Receptacle

[FX8-\*\*-S-SV]



Unit : mm

| Part No.**      | HRS No.       | No. of contacts | A     | B     | C     | D     | E     | RoHS |
|-----------------|---------------|-----------------|-------|-------|-------|-------|-------|------|
| FX8-60S-SV(**)  | 578-0201-5 ** | 60              | 24.60 | 23.05 | 20.80 | 17.40 | 22.20 | Yes  |
| FX8-80S-SV(**)  | 578-0203-0 ** | 80              | 30.60 | 29.05 | 26.80 | 23.40 | 28.20 |      |
| FX8-90S-SV(**)  | 578-0204-3 ** | 90              | 33.60 | 32.05 | 29.80 | 26.40 | 31.20 |      |
| FX8-100S-SV(**) | 578-0205-6 ** | 100             | 36.60 | 35.05 | 32.80 | 29.40 | 34.20 |      |
| FX8-120S-SV(**) | 578-0206-9 ** | 120             | 42.60 | 41.05 | 38.80 | 35.40 | 40.20 |      |
| FX8-140S-SV(**) | 578-0207-1 ** | 140             | 48.60 | 47.05 | 44.80 | 41.40 | 46.20 |      |

\*\* None : Tray packaging, 21 : Tube packaging, 22 : Embossed tape packaging

Note 1 : Please place orders in full magazine/tube quantities.

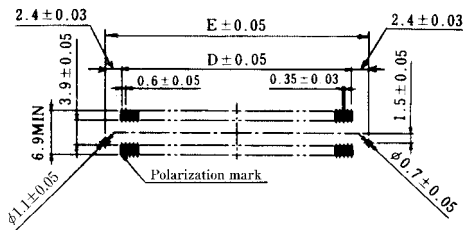
Note 2 : Reels are sold containing 1,000 pcs/reel. Please refer to the delivery form on page 6 for details.

Note 3 : Please note that tray packaged parts are not suitable for use with automatic mounting processes.

## ◆ PCB Mounting Pattern

### Header

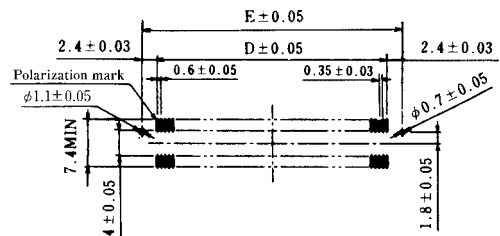
[FX8-\*\*-P-SV]  
[FX8-\*\*-P-SV1]



• Recommended metal mask thickness : t = 0.15mm

### Receptacle

[FX8-\*\*-S-SV]



- Recommended metal mask thickness : t = 0.15mm
- If the inside (the connector mounting lower side) of the SMT portion is not treated with the insulation tape and so on, the area is specified as a pattern prohibited area.

## ◆ Connector Precautions for use

### 1. Tolerance Clearance on the Mating Side

The effective contact length of the product is set to 0.7mm. Please make sure there is less than 0.2mm clearance between the header and receptacle during mating.

### 2. Support between the PCBs

Please be sure to fix the boards to each other with screws or other means of support. Do not use only the mated connector to support the boards.

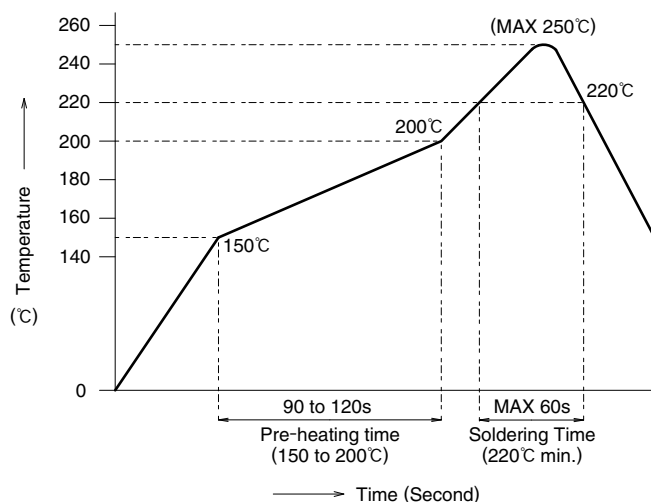
### 3. Stacking Height Tolerance for Mating

|           |   |
|-----------|---|
| Stack 3mm | 3 $\begin{smallmatrix} +0.3 \\ -0.2 \end{smallmatrix}$ mm |
| Stack 4mm | 4 $\begin{smallmatrix} +0.3 \\ -0.2 \end{smallmatrix}$ mm |

Note : Please Note that the above stacking tolerance doesn't include the solder paste thickness.

### 4. Multiple mounting on same PCB is not recommended in principle

### 5. Mounting Temperature Profile (Reference)



#### HRS test conditions

Test board Glass epoxy 161mm×100mm×1.6mm thick  
 Solder method : Reflow  
 Solder composition : Paste, 96.5%Sn/3%Ag/0.5%Cu  
 Metal mask : 0.15mm thick  
 Reflow cycles : 2 cycles

The temperature profile is based on the above conditions.

In individual applications the actual temperature may vary, depending on solder paste type, volume/thickness and board size/thickness. Consult your solder paste and equipment manufacturer for specific recommendations.

## ◆ Packaging Type

| Packaging Type          | No. of contacts        | 60 contacts   | 80 contacts | 90 contacts | 100 contacts | 120 contacts | 140 contacts |
|-------------------------|------------------------|---|-------------|-------------|--------------|--------------|--------------|
| Tube packaging          | Pieces per tube        | 21 pcs  | 17 pcs      | 15 pcs      | 14 pcs       | 12 pcs       | 10 pcs       |
|                         | Sales unit             | Per tube. Please place orders in full magazine/tube quantities. |             |             |              |              |              |
|                         | Tube Total Length      | 550mm±2mm   |             |             |              |              |              |
| Embossed Tape Packaging | Tape Width             | 44mm  | 44mm        | 44mm        | 56mm         | 56mm         | 72mm         |
|                         | Product Pitch          | 12mm  |             |             |              |              |              |
|                         | Embossed Reel diameter | Refer to the table on catalog page 6.                           |             |             |              |              |              |
|                         | Pieces per reel        | 1000 pcs/reel   |             |             |              |              |              |
|                         | Sales unit             | Per reel  |             |             |              |              |              |

\*\* The chart above applies only to individual connectors.  
Dual connected products are packaged and shipped in trays only.

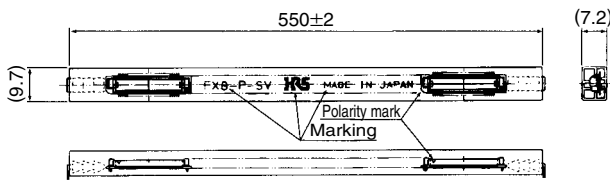
## ◆ Packaging Specification

### [Tube packaging]

#### ● Header

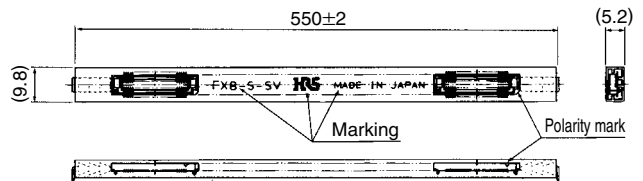
[FX8-\*\*-P-SV (91)]

[FX8-\*\*-P-SV1 (91)]



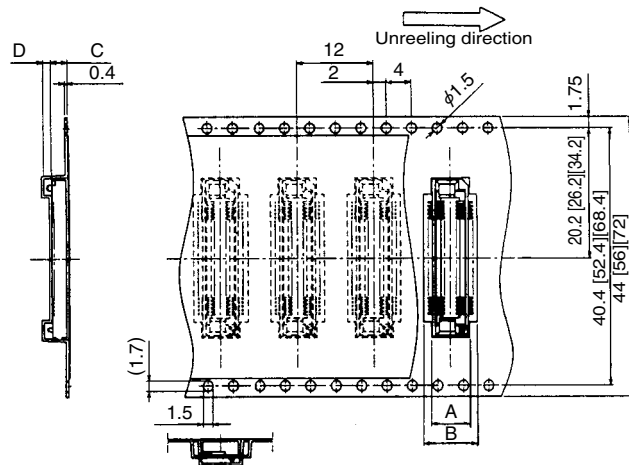
#### ● Receptacle

[FX8-\*\*-S-SV (21)]

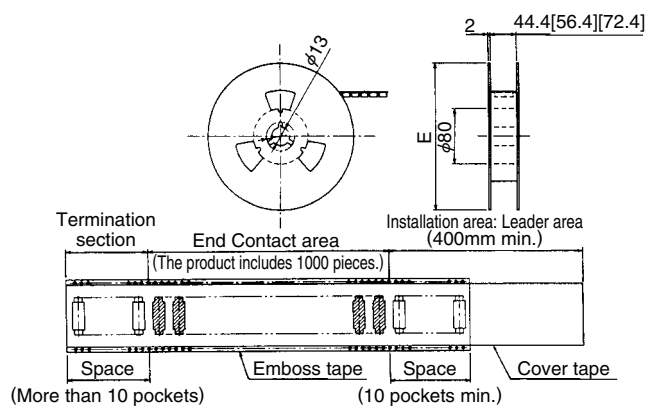


### [Embossed Tape Package]

#### ● Embossed Carrier Tape Dimensions



#### ● Reel Dimensions (FREE)



\*The figure above shows the receptacle in its pocket.

| P/S        | Part No.          | A   | B   | C   | D  | E        |
|------------|-------------------|-----|-----|-----|----|----------|
| Header     | FX8-**-P-SV (92)  | 5.5 | 7.9 | 3.2 | 12 | φ 330    |
|            | FX8-**-P-SV1 (92) |     |     | 4.2 |    | (Note 1) |
| Receptacle | FX8-**-S-SV (22)  | 6.0 | 8.4 | 2.6 |    | φ 330    |

\*\* : No. of contacts

Note 1 : φ 330 are for 60, 80 and 90 contacts.

φ 360 are for 100, 120 and 140 contacts.

FX8C Series

Product Specifications

|         |                         |   |   |
|---------|-------------------------|---|---|
| Ratings | Rated current : 0.4A    | Operation temperature range : -55 to +85°C (Note 1)<br>Operation humidity range : 40 to 80% | Storage temperature range : -10 to +60°C (Note 2) |
|         | Rated voltage : AC 100V |   | Storage humidity range : 40 to 70% (Note 2)       |

| Items                        | Specifications  | Conditions   |
|------------------------------|---|--|
| 1. Insulation resistance     | Min of 100MΩ  | Measured at 250 V DC   |
| 2. Withstand voltage         | No flashover or dielectric breakdown.   | 300V AC for 1 minute   |
| 3. Contact resistance        | Max of 80MΩ   | Measured at 100 mA   |
| 4. Vibration proof           | No electrical discontinuity lasting for a min of 1μs.                           | 10 to 55Hz, half amplitude : 0.75mm, 3 axis directions, 10 cycles each.  |
| 5. Moisture resistance       | Contact resistance : a max of 100mΩ ;<br>Insulation resistance : a min of 100MΩ | Left for 96 hours at the temperature of 40 ±2°C and the humidity of 90 to 95%  |
| 6. Temperature cycle         | Contact resistance : a max of 100mΩ ;<br>Insulation resistance : a min of 100Ω  | (-55°C for 30 minutes → 15 to 35°C for 2 to 3 minutes → 85°C for 30 minutes → 15 to 35°C for 2 to 3 minutes) in 5 cycles |
| 7. Mating cycles             | Contact resistance : a max of 100mΩ   | 50 times   |
| 8. Soldering heat resistance | No dissolution of the resin affecting performance.                              | Reflow : With recommended temperature profile, at the soldering iron temperature of 350°C for 5 seconds                  |

Note 1 : Includes the temperature rise caused by current flow.

Note 2 : Storage as described here represents the long-term-storage status of unused items before they are mounted on PCB.  
Operation humidity range applies to the unpowered status after the items are mounted on PCB.

Note 3 : The contact resistance noted above is measured using a connector combination with a 16mm stack height.

Material / Finish

| Part name          | Material        | Treatment    |                           | Remarks |
|--------------------|-----------------|--------------|---------------------------|---------|
| Insulator          | PPS resin       | Light brown  |                           | UL94V-0 |
| Header contact     | Phosphor bronze | Contact area | Gold plating              | _____   |
|                    |                 | Lead area    | Pure tin plating (Note 2) |         |
| Receptacle contact |                 | Contact area | Gold plating              | _____   |
|                    |                 | Lead area    | Pure tin plating (Note 2) |         |

Note 1 : Black dots or other color irregularities may occur in the insulator resin. In addition, the color may change if exposed to sunlight or florescent light. But this does not affect the quality or performance.

Note 2 : FX8C-*\*P-SV* (\*) and FX8C-*\*S-SV* are gold 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.

Single Product

**FX8C - 120 P - SV 1 (91)**

①
②
③
④
⑤
⑥

|   |  |
|---|--|
| ① Series name : FX8C                            | ⑤ Variable product height : None : Standard (Minimum height product)<br>1 : +1mm 6 : +6mm  |
| ② No. of contacts : 60, 80, 100, 120, 140       | ⑥ Packaged state<br>(71) : Tray packaging<br>(68), (91) : Magazine/tube packaging<br>(92) : Embosses tape packaging<br>(93) : Vacuum tape, embosses tape packaging |
| ③ Connector type : P : Header<br>S : Receptacle |  |
| ④ Contact form : SV : Vertical PCB type         |  |

Two-connected products

**FX8C - 120/120 P 11 - SV 1 J**

①
②
③
④
⑤
⑥
⑦

|   |   |
|---|---|
| ① Series name : FX8C  | ④ Pitch between dual connected products   |
| ② No. of contacts : 60×2, 80×2, 100×2, 120×2, 140×2<br>Example : 120/120=240 contacts | ⑤ Contact form : SV : Vertical PCB type   |
|   | ⑥ Variable product height : None : Standard (Minimum height product)<br>1 : +1mm 6 : +6mm |
| ③ Connector type : P : Header<br>S : Receptacle                                       | ⑦ J : Dual connected product  |
|   |   |

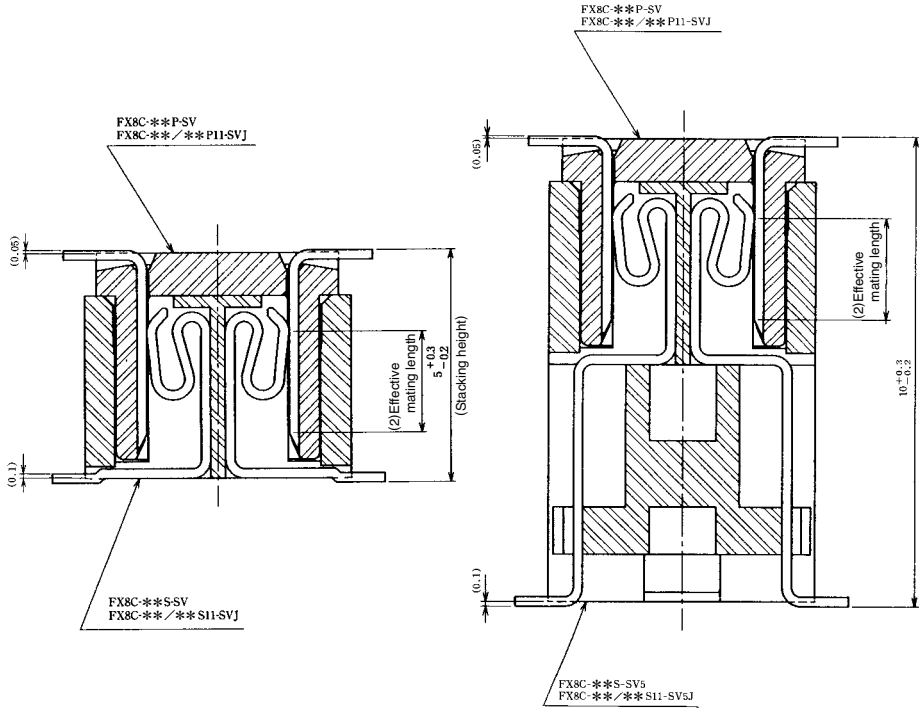
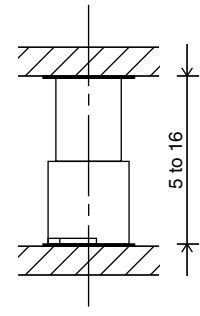
\*Dual connected products are packed in trays as the standard delivery method.

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## ◆ Stacking Height Variations

| Header \ Receptacle                 | FX8C-**-S-SV<br>FX8C-**-**S11-SVJ | FX8C-**-S-SV5<br>FX8C-**-**S11-SV5J |
|-------------------------------------|-----------------------------------|-------------------------------------|
| FX8C-**-P-SV<br>FX8C-**-**P11-SVJ   | 5mm                               | 10mm                                |
| FX8C-**-P-SV1<br>FX8C-**-**P11-SV1J | 6mm                               | 11mm                                |
| FX8C-**-P-SV2<br>FX8C-**-**P11-SV2J | 7mm                               | 12mm                                |
| FX8C-**-P-SV4<br>FX8C-**-**P11-SV4J | 9mm                               | 14mm                                |
| FX8C-**-P-SV6<br>FX8C-**-**P11-SV6J | 11mm                              | 16mm                                |

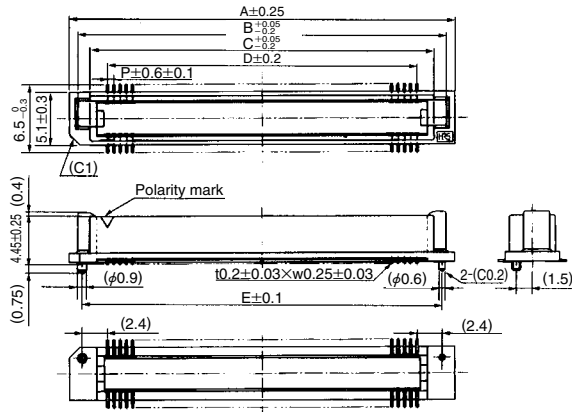
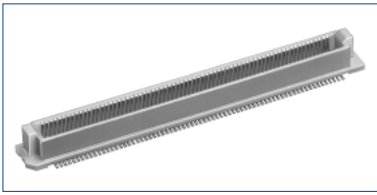


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Header (Single Product)

[FX8C-\*\*P-SV]



Unit : mm

| Part No.         | HRS No.       | No. of contacts | A     | B     | C     | D     | E     | RoHS |
|------------------|---------------|-----------------|-------|-------|-------|-------|-------|------|
| FX8C-60P-SV(**)  | 578-0501-9 ** | 60              | 24.60 | 23.00 | 20.70 | 17.40 | 22.20 | Yes  |
| FX8C-80P-SV(**)  | 578-0503-4 ** | 80              | 30.60 | 29.00 | 26.70 | 23.40 | 28.20 |      |
| FX8C-100P-SV(**) | 578-0505-0 ** | 100             | 36.60 | 35.00 | 32.70 | 29.40 | 34.20 |      |
| FX8C-120P-SV(**) | 578-0506-2 ** | 120             | 42.60 | 41.00 | 38.70 | 35.40 | 40.20 |      |
| FX8C-140P-SV(**) | 578-0507-5 ** | 140             | 48.60 | 47.00 | 44.70 | 41.40 | 46.20 |      |

Note 1 : Embossed tape packaging product are sold in full reel quantities. For details, see the item showing delivery forms in Page 16.

Note 2 : Please place orders in full magazine/tube quantities.

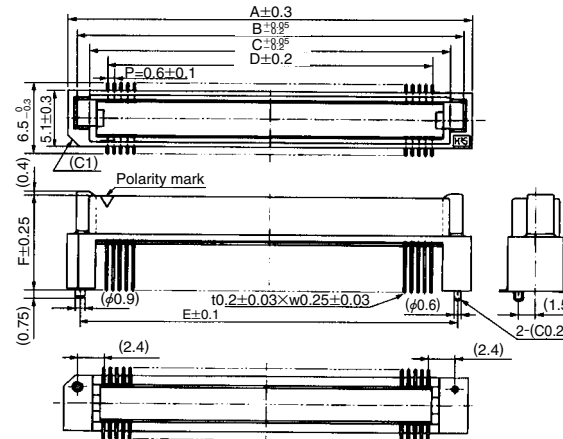
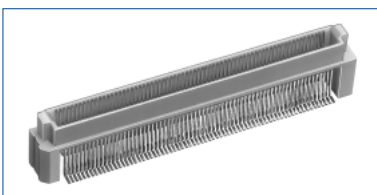
Note 3 : Please note that tray packaged parts are not suitable for use with automatic mounting processes.

[FX8C-\*\*P-SV1]

[FX8C-\*\*P-SV2]

[FX8C-\*\*P-SV4]

[FX8C-\*\*P-SV6]



Unit : mm

| Part No.          | HRS No.       | No. of contacts | A     | B     | C     | D     | E     | F     | RoHS |
|-------------------|---------------|-----------------|-------|-------|-------|-------|-------|-------|------|
| FX8C-60P-SV1(**)  | 578-0521-6 ** | 60              | 24.60 | 23.00 | 20.70 | 17.40 | 22.20 | 5.45  | Yes  |
| FX8C-60P-SV2(**)  | 578-0541-3 ** |                 |       |       |       |       |       | 6.45  |      |
| FX8C-60P-SV4(**)  | 578-0581-8 ** |                 |       |       |       |       |       | 8.45  |      |
| FX8C-60P-SV6(**)  | 578-0601-3 ** |                 |       |       |       |       |       | 10.45 |      |
| FX8C-80P-SV1(**)  | 578-0523-1 ** | 80              | 30.60 | 29.00 | 26.70 | 23.40 | 28.20 | 5.45  |      |
| FX8C-80P-SV2(**)  | 578-0543-9 ** |                 |       |       |       |       |       | 6.45  |      |
| FX8C-80P-SV4(**)  | 578-0583-3 ** |                 |       |       |       |       |       | 8.45  |      |
| FX8C-80P-SV6(**)  | 578-0603-9 ** |                 |       |       |       |       |       | 10.45 |      |
| FX8C-100P-SV1(**) | 578-0525-7 ** | 100             | 36.60 | 35.00 | 32.70 | 29.40 | 34.20 | 5.45  |      |
| FX8C-100P-SV2(**) | 578-0545-4 ** |                 |       |       |       |       |       | 6.45  |      |
| FX8C-100P-SV4(**) | 578-0585-9 ** |                 |       |       |       |       |       | 8.45  |      |
| FX8C-100P-SV6(**) | 578-0605-4 ** |                 |       |       |       |       |       | 10.45 |      |
| FX8C-120P-SV1(**) | 578-0526-0 ** | 120             | 42.60 | 41.00 | 38.70 | 35.40 | 40.20 | 5.45  |      |
| FX8C-120P-SV2(**) | 578-0546-7 ** |                 |       |       |       |       |       | 6.45  |      |
| FX8C-120P-SV4(**) | 578-0586-1 ** |                 |       |       |       |       |       | 8.45  |      |
| FX8C-120P-SV6(**) | 578-0606-7 ** |                 |       |       |       |       |       | 10.45 |      |
| FX8C-140P-SV1(**) | 578-0527-2 ** | 140             | 48.60 | 47.00 | 44.70 | 41.40 | 46.20 | 5.45  |      |
| FX8C-140P-SV2(**) | 578-0547-0 ** |                 |       |       |       |       |       | 6.45  |      |
| FX8C-140P-SV4(**) | 578-0587-4 ** |                 |       |       |       |       |       | 8.45  |      |
| FX8C-140P-SV6(**) | 578-0607-0 ** |                 |       |       |       |       |       | 10.45 |      |

Note 1 : Embossed tape packaging product are sold in full reel quantities. For details, see the item showing delivery forms in Page 16.

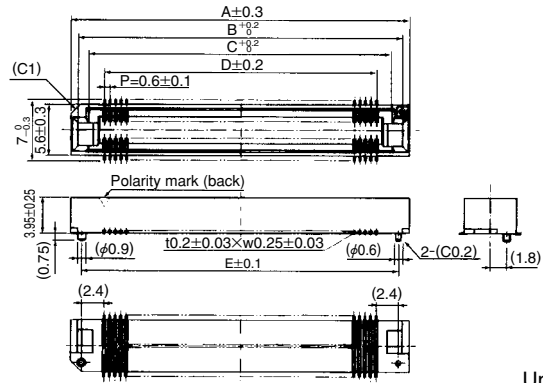
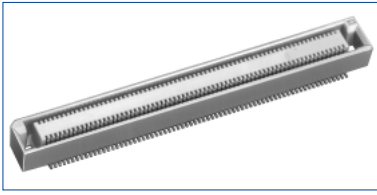
Note 2 : Please place orders in full magazine/tube quantities.

Note 3 : For FX8C-\*\*P-SV6 connectors, there is a spacer attached between the leads. Please request the specific drawing for clarification.

Note 4 : Please note that tray packaged parts are not suitable for use with automatic mounting processes.

## ■ Receptacle (Single Product)

### [FX8C-\*\*-S-SV]



Unit : mm

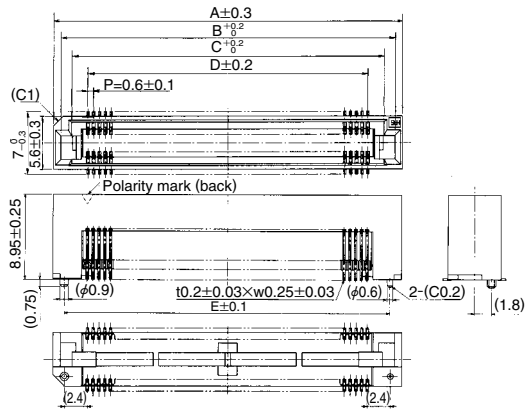
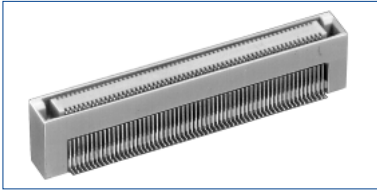
| Part No.         | HRS No.       | No. of contacts | A     | B     | C     | D     | E     | RoHS |
|------------------|---------------|-----------------|-------|-------|-------|-------|-------|------|
| FX8C-60S-SV(**)  | 578-0801-2 ** | 60              | 24.60 | 23.05 | 20.80 | 17.40 | 22.20 | Yes  |
| FX8C-80S-SV(**)  | 578-0803-8 ** | 80              | 30.60 | 29.05 | 26.80 | 23.40 | 28.20 |      |
| FX8C-100S-SV(**) | 578-0805-3 ** | 100             | 36.60 | 35.05 | 32.80 | 29.40 | 34.20 |      |
| FX8C-120S-SV(**) | 578-0806-6 ** | 120             | 42.60 | 41.05 | 38.80 | 35.40 | 40.20 |      |
| FX8C-140S-SV(**) | 578-0807-9 ** | 140             | 48.60 | 47.05 | 44.80 | 41.40 | 46.20 |      |

Note 1 : Embossed tape packaging product are sold in full reel quantities. For details, see the item showing delivery forms in Page 16.

Note 2 : Please place orders in full magazine/tube quantities.

Note 3 : Please note that tray packaged parts are not suitable for use with automatic mounting processes.

### [FX8C-\*\*-S-SV5]



Unit : mm

| Part No.          | HRS No.       | No. of contacts | A    | B     | C    | D    | E    | RoHS |
|-------------------|---------------|-----------------|------|-------|------|------|------|------|
| FX8C-60S-SV5(**)  | 578-0821-0 ** | 60              | 24.6 | 23.05 | 20.8 | 17.4 | 22.2 | Yes  |
| FX8C-80S-SV5(**)  | 578-0823-5 ** | 80              | 30.6 | 29.05 | 26.8 | 23.4 | 28.2 |      |
| FX8C-100S-SV5(**) | 578-0825-0 ** | 100             | 36.6 | 35.05 | 32.8 | 29.4 | 34.2 |      |
| FX8C-120S-SV5(**) | 578-0826-3 ** | 120             | 42.6 | 41.05 | 38.8 | 35.4 | 40.2 |      |
| FX8C-140S-SV5(**) | 578-0827-6 ** | 140             | 48.6 | 47.05 | 44.8 | 41.4 | 46.2 |      |

Note 1 : Embossed tape packaging product are sold in full reel quantities.

For details, see the item showing delivery forms in Page 16.

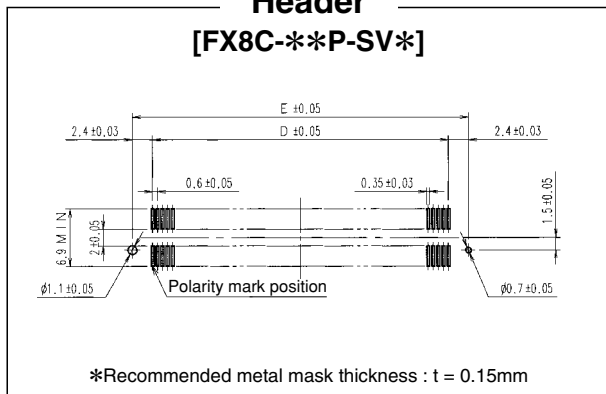
Note 2 : Please place orders in full magazine/tube quantities.

Note 3 : Please note that tray packaged parts are not suitable for use with automatic mounting processes.

## ◆ Recommended PCB layout and metal mask dimensions for single connector (mounting side)

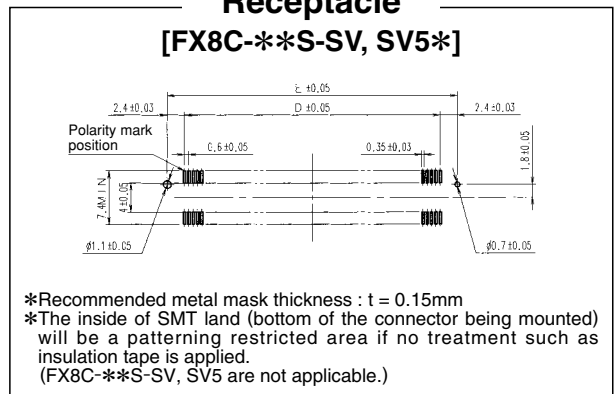
### Header

#### [FX8C-\*\*-P-SV\*]



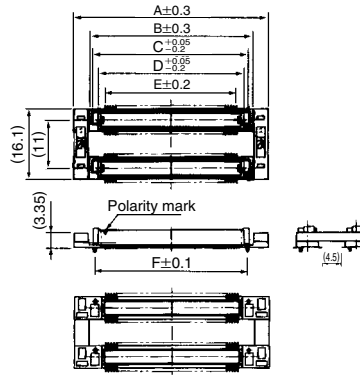
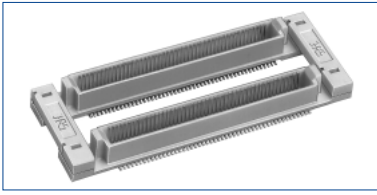
### Receptacle

#### [FX8C-\*\*-S-SV, SV5\*]



**Header (Dual Connected Product)**

**[FX8C-\*/\*/\*\*P11-SVJ]**



Unit : mm

| Part No.                | HRS No.       | No. of contacts | A     | B     | C     | D     | E     | F     | RoHS |
|-------------------------|---------------|-----------------|-------|-------|-------|-------|-------|-------|------|
| FX8C-60/60P11-SVJ(71)   | 578-0651-1 71 | 60×2            | 31.70 | 24.70 | 23.00 | 20.70 | 17.40 | 22.20 | Yes  |
| FX8C-80/80P11-SVJ(71)   | 578-0653-7 71 | 80×2            | 37.70 | 30.70 | 29.00 | 26.70 | 23.40 | 28.20 |      |
| FX8C-100/100P11-SVJ(71) | 578-0655-2 71 | 100×2           | 43.70 | 36.70 | 35.00 | 32.70 | 29.40 | 34.20 |      |
| FX8C-120/120P11-SVJ(71) | 578-0656-5 71 | 120×2           | 49.70 | 42.70 | 41.00 | 38.70 | 35.40 | 40.20 |      |
| FX8C-140/140P11-SVJ(71) | 578-0657-8 71 | 140×2           | 55.70 | 48.70 | 47.00 | 44.70 | 41.40 | 46.20 |      |

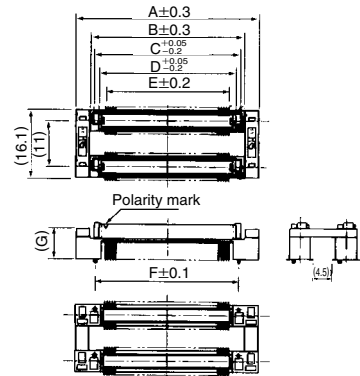
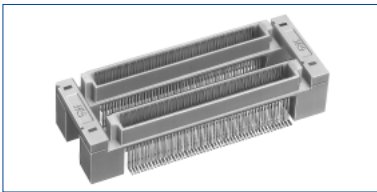
Note : Dual connected products are packaged and shipped in trays. And as such, are not suitable for use with automatic mounting processes.

**[FX8C-\*/\*/\*\*P11-SV1J]**

**[FX8C-\*/\*/\*\*P11-SV2J]**

**[FX8C-\*/\*/\*\*P11-SV4J]**

**[FX8C-\*/\*/\*\*P11-SV6J]**



Unit : mm

| Part No.                 | HRS No.       | No. of contacts | A     | B     | C     | D     | E     | F     | G    | H     | RoHS |
|--------------------------|---------------|-----------------|-------|-------|-------|-------|-------|-------|------|-------|------|
| FX8C-60/60P11-SV1J(71)   | 578-0671-9 71 | 60×2            | 31.70 | 24.70 | 23.00 | 20.70 | 17.40 | 22.20 | 4.35 | 5.45  | Yes  |
| FX8C-60/60P11-SV2J(71)   | 578-0691-6 71 |                 |       |       |       |       |       |       | 5.35 | 6.45  |      |
| FX8C-60/60P11-SV4J(71)   | 578-0731-9 71 |                 |       |       |       |       |       |       | 7.35 | 8.45  |      |
| FX8C-60/60P11-SV6J(71)   | 578-0751-6 71 |                 |       |       |       |       |       |       | 9.35 | 10.45 |      |
| FX8C-80/80P11-SV1J(71)   | 578-0673-4 71 | 80×2            | 37.70 | 30.70 | 29.00 | 26.70 | 23.40 | 28.20 | 4.35 | 5.45  |      |
| FX8C-80/80P11-SV2J(71)   | 578-0693-1 71 |                 |       |       |       |       |       |       | 5.35 | 6.45  |      |
| FX8C-80/80P11-SV4J(71)   | 578-0733-4 71 |                 |       |       |       |       |       |       | 7.35 | 8.45  |      |
| FX8C-80/80P11-SV6J(71)   | 578-0753-1 71 |                 |       |       |       |       |       |       | 9.35 | 10.45 |      |
| FX8C-100/100P11-SV1J(71) | 578-0675-0 71 | 100×2           | 43.70 | 36.70 | 35.00 | 32.70 | 29.40 | 34.20 | 4.35 | 5.45  |      |
| FX8C-100/100P11-SV2J(71) | 578-0695-7 71 |                 |       |       |       |       |       |       | 5.35 | 6.45  |      |
| FX8C-100/100P11-SV4J(71) | 578-0735-0 71 |                 |       |       |       |       |       |       | 7.35 | 8.45  |      |
| FX8C-100/100P11-SV6J(71) | 578-0755-7 71 |                 |       |       |       |       |       |       | 9.35 | 10.45 |      |
| FX8C-120/120P11-SV1J(71) | 578-0676-2 71 | 120×2           | 49.70 | 42.70 | 41.00 | 38.70 | 35.40 | 40.20 | 4.35 | 5.45  |      |
| FX8C-120/120P11-SV2J(71) | 578-0696-0 71 |                 |       |       |       |       |       |       | 5.35 | 6.45  |      |
| FX8C-120/120P11-SV4J(71) | 578-0736-2 71 |                 |       |       |       |       |       |       | 7.35 | 8.45  |      |
| FX8C-120/120P11-SV6J(71) | 578-0756-0 71 |                 |       |       |       |       |       |       | 9.35 | 10.45 |      |
| FX8C-140/140P11-SV1J(71) | 578-0677-5 71 | 140×2           | 55.70 | 48.70 | 47.00 | 44.70 | 41.40 | 46.20 | 4.35 | 5.45  |      |
| FX8C-140/140P11-SV2J(71) | 578-0697-2 71 |                 |       |       |       |       |       |       | 5.35 | 6.45  |      |
| FX8C-140/140P11-SV4J(71) | 578-0737-5 71 |                 |       |       |       |       |       |       | 7.35 | 8.45  |      |
| FX8C-140/140P11-SV6J(71) | 578-0757-2 71 |                 |       |       |       |       |       |       | 9.35 | 10.45 |      |

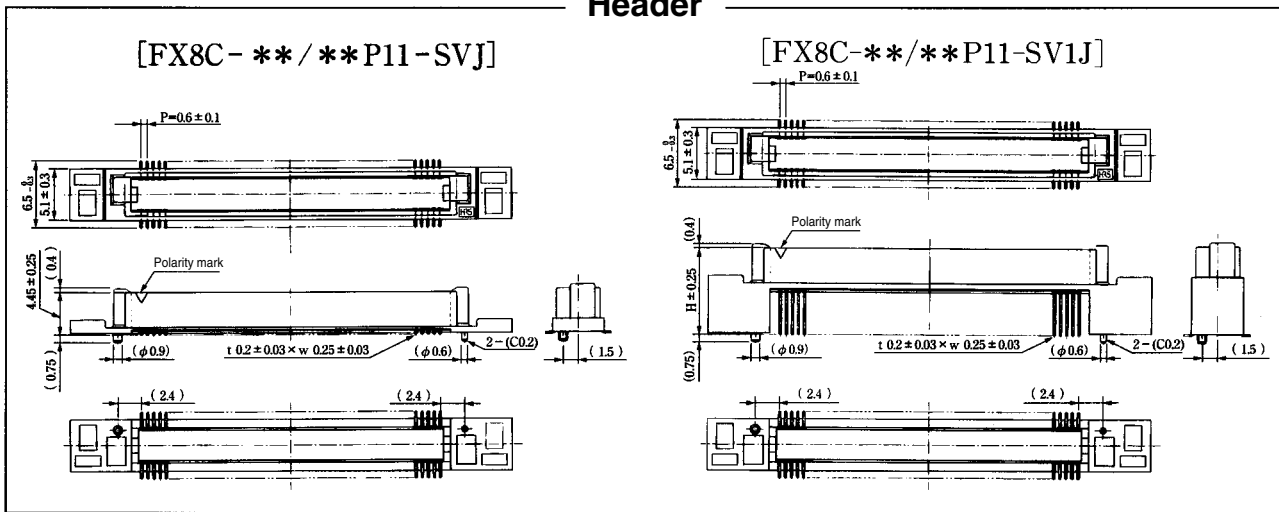
Note 1 : Dual connected products are packaged and shipped in trays. And as such, are not suitable for use with automatic mounting processes.

Note 2 : For FX8C-\*/\*/\*\*P11-SV6J connectors, there is a spacer attached between the leads. Please request the specific drawing for clarification.

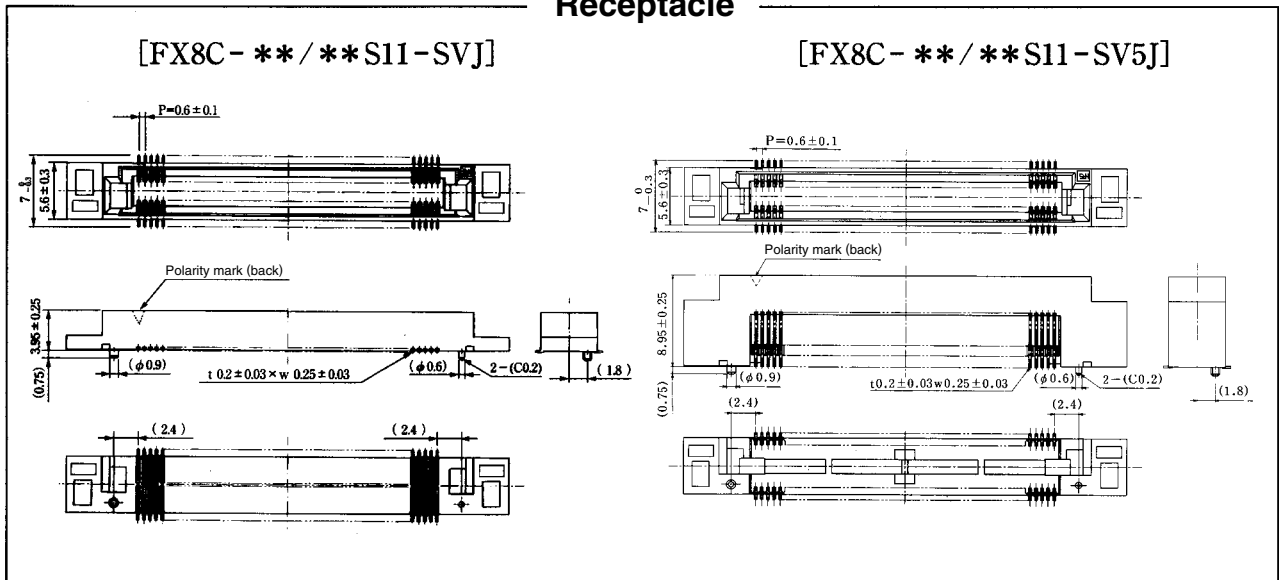


◆ Detailed drawing on dual connected products after the spacers are removed (individual connector from dual connected product)

Header



Receptacle



## ◆ How to Use the Connector

### 1. Permissible gap between mating surfaces

The effective mating length of this product is 2.0mm. Please make sure that the gap between the header and receptacle when mated will be 1.2mm or less.

### 2. Fixation between mounted PCBs

If the connector is secured to the board with only other connectors, please make sure that no vibrations or impact will occur.

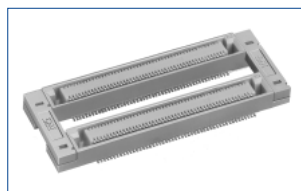
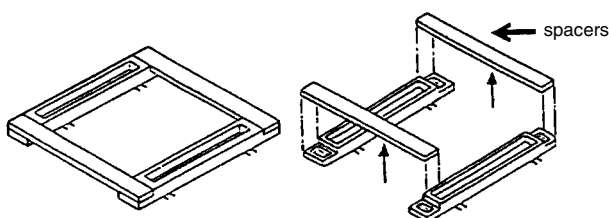
### 3. Tolerances in stacking height when mated

Stack    Amm     $\longrightarrow$     A  $\begin{matrix} +0.3 \\ -0.2 \end{matrix}$  mm

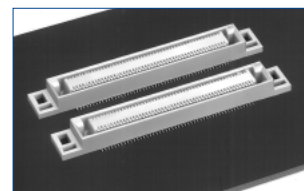
Note: Please note that the thickness of solder cream is not taken into account for the above tolerances in stacking height.

### 4. Using dual connected products

Dual connected products are fixed with spacers on both longitudinal sides. However, the products cannot be mated in that state. Please make sure to remove the spacers before mating. (Please do not remove the spacers before mounting on PCB.)



Before removing the joint bar

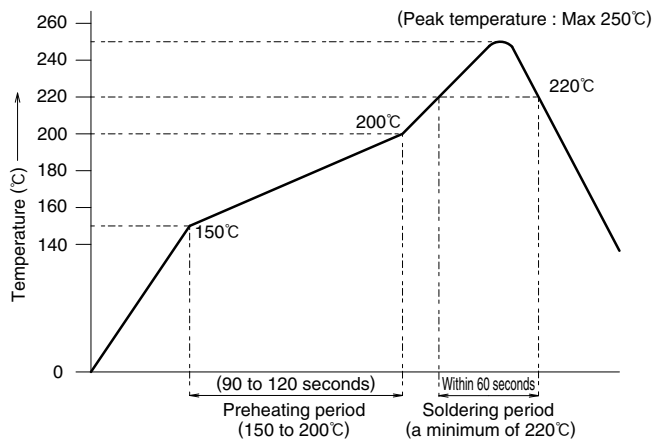


After removing the joint bar

Note : Please use dual-connected products for multiple mounting.

However, multiple mounting of dual-connected products are not recommended.

### 5. Temperature profile for mounting (reference)



#### <Applicable conditions>

|                                   |   |
|-----------------------------------|---|
| Reflow method                     | Reflow with infrared light and heat (SENSBEY NR-II)   |
| Environment in the reflow furnace | Ambient air   |
| Solder                            | Cream type (Sn-3Ag-0.5Cu)<br>(Flux contained amount : 11 Wt%)<br>(M705-221CM5-42-10.5<br>manufactured by Senju Metal<br>Industry Co., Ltd.) |
| PCB                               | Size 161 × 100 × 1.6mm<br>Material : Glass epoxy  |
| Metal mask thickness              | Thickness : 0.15mm  |

Note 1 : This temperature profile shows recommended values. Temperature should be measured on the top of the connector.

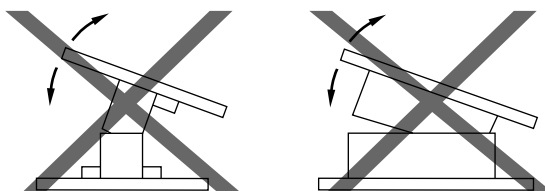
Note 2 : The reflow process should be limited to two times.

Note 3 : Results may differ depending on the type and manufacturer of solder cream, PCB size, mounting materials and other conditions. Please be sure to confirm the mounting conditions before use.

### 6. Usage Recommendations

This product has been thin-formed for minimization.

Care should be taken that excessive prying mating/unmating could cause damage and contact failure.





### ◆ Form of Delivery

| Packaging style         | No. of contacts         | 60 contacts  | 80 contacts | 100 contacts | 120 contacts | 140 contacts |
|-------------------------|-------------------------|--|-------------|--------------|--------------|--------------|
| Magazine packaging      | Product quantity        | 21 pieces  | 17 pieces   | 14 pieces    | 12 pieces    | 10 pieces    |
|                         | Sales unit              | Please place orders in full magazine/tube quantities.              |             |              |              |              |
|                         | Overall magazine length | 550mm ± 2mm  |             |              |              |              |
| Embossed tape packaging | Tape width (JIS)        | 44   |             | 56           |              | 72           |
|                         | Product pitch           | (12mm)   |             |              |              |              |
|                         | Embossed reel diameter  | Please see the table shown in Page 16 of this catalog.             |             |              |              |              |
|                         | Product quantity        | Please see the table shown in Page 16 of this catalog.             |             |              |              |              |
|                         | Sales unit              | Full reels. Please see the table shown in page 16 of this catalog. |             |              |              |              |

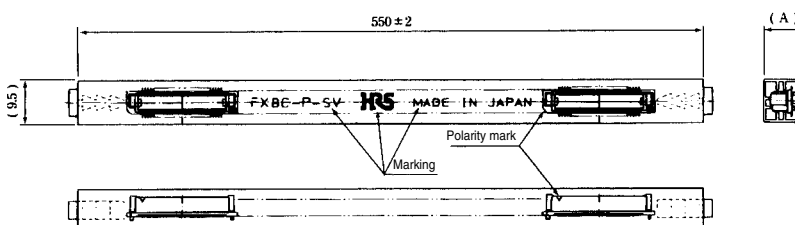
\*\*The chart above applies only to individual connectors.  
Dual connected products will be packaged and delivered in trays.

### ◆ Packaging Specification

#### [Magazine Packaging]

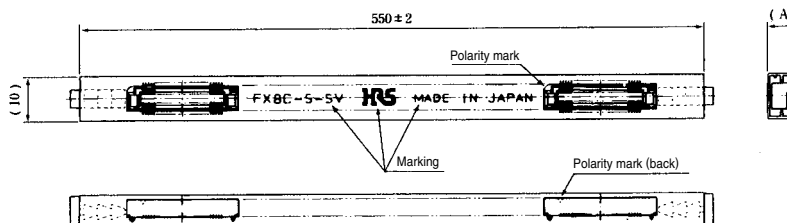
##### ● Header

- [FX8C-\*\*\*P-SV(91)]
- [FX8C-\*\*\*P-SV1(91)]
- [FX8C-\*\*\*P-SV2(91)]
- [FX8C-\*\*\*P-SV4(91)]
- [FX8C-\*\*\*P-SV6(91)]



##### ● Receptacle

- [FX8C-\*\*\*S-SV(68)]
- [FX8C-\*\*\*S-SV5(91)]

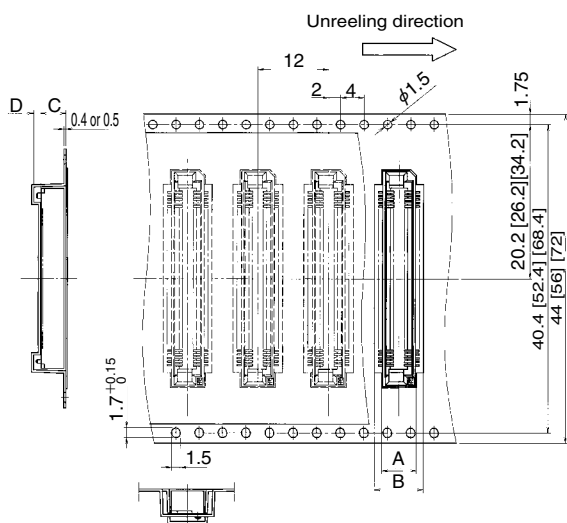


| P/S        | Part No.          | A    |
|------------|-------------------|------|
| Header     | FX8C-***P-SV(91)  | 9    |
|            | FX8C-***P-SV1(91) | 10   |
|            | FX8C-***P-SV2(91) | 11   |
|            | FX8C-***P-SV4(91) | 13   |
|            | FX8C-***P-SV6(91) | 15   |
| Receptacle | FX8C-***S-SV(68)  | 7.4  |
|            | FX8C-***S-SV5(91) | 12.4 |

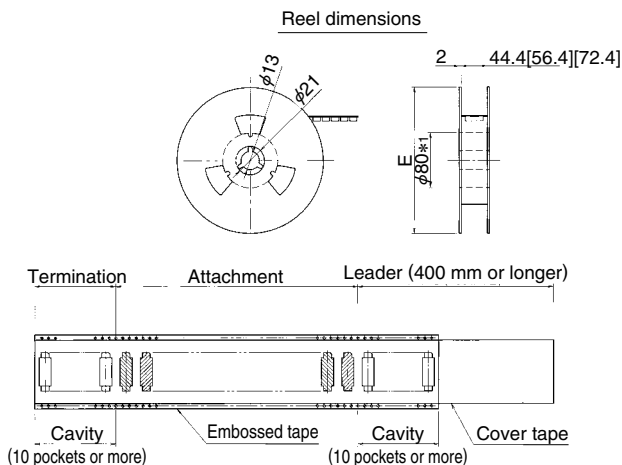


## [Embossed Tape Packaging]

### ●Carrier Dimensions



### ●Reel Dimensions



\*The figure above shows FX8 receptacles packaged on an embossed tape. Dimensions shown in brackets [ ] are those for tape widths of 56mm or 72mm.

\*1 For FX8C-140S-SV(92), E dimension is 370 in diameter and core dimension is 100 in diameter.

\*2 For FX8C-120P-SV2(92), FX8C-120S-SV5(92), and FX8C-140S-SV5(92), E dimension is 380 in diameter.

Note : Some products are not available packaged on an embossed tape. Please be sure to clarify the packaging type before you order.

Unit : mm

| P/S        | Part No.          | A   | B   | C    | D   | E    | Product quantity |
|------------|-------------------|-----|-----|------|-----|------|------------------|
| Header     | FX8C-***P-SV(92)  | 5.5 | 7.9 | 5.2  | 1.2 | φ370 | 1000 pcs/reel    |
|            | FX8C-***P-SV1(92) | 5.5 | 7.9 | 6.2  | 1.2 | φ370 | 1000 pcs/reel    |
|            | FX8C-***P-SV2(92) | 5.5 | 7.9 | 7.2  | 1.2 | φ330 | 500 pcs/reel *2  |
|            | FX8C-***P-SV4(92) | 5.5 | 7.9 | 9.2  | 1.2 | φ370 | 500 pcs/reel     |
|            | FX8C-***P-SV6(92) | 5.5 | 7.9 | 11.2 | 1.2 | φ370 | 500 pcs/reel     |
| Receptacle | FX8C-***S-SV(92)  | 6.0 | 8.4 | 4.3  | 1.2 | φ330 | 1000 pcs/reel *1 |
|            | FX8C-***S-SV5(92) | 6.0 | 8.4 | 9.3  | 1.2 | φ370 | 500 pcs/reel *2  |

\*\* : No. of contacts



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