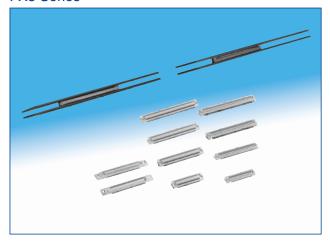
# Function MAX...

# 0.6mm Pitch Stacking Height 3mm to 16mm Connectors

FX8, FX8C Series

#### **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 ±0.6 mm of mis-alignmet and ensures easy mating.

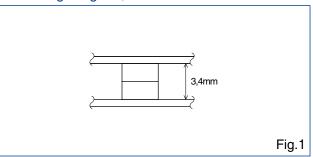
#### 4. Mis-insertion Prevention

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

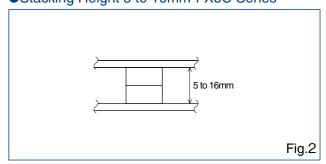
#### 5. Dual Connected Products

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



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



#### **FX8 Series**

# **■**Product Specifications

Dating	Current rating 0.4A	A 0	Operating Temperature Range -55℃ to +85℃ (Note 1)	Storage Temperature Range -10°C to +60°C(Note 2)
nating	Voltage rating 100\	V AC O	Operating Temperature Range -55°C to +85°C (Note 1) Operating Humidity Range -40% to 80%	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 1 $\mu$ s or more	Frequency: 10 to 55 Hz, single amplitude of 0.75 mm,		
4. VIDIALIOII	The electrical discontinuity of 1 $\mu$ s of more	2 hours in each of the 3 axis directions.		
5. Humidity (Steady state)	Contact resistance: 55mΩ max.: Insulation	06 hours at 40°C and humidity of 00°/ to 05°/		
5. Humbully (Steady State)	resistance: 100MΩ min.	96 hours at 40°C and humidity of 90% to 95%		
6. Tamparatura Cyala	Contact resistance: 55mΩ max.: Insulation	(-55°C: 30 minutes, 15 to 35°C: 2 to 3 minutes		
6. Temperature Cycle	resistance: 100MΩ min.	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	No deformation of components affecting	Reflow: At the recommended temperature profile		
heat	performance.	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

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

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

#### Single Product

1 Series Name: FX8

2 No. of contacts :60, 80, 90, 120, 140

3 Connector type

P: Header

S: Receptacle

4 Contact type

SV: Board vertical type

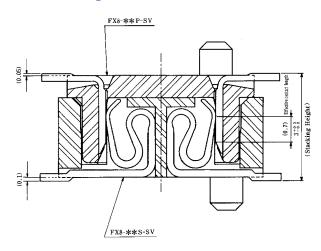
5 Product height variation: none= standard (minimum low profile)

1:+1mm

6 Package Form

None,(71): Tray package product (21),(91): Tube packaging product (22),(92) : Emboss tape package product

# Mating Sectional View

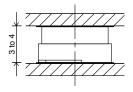


(The above illustration represents the stacking height 3mm type.)

# Stacking Height Variation

#### **●Single Product**

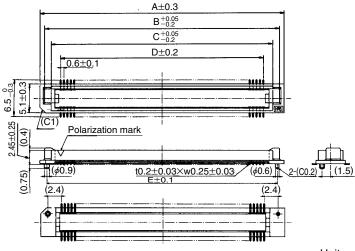
	FX8-**P-SV	FX8-**P-SV1
FX8-**S-SV	3mm	4mm



#### **■**Header

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





Unit: mm

Part No.**	HRS No.	No. of contacts	Α	В	С	D	Е	Tube packaging Quantity (Pieces)	RoHS
FX8-60P-SV(92)	578-0001-6 92	60	24.60	23.00	20.70	17.40	22.20	21	
FX8-80P-SV(92)	578-0003-1 92	80	30.60	29.00	26.70	23.40	28.20	17	
FX8-90P-SV(92)	578-0004-4 92	90	33.60	32.00	29.70	26.40	31.20	15	Yes
FX8-100P-SV(92)	578-0005-7 92	100	36.60	35.00	32.70	29.40	34.20	14	res
FX8-120P-SV(92)	578-0006-0 92	120	42.60	41.00	38.70	35.40	40.20	12	
FX8-140P-SV(92)	578-0007-2 92	140	48.60	47.00	44.70	41.40	46.20	10	

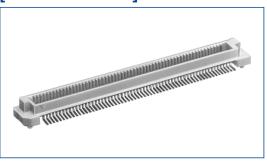
\*\* 71 : Tray packaging, 91: Tube packaging, 92: Embossed tape packaging

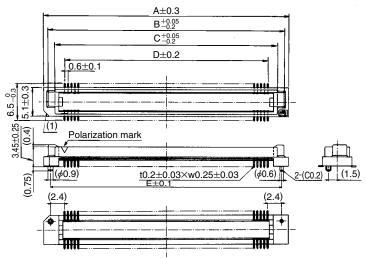
Note 1 : Please place orders in full magazine/tube quantities.

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	Α	В	С	D	Е	Tube packaging Quantity (Pieces)	RoHS
FX8-60P-SV1(92)	578-0041-0 92	60	24.60	23.00	20.70	17.40	22.20	21	
FX8-80P-SV1(92)	578-0043-6 92	80	30.60	29.00	26.70	23.40	28.20	17	
FX8-90P-SV1(92)	578-0044-9 92	90	33.60	32.00	29.70	26.40	31.20	15	Yes
FX8-100P-SV1(92)	578-0045-1 92	100	36.60	35.00	32.70	29.40	34.20	14	res
FX8-120P-SV1(92)	578-0046-4 92	120	42.60	41.00	38.70	35.40	40.20	12	
FX8-140P-SV1(92)	578-0047-7 92	140	48.60	47.00	44.70	41.40	46.20	10	

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

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

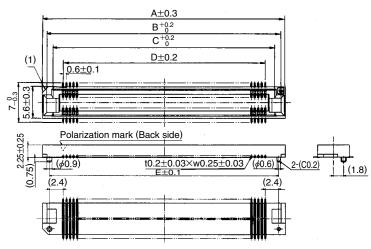
Note 2: The embossed tape packaged parts are available for all pin counts, except the 140 pin count. Reels are sold containing 1,000 pcs/reel. Please refer to the delivery form on page 15 for details.

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	Α	В	С	D	Е	Tube packaging Quantity (Pieces)	RoHS
FX8-60S-SV(22)	578-0201-5 22	60	24.60	23.05	20.80	17.40	22.20	21	
FX8-80S-SV(22)	578-0203-0 22	80	30.60	29.05	26.80	23.40	28.20	17	
FX8-90S-SV(22)	578-0204-3 22	90	33.60	32.05	29.80	26.40	31.20	15	Vaa
FX8-100S-SV(22)	578-0205-6 22	100	36.60	35.05	32.80	29.40	34.20	14	Yes
FX8-120S-SV(22)	578-0206-9 22	120	42.60	41.05	38.80	35.40	40.20	12	
FX8-140S-SV(22)	578-0207-1 22	140	48.60	47.05	44.80	41.40	46.20	10	

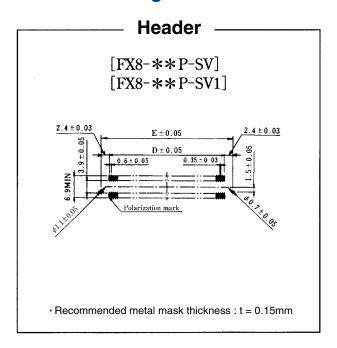
\*\* None: Tray packaging, 21: Tube packaging, 22: Embossed tape packaging

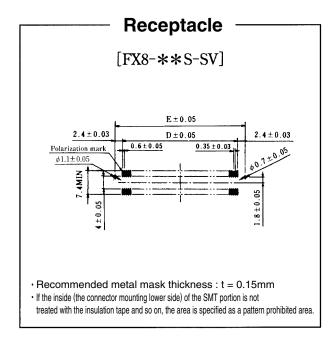
Note 1: Please place orders in full magazine/tube quantities.

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**





#### **♦** 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

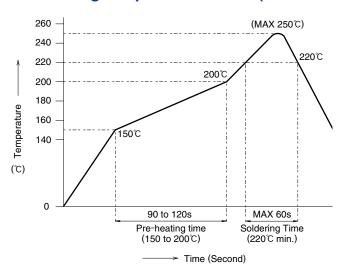
Please be sure to fix the boards to each other with screws or other means of support. Do not use only the mated connector to support the boards.

#### 3. Stacking Height Tolerance for Mating

Stack 3mm	3 <sup>+0.3</sup> mm
Stack 4mm	4 <sup>+0.3</sup> mm

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

#### 4. Mounting Temperature Profile (Reference)



#### **HRS** test conditions

Test boardGlass 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		
	Pieces per tube	21 pcs	17 pcs	15 pcs	14 pcs	12 pcs	10 pcs		
Tube packaging	Sales unit	Per tube. Please place orders in full magazine/tube quantities.							
	Tube Total Length	550mm±2mm							
	Tape Width	44mm	44mm	44mm	56mm	56mm	72mm		
	Product Pitch	12mm							
Embossed Tape Packaging	Embossed Reel diameter	Refer to the table on catalog page 6.							
rackaging	Pieces per reel	1000 pcs/reel							
	Sales unit	Per reel							

<sup>\*\*</sup> The chart above applies only to individual connectors.

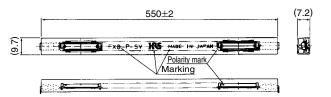
Dual connected products are packaged and shipped in trays only.

# ◆Packaging Specification [Tube packaging]

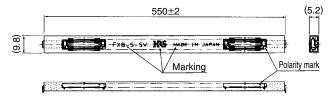
● Header

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

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



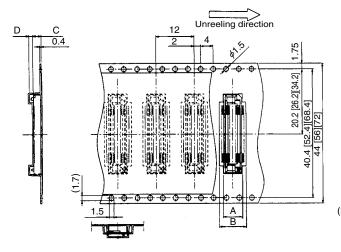
#### Receptacle [FX8-\*\*S-SV (21)]

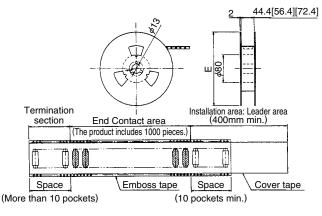


#### [Embossed Tape Package]

**●**Embossed Carrier Tape Dimensions

#### ● Reel Dimensions (FREE)





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

Unit: mm

P/S	Part No.	Α	В	С	D	E
Header	FX8-**P-SV (92)	F F	7.9	3.2		φ 330
	FX8-**P-SV1 (92)	5.5	7.9	4.2	12	(Note 1)
Receptacle	FX8-**S-SV (22)	6.0	8.4	2.6		φ 330

\*\*: No. of contacts

Note 1:  $\phi$  330 are for 60, 80 and 90 contacts.  $\phi$  360 are for 100, 120 and 140 contacts.

#### **FX8C Series**

# **■**Product Specifications

Datingo	Rated current: 0.4 A	Operation temperature range: -55 to +85°C (Note 1) Operation humidity range: 40 to 80%	Storage temperature range: -10 to 60°C (Note 2)
Hallings	Rated voltage: AC 100 V	Operation humidity range: 40 to 80%	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.	300 V AC for one minute
3. Contact resistance	Max of 80MΩ	Measured at 100 mA
4. Vibration proof	No electrical discontinuity lasting for a min of 1 $\mu$ s.	10 to 55 Hz, half amplitude: 0.75 mm, 3 axis directions, 10 cycles each.
5. Moisture resistance	Contact resistance: a max of 100mΩ; Insulation resistance: a min of 100MΩ	Left for 96 hours at the temperature of 40 $\pm 2^{\circ}$ C and the humidity of 90 to 95%
6. Temperature cycle	Contact resistance: a max of $100m\Omega$ ; Insulation resistance: a min of $100\Omega$	(-55°C for 30 minutes $\rightarrow$ 15 to 35°C for 2 to 3 minutes $\rightarrow$ 85°C for 30 minutes $\rightarrow$ 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	No dissolution of the resin affecting	Reflow: With recommended temperature profile, at
resistance	performance.	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

Part name	Material	Trea	Remarks	
Insulator	PPS resin	Light	UL94V-0	
Hooder contact	loader centeet		Gold plating	
Header contact	Dhaarban bara	Lead area	Pure tin plating (Note 2)	<del></del>
Decented contest	Phosphor bronze		Gold plating	
Receptacle contact		Lead area	Pure tin plating (Note 2)	<del></del>

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

#### **●Single Product**

$$\frac{FX8C}{\bullet} - \frac{120}{2} \frac{P}{\bullet} - \frac{SV}{4} \frac{1}{6} \frac{(91)}{6}$$

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

#### ●Two-connected products

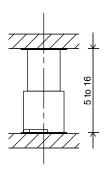
$$\frac{FX8C}{0} - \frac{120/120}{2} = \frac{P}{0} = \frac{11}{0} - \frac{SV}{0} = \frac{1}{0} = \frac{J}{0}$$

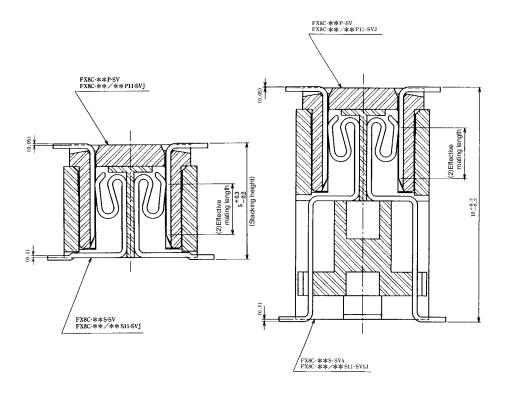
Series name: FX8C	4 Pitch between dual connected products
	5 Contact form: SV: Vertical PCB type
<b>2</b> No. of contacts: 60×2, 80×2, 100×2, 120×2, 140×2 Example : 120/120=240 contacts	6 Variable product height: None: Standard (Minimum height product) 1: +1 mm 6: +6 mm
·	J: Dual connected product
3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

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

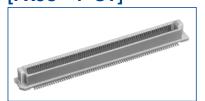
# **●**Stacking Height Variations

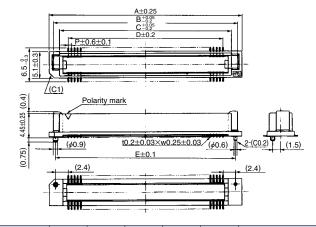
Receptacle	FX8C-**S-SV FX8C-**/**S11-SVJ	FX8C-**S-SV5				
	FX0C-44/44311-3VJ	FX8C-**/**S11-SV5J				
FX8C-**P-SV	5mm	10mm				
FX8C-**/**P11-SVJ	311111	1011111				
FX8C-**P-SV1	6mm	11mm				
FX8C-**/**P11-SV1J	OHIIII	11111111				
FX8C-**P-SV2	7mm	12mm				
FX8C-**/**P11-SV2J	7111111	1211111				
FX8C-**P-SV4	9mm	14mm				
FX8C-**/**P11-SV4J	911111	14111111				
FX8C-**P-SV6	11mm	16mm				
FX8C-**/**P11-SV6J	1 1111111	төнш				





# ■Header (Single Product) [FX8C-\*\*P-SV]





Unit: mm

Part No.	HRS No.	No. of contacts	Α	В	С	D	Е	Magazine packaging quantity (pieces)	RoHS
FX8C-60P-SV(92)	578-0501-9 92	60	24.60	23.00	20.70	17.40	22.20	21	
FX8C-80P-SV(92)	578-0503-4 92	80	30.60	29.00	26.70	23.40	28.20	17	
FX8C-100P-SV(92)	578-0505-0 92	100	36.60	35.00	32.70	29.40	34.20	14	Yes
FX8C-120P-SV(92)	578-0506-2 92	120	42.60	41.00	38.70	35.40	40.20	12	
FX8C-140P-SV(92)	578-0507-5 92	140	48.60	47.00	44.70	41.40	46.20	10	

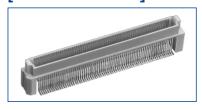
(92): Embossed tape packaging, (91): Magazine packaging, (71): Tray packaging

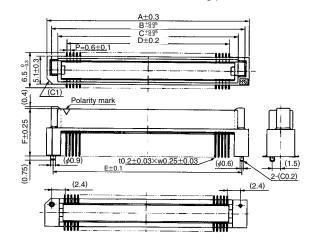
Note 1: Embossed tape packaging product are sold in full reel quantities. For details, see the item showing delivery forms in Page 16.

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	А	В	С	D	Е	F	Magazine packaging quantity (pieces)	RoHS	
FX8C-60P-SV1(92)	578-0521-6 92							5.45			
FX8C-60P-SV2(92)	578-0541-3 92	60	24.60	23.00	20.70	17.40	22.20	6.45	21		
FX8C-60P-SV4(92)	578-0581-8 92	00	24.00	23.00	20.70	17.40	22.20	8.45	21		
FX8C-60P-SV6(92)	578-0601-3 92							10.45			
FX8C-80P-SV1(92)	578-0523-1 92							5.45			
FX8C-80P-SV2(92)	578-0543-9 92	80	30.60	29.00	26.70	23.40	28.20	6.45	17		
FX8C-80P-SV4(92)	578-0583-3 92	80	30.00	29.00	20.70	23.40	20.20	8.45	17		
FX8C-80P-SV6(92)	578-0603-9 92							10.45			
FX8C-100P-SV1(92)	578-0525-7 92							5.45			
FX8C-100P-SV2(92)	578-0545-4 92	100	36.60	35.00	32.70	29.40	34.20	6.45	14	Yes	
FX8C-100P-SV4(92)	578-0585-9 92	100	30.00	33.00	00.00	32.70	25.40	34.20	8.45		163
FX8C-100P-SV6(92)	578-0605-4 92							10.45			
FX8C-120P-SV1(92)	578-0526-0 92							5.45			
FX8C-120P-SV2(92)	578-0546-7 92	120	42.60	41.00	38.70	35.40	40.20	6.45	12		
FX8C-120P-SV4(92)	578-0586-1 92	120	42.00	41.00	30.70	33.40	40.20	8.45	12		
FX8C-120P-SV6(92)	578-0606-7 92							10.45			
FX8C-140P-SV1(92)	578-0527-2 92							5.45			
FX8C-140P-SV2(92)	578-0547-0 92	140	48.60	47.00	44.70	41.40	46.20	6.45	10		
FX8C-140P-SV4(92)	578-0587-4 92	140	40.00	47.00	44.70	41.40	40.20	8.45	10		
FX8C-140P-SV6(93)	578-0607-0 93							10.45			

(92): Embossed tape packaging, (91): Magazine packaging, (71): Tray packaging

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

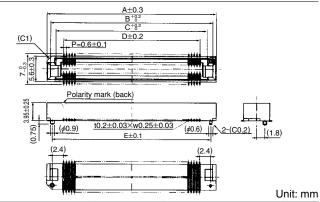
Note 2: Please place orders in full magazine/tube quantities.

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]





Part No.	HRS No.	No. of contacts	Α	В	С	D	Е	Magazine packaging quantity (pieces)	RoHS
FX8C-60S-SV(92)	578-0801-2 92	60	24.60	23.05	20.80	17.40	22.20	21	
FX8C-80S-SV(92)	578-0803-8 92	80	30.60	29.05	26.80	23.40	28.20	17	
FX8C-100S-SV(92)	578-0805-3 92	100	36.60	35.05	32.80	29.40	34.20	14	Yes
FX8C-120S-SV(92)	578-0806-6 92	120	42.60	41.05	38.80	35.40	40.20	12	
FX8C-140S-SV(92)	578-0807-9 92	140	48.60	47.05	44.80	41.40	46.20	10	

(92): Embossed tape packaging, (91): Magazine packaging, (71): Tray packaging

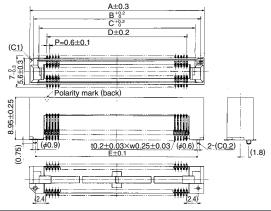
Note 1: Embossed tape packaging product are sold in full reel quantities. For details, see the item showing delivery forms in Page 16.

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	А	В	С	D	Е	Magazine packaging quantity (pieces)	RoHS
FX8C-60S-SV5(92)	578-0821-0 92	60	24.6	23.05	20.8	17.4	22.2	21	
FX8C-80S-SV5(92)	578-0823-5 92	80	30.6	29.05	26.8	23.4	28.2	17	
FX8C-100S-SV5(92)	578-0825-0 92	100	36.6	35.05	32.8	29.4	34.2	14	Yes
FX8C-120S-SV5(92)	578-0826-3 92	120	42.6	41.05	38.8	35.4	40.2	12	
FX8C-140S-SV5(92)	578-0827-6 92	140	48.6	47.05	44.8	41.4	46.2	10	

(92): Embossed tape packaging, (91): Magazine packaging, (71): Tray packaging

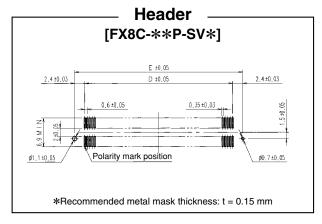
Note 1: Embossed tape packaging product are sold in full reel quantities.

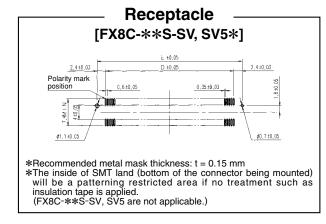
For details, see the item showing delivery forms in Page 16.

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.

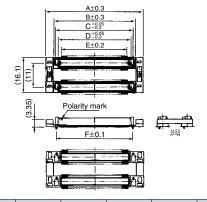
# ■ Recommended PCB layout and metal mask dimensions for single connector (mounting side)





# ■Header (Dual Connected Product) [FX8C-\*\*/\*\*P11-SVJ]





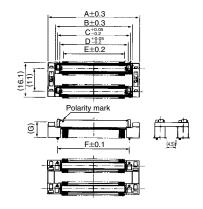
Unit: mm

Part No.	HRS No.	No. of contacts	Α	В	С	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	
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	Yes
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

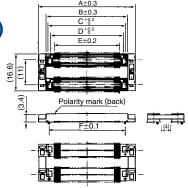
Part No.	HRS No.	No. of contacts	А	В	С	D	Е	F	G	Н	RoHS
FX8C-60/60P11-SV1J(71)	578-0671-9 71								4.35	5.45	
FX8C-60/60P11-SV2J(71)	578-0691-6 71		04.70	04.70			47.40		5.35	6.45	
FX8C-60/60P11-SV4J(71)	578-0731-9 71	60×2	31.70	24.70	23.00	20.70	17.40	22.20	7.35	8.45	
FX8C-60/60P11-SV6J(71)	578-0751-6 71								9.35	10.45	
FX8C-80/80P11-SV1J(71)	578-0673-4 71								4.35	5.45	
FX8C-80/80P11-SV2J(71)	578-0693-1 71	80×2	37.70	30.70	29.00	26.70	23.40	28.20	5.35	6.45	
FX8C-80/80P11-SV4J(71)	578-0733-4 71	00x2	37.70	30.70	29.00	26.70	23.40	26.20	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								4.35	5.45	
FX8C-100/100P11-SV2J(71)	578-0695-7 71	100×2	42.70	36.70	35.00	32.70	29.40	34.20	5.35	6.45	Yes
FX8C-100/100P11-SV4J(71)	578-0735-0 71	100x2	43.70	30.70	33.00	32.70	.70 29.40	34.20	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								4.35	5.45	
FX8C-120/120P11-SV2J(71)	578-0696-0 71	120×2	49.70	42.70	41.00	38.70	35.40	40.20	5.35	6.45	
FX8C-120/120P11-SV4J(71)	578-0736-2 71	120x2	49.70	42.70	41.00	36.70	35.40	40.20	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								4.35	5.45	
FX8C-140/140P11-SV2J(71)	578-0697-2 71	140×2	55.70	10 70	47.00	44.70	41 40	46 20	5.35	6.45	
FX8C-140/140P11-SV4J(71)	578-0737-5 71	140XZ	35.70	0   48.70	J 47.00	0 44.70	44.70   41.40	.40   46.20	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.

# ■ Receptacle (Dual Connected Product)

#### [FX8C-\*\*/\*\*S11-SVJ]





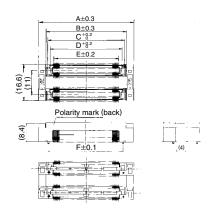
Unit: mm

Part No.	HRS No.	No. of contacts	Α	В	С	D	E	F	RoHS
FX8C-60/60S11-SVJ(71)	578-0901-7 71	60×2	31.70	24.60	23.05	20.80	17.40	22.20	
FX8C-80/80S11-SVJ(71)	578-0903-2 71	80×2	37.70	30.60	29.05	26.80	23.40	28.20	
FX8C-100/100S11-SVJ(71)	578-0905-8 71	100×2	43.70	36.60	35.05	32.80	29.40	34.20	Yes
FX8C-120/120S11-SVJ(71)	578-0906-0 71	120×2	49.70	42.60	41.05	38.80	35.40	40.20	
FX8C-140/140S11-SVJ(71)	578-0907-3 71	140×2	55.70	48.60	47.05	44.80	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-\*\*/\*\*S11-SV5J]



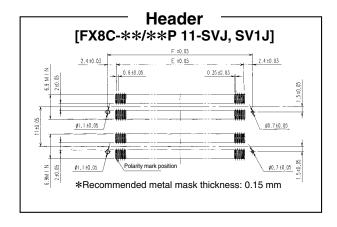


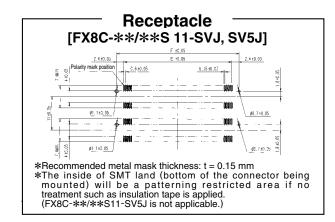
Unit: mm

Part No.	HRS No.	No. of contacts	Α	В	С	D	E	F	RoHS
FX8C-60/60S11-SV5J(71)	578-0921-4 71	60×2	31.70	24.60	23.05	20.80	17.40	22.20	
FX8C-80/80S11-SV5J(71)	578-0923-0 71	80×2	37.70	30.60	29.05	26.80	23.40	28.20	
FX8C-100/100S11-SV5J(71)	578-0925-5 71	100×2	43.70	36.60	35.05	32.80	29.40	34.20	Yes
FX8C-120/120S11-SV5J(71)	578-0926-8 71	120×2	49.70	42.60	41.05	38.80	35.40	40.20	
FX8C-140/140S11-SV5J(71)	578-0927-0 71	140×2	55.70	48.60	47.05	44.80	41.40	46.20	

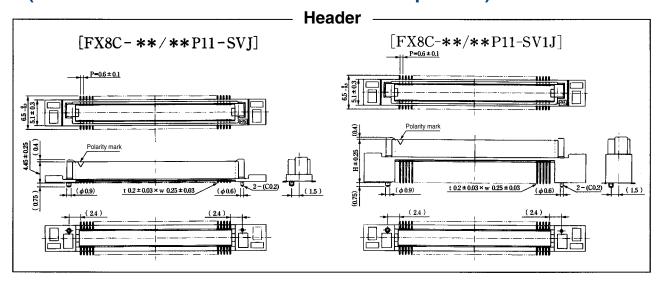
Note: Dual connected products are packaged and shipped in trays. And as such, are not suitable for use with automatic mounting processes.

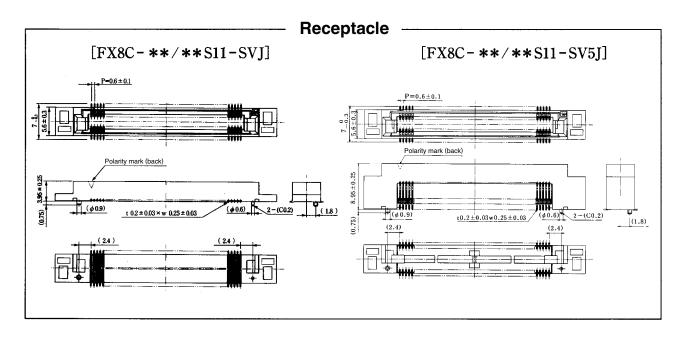
# Recommended PCB layout and metal mask dimensions for dual connected products (mounting side)





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





#### How to Use the Connector

#### 1. Permissible gap between mating surfaces

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

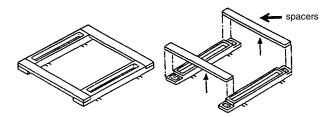
#### 3. Tolerances in stacking height when mated

Stack Amm 
$$\longrightarrow$$
 A  $^{+0.3}_{-0.2}$  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.)



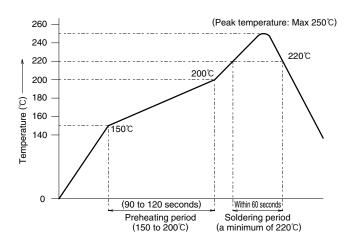




Before removing the joint bar

After removing the joint bar

#### 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)		
	(Flux contained amount: 11 Wt%)		
	(M705-221CM5-42-10.5		
	manufactured by Senju Metal		
	Industry Co., Ltd.)		
PCB	Size 161 × 100 × 1.6 mm		
	Material: Glass epoxy		
Metal mask thickness	Thickness: 0.15 mm		

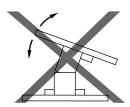
Note 1: This temperature profile shows recommended values. Temperature should be measured on the top of the connector.

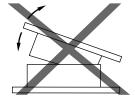
Note 2: The reflow process should be limited to two times.

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)	4	4	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.					

<sup>\*\*</sup> The chart above applies only to individual connectors.

Dual connected products will be packaged and delivered in trays.

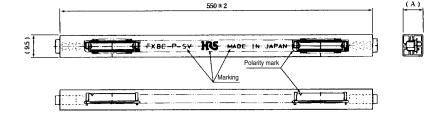
# **●** Packaging Specification

#### [Magazine Packaging]

#### Header

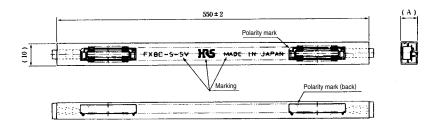
[FX8C-\*\*P-SV(91)] [FX8C-\*\*P-SV1(91)] [FX8C-\*\*P-SV2(91)] [FX8C-\*\*P-SV4(91)]

[FX8C-\*\*P-SV6(91)]



#### •Receptacle

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



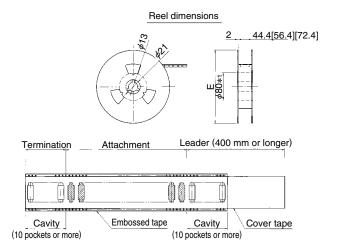
P/S	Part No.	Α
Header	FX8C-**P-SV(91)	9
	FX8C-**P-SV1(91)	10
	FX8C-**P-SV2(91)	11
	FX8C-**P-SV4(91)	13
	FX8C-**P-SV6(91)	15
Receptacle	FX8C-**S-SV(91)	7.4
	FX8C-**S-SV5(91)	12.4

#### [Embossed Tape Packaging]

#### Carrier Dimensions

# Unreeling direction 2 0 0 0 0 0 0 0 A B

#### Reel Dimensions



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

- \*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.	Α	В	С	D	E	Product	
							quantity	
Header	FX8C-**P-SV(92)	5.5	7.9	5.2	1.2	<i>φ</i> 370	1000 pcs/reel	
	FX8C-**P-SV1(92)	5.5	7.9	6.2	1.2	<i>φ</i> 370	1000 pcs/reel	
	FX8C-**P-SV2(92)	5.5	7.9	7.2	1.2	<i>φ</i> 330	500 pcs/reel	*2
	FX8C-**P-SV4(92)	5.5	7.9	9.2	1.2	<i>φ</i> 370	500 pcs/reel	
	FX8C-**P-SV6(92)	5.5	7.9	11.2	1.2	<i>φ</i> 370	500 pcs/reel	
Receptacle	FX8C-**S-SV(92)	6.0	8.4	4.3	1.2	<i>φ</i> 330	1000 pcs/reel	*1
	FX8C-**S-SV5(92)	6.0	8.4	9.3	1.2	<i>φ</i> 370	500 pcs/reel	<b>*</b> 2

\*\*: No. of contacts



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http://www.hirose-connectors.com