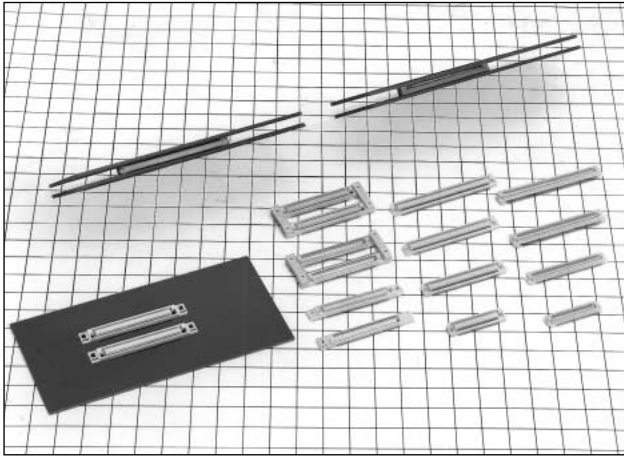


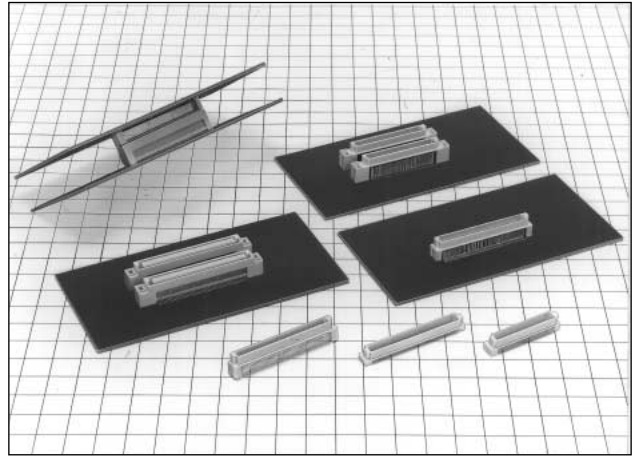
0.6mm Pitch Stacking Height 3mm~16mm Connector

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~16mm available

The board to board stacking height can correspond to 3mm~16mm.

2. SMT Coplanarity

The coplanarity of the SMT solder area lead is maintained at the high accuracy of less than 0.1mm.

3. Mating Guide

The very small and guide rib is provided, and secures $\pm 0.6\text{mm}$ self-alignment, considering the mating operativity into accounts.

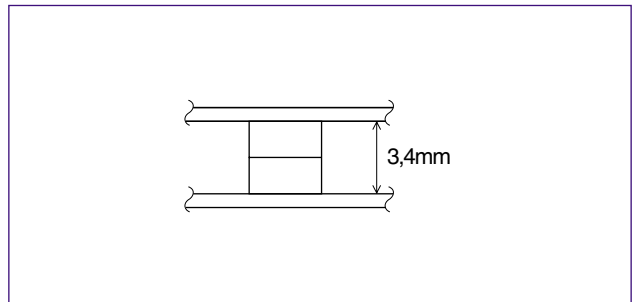
4. Mis-insertion Prevention

The boss prevents mis-insertion in the board to cause due to the boss position and boss diameter.

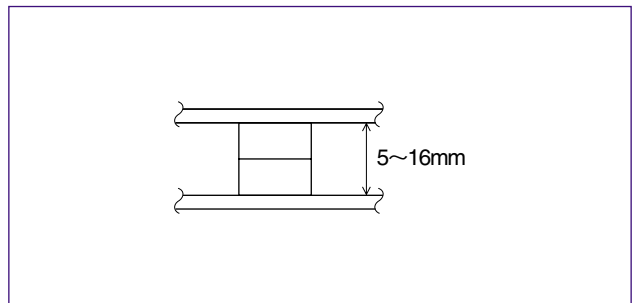
5. Two-piece Connection Product

In order to enhance the mating reliability for the fine pitch connector using two-pieces, the two-pieces of connectors are combined by our unique method, and can secure the mount position accuracy. In such a new concept, the two-piece connected product is prepared at every number of contacts (The standard mating pitch for the two-piece interconnected product in two rows is 11mm.)

●Stacking Height 3,4mm-FX8 Series



●Stacking Height 5~16mm-FX8C Series



■Applications

Note pc, business equipments, which require miniaturization or light-weight

FX8 Series

Product Specifications

Rating	Rated Current 0.4A	Operating Temperature Range -55°C~+85°C Note 1.	Storage Temperature Range -10°C~+60°C Note 2.
	Rated Voltage 100V AC	Operating Humidity Range 40%~80%	Storage Humidity Range 40%~70%

Item	Specification	Condition
1. Insulation Resistance	1000MΩ min	Measured at 250V DC
2. Withstand voltage	Neither short or insulation breakdown	300V AC for 1 minute
3. Contact Resistance	45mΩ max.	Measured at 100mA
4. Vibration	Electrical discontinuity, 1μS max.	10~55Hz and single amplitude 0.75mm in 3 directions for 10 cycles, respectively.
5. Moisture Resistance	Contact resistance: 55mΩ max.: Insulation resistance: 100MΩ min.	Exposed to temperature 40±2°C and humidity 90~95% for 96 hours
6. Temperature Cycle	Contact resistance: 55mΩ max.: Insulation resistance: 100MΩ min.	(-55°C: 30 minutes, 15~35°C: 2~3 minutes 85°C: 30 minutes, 15~35°C: 2~3 minutes) 5 cycles
7. Operating Life	Contact resistance: 55mΩ max.	50 cycles
8. Resistance to Soldering heat	No resin area fusion to degrade performance S	Reflow: According to the recommended temperature profile Soldering iron temperature: 300°C for 3 seconds

Note 1: Temperature rise included when energized.

Note 2: This storage indicates a long-term storage state for the unused product before the board mounted.

The operating temperature and humidity ranges are applied to the non-energized state after the connector is installed in the board.

In addition, the operating temperature and humidity range can be set up to +85°C in the temporary storage state for a transportation period.

Note 3: The above standards represent this series. Individual formal agreement should be based on the "Specification".

Material

Part	Material	Finish		Remarks
Insulator	PBS	Light brown		UL94V-0
Header Contact	Phosphor bronze	Contact area Lead area	Gold plating Solder plating	_____
Receptacle Contact	Phosphor bronze	Contact area Lead area	Gold plating	_____

Ordering Information

Using this configuration, determine the specific product. To order the product, select the product type from the list on catalog A229 to A232.

Single Product

FX 8 - 120 P - SV 1 (22)

① ② ③ ④ ⑤ ⑥ ⑦

① Series Name : FX	⑥ Product height variation None...Standard (Minimum low profile)
② Series No : 8	1 : +1mm
③ Number of Contacts :60, 80, 90, 120, 140	⑦ Package Form None : Tray package product (21) : Tube packaging product (22) : Emboss tape package product
④ Connector type P : Header S : Receptacle	
⑤ Contact type SV...Board vertical type	

※The embossed tape packaging product is prepared for all number of contacts, except for 140

two-pieces Connection Product

FX 8 - 120/120 P 11 - SV 1 J

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Series Name :FX	⑤ Connector to Connector Pitch
② Series No. :8	⑥ Contact type : SV...Board vertical type
③ Number of Contacts: 60×2, 80×2, 90×2, 100×2, 120×2, 140×2 Example: 120/120 = 240 contacts	⑦ Product height variation None...Standard (Minimum low profile) 1 : +1mm
④ Connector Type : P : Header S : Receptacle	⑧ J: two-pieces connection product

※The standard delivery packaging of the two-piece connection product is the tray packaging.

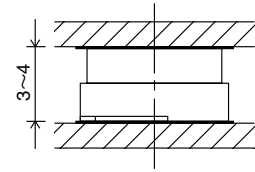
◆ Stacking Height Variation

● Single Product

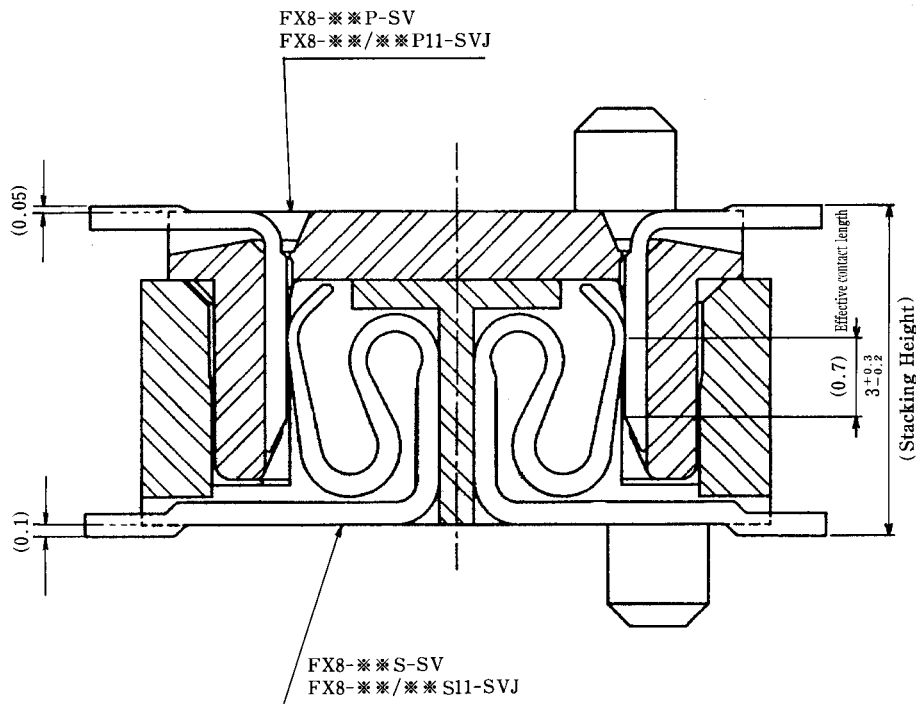
	FX8-***P-SV	FX8-***P-SV1
FX8-***S-SV	3mm	4mm

● two-pieces Connection Product

	FX8-***/**P11-SVJ	FX8-***/**P11-SV1J
FX8-***/**S11-SVJ	3mm	4mm



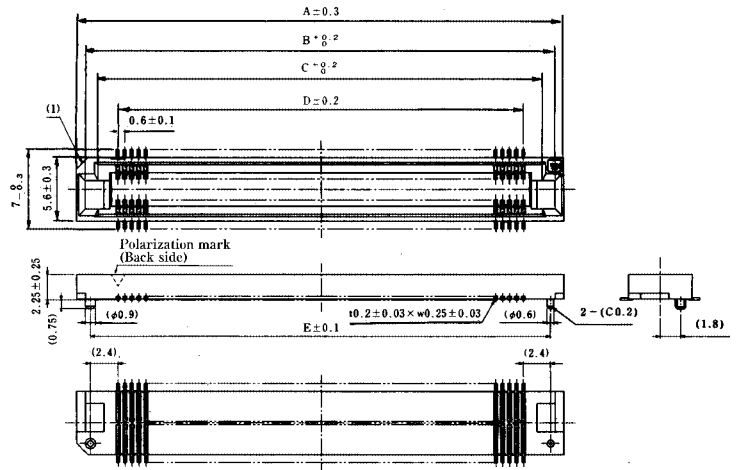
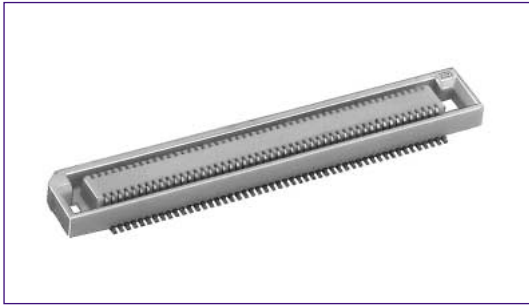
◆ Mating Sectional View



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

■ Receptacle (Single Product)

[FX8-**-S-SV]



Unit: mm

Product No.	HRS No.	Number of Contacts	A	B	C	D	E	Tube packaging Quantity (Pieces)
FX8- 60S-SV(**)	CL578-0201-5-**-*	60	24.60	23.05	20.80	17.40	22.20	21
FX8- 80S-SV(**)	CL578-0203-0-**-*	80	30.60	29.05	26.80	23.40	28.20	17
FX8- 90S-SV(**)	CL578-0204-3-**-*	90	33.60	32.05	29.80	26.40	31.20	15
FX8-100S-SV(**)	CL578-0205-6-**-*	100	36.60	35.05	32.80	29.40	34.20	14
FX8-120S-SV(**)	CL578-0206-9-**-*	120	42.60	41.05	38.80	35.40	40.20	12
FX8-140S-SV(**)	CL578-0207-1-**-*	140	48.60	47.05	44.80	41.40	46.20	10

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

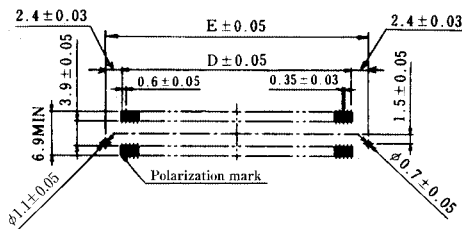
Note 1: To order the tube packaging product, determine a quantity for delivery, multiplying the tube packaging product by an integer.

Note 2: The embossed tape package product is prepared for the entire number of contacts, except for 140 contacts. In addition, the product will be sold per reel when 1 reel = 1000 pieces. Please refer to the delivery form item on page A235 for details.

◆ Single Product Recommended Land Pattern Size (Connector Mounting Surface Side)

Header

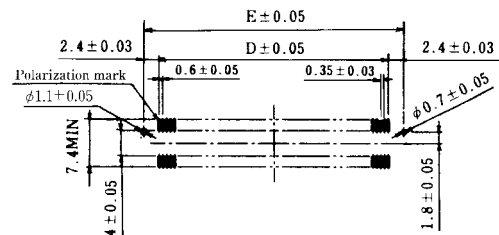
[FX8-**-P-SV]
[FX8-**-P-SV1]



· Recommended metal mask thickness : $t = 0.15\text{mm}$

Receptacle

[FX8-**-S-SV]



- Recommended metal mask thickness : $t = 0.15\text{mm}$
- If the inside (the connector mounting lower side) of the SMT land isn't 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 Mating Side

The effective contact length of the product is set to 0.7mm. Please use the product so as to set the clearance to less than 0.2mm between the header and the receptacle in the mating process.

2. Fixation between Mounting Boards

The very low profile and compact product, so never fix the connector between boards by mating force only

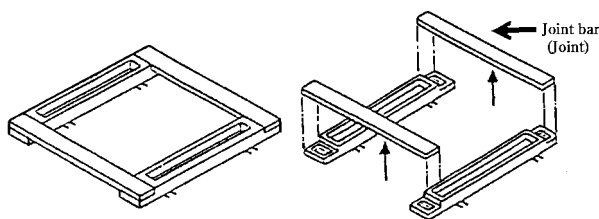
3. Stacking Height Tolerance for Mating

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

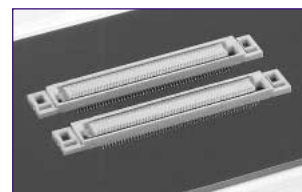
Note: Please Note that the above stacking tolerance doesn't include the solder paste thickness.

4. Handling two-piece connection Product

Both joint bars of the two-piece connection product are fixed by the joint members, but the mating cannot be implemented in that state. Before mating, remove the joint bars as if pull it up. (Don't remove the joint members, before mounting on the board.)

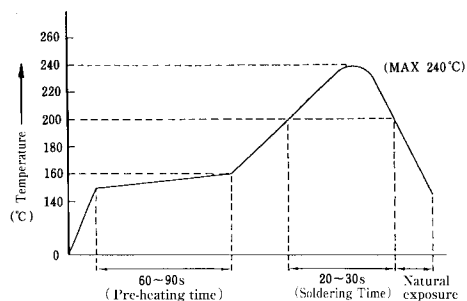


Before removing joint bar



After removing joint bar

5. Mounting Temperature Profile (Reference)



Setting Condition

- Board
 - Size: 161×100×1.6(mm)
 - Material: Glass epoxy
- Solder paste
 - Constituent: 63Sn/37Pb(Flux content: 11Wt%)
 - Metal Mask Thickness : 0.15mm
- Reflow Method
 - IR reflow

◆Packaging Type

Packaging Type	Number of contacts	60 contacts	80 contacts	90contacts	100 contacts	120 contacts	140 contacts	
Tube packaging	Product Pieces	21 pieces	17 pieces	15 pieces	14 pieces	12-pieces	10pieces	
	Unit Packaged Sales	Deliver multiplying product pieces (60 contacts: 21, 42...)						
	Tube Total Length	550mm±2mm						
Embossed Tape Packaging	Tape Width	44mm	44mm	44mm	56mm	56mm	X	
	Product Pitch	12mm						
	Emboss Reel Diameter	Refer to the table on catalog page A236.						
	Product Pieces	10000 pieces per reel						
	Unit Packaged Sales	Per reel						

※The above packaging describes about the single product only.

In addition, the packaging of the two-piece connection product is packaged by tray.

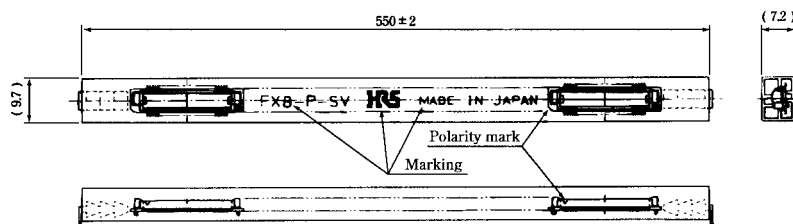
◆Packaging Specification

[Tube packaging]

●Header

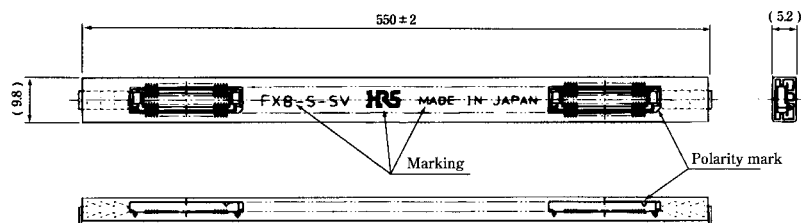
[FX8-***P-SV (21)]

[FX8-***P-SV1 (21)]



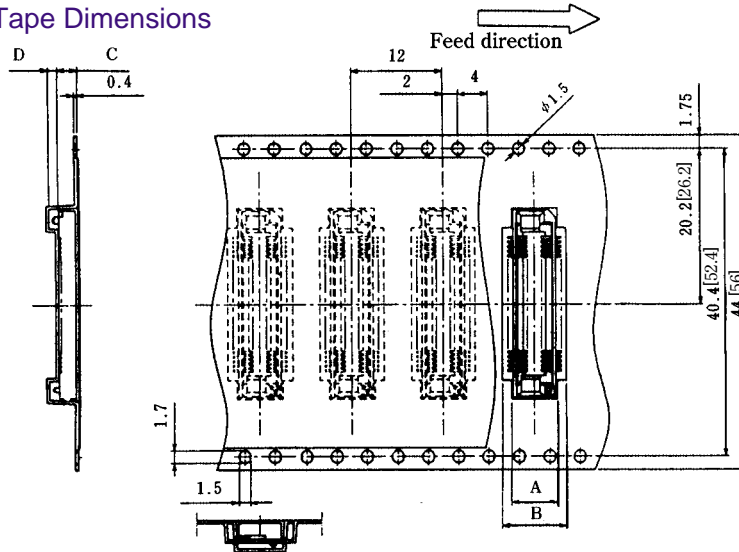
●Receptacle

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



[Embossed Tape Package]

●Embossed Carrier Tape Dimensions



※The above pattern represents the receptacle connector case.

Unit: mm

P/S	Product No.	A	B	C	D	E
Header	FX8-※※P-SV (22)	5.5	7.9	3.2	12	φ 330
	FX8-※※P-SV1 (22)			4.2		φ 360
Receptacle	FX8-※※S-SV (22)	6.0	8.4	2.6		φ 330

※※ : Number of Contacts

●Reel Dimensions (FREE)

