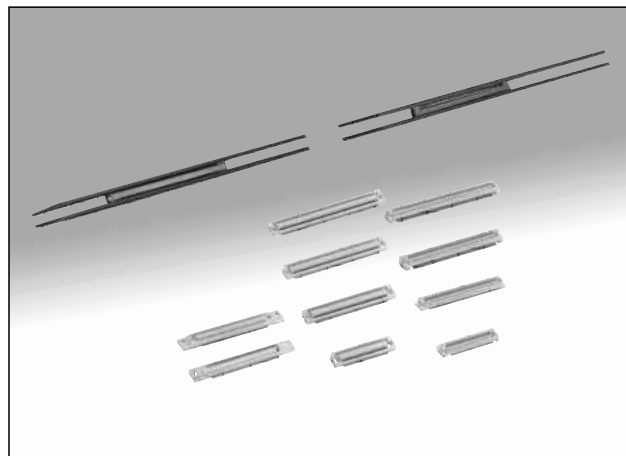


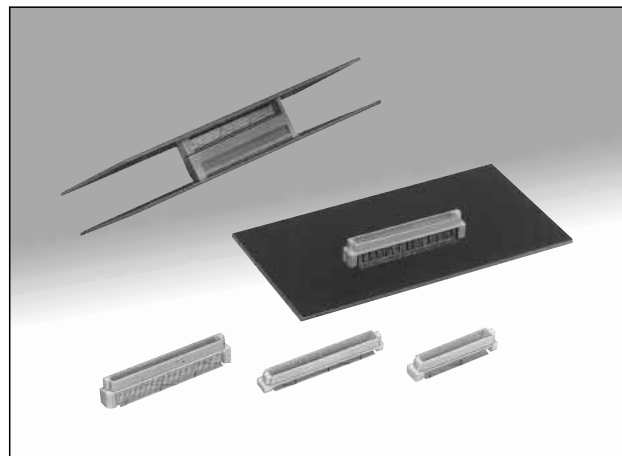
# 0.6mm Pitch Stacking Height 3mm to 16mm Connector

## 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 to 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.

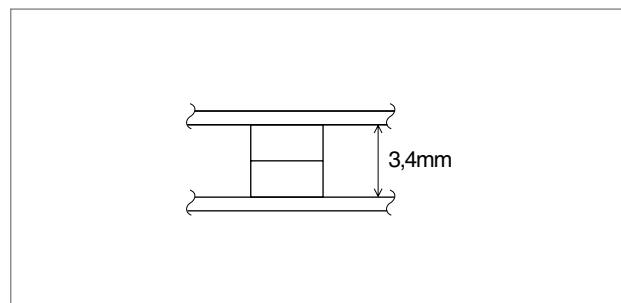
#### 3. Mating Guide

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

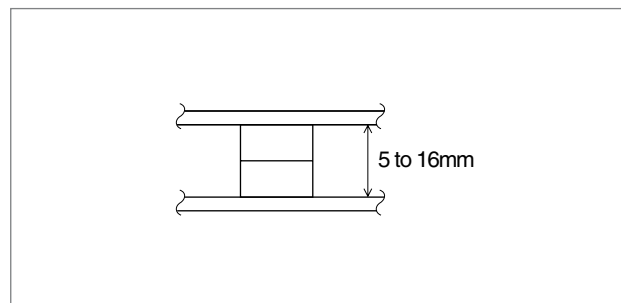
#### 4. Mis-insertion Prevention

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

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



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



### ■Applications

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

FX8, FX8C Series 0.6mm Pitch Stacking Height 3mm to 16mm Connector

FX8C Series

Product Specifications

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

Item	Specification	Condition
1. Insulation Resistance	100M ohms min.	250V DC
2. Withstanding voltage	No flashover or insulation breakdown.	300V AC/1 minute
3. Contact Resistance	80m ohms max.	100mA
4. Vibration	No electrical discontinuity of 1μs or more	Frequency: 10 to 55 Hz, single amplitude of 0.75 mm, 2 hours in each of the 3 directions.
5. Humidity (Steady state)	Contact resistance: 100m ohms max.Insulation resistance: 100M ohms min.	96 hours at temperature of 40°C and humidity of 90% to 95%
6. Temperature Cycle	Contact resistance: 100m ohms max.Insulation resistance: 100M ohms min.	(-55°C: 30 minutes, 15 to 35°C: 2 to 3 minutes 85°C: 30 minutes, 15 to 35°C: 2 to 3minutes) 5 cycles
7. Durability (Mating/un-mating)	Contact resistance: 100m ohms max.	50 cycles
8. Resistance to Soldering heat	No deformation of components affecting performance.	Reflow: At the recommended temperature profile
		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 covers non conducting condition of installed connectors in storage, shipment or during transportation.

Note 3 : Slight variations in color of the plastic compounds do not affect form ,fit or function of the connector.

Note 4 : FX8C-\*P-SV(\*),FX8C-\*S-SV(\*) is gold plated.

Note 5 : Information contained in this catalog represents general requirements for this Series. Contact us for the drawings and specifications for a specific part number shown.

Material

Part	Material	Finish		Remarks
Insulator	PBS	Light brown		UL94V-0
Header Contact	Phosphor bronze	Contact area Lead area	Gold plated Tin plated(Note 4)	_____
Receptacle Contact	Phosphor bronze	Contact area Lead area	Gold plated Tin plated(Note 4)	_____

Ordering Information

Single Product

**FX8C - 120 P - SV 1 (91)**  
① ② ③ ④ ⑤ ⑥

① Series Name : FX8C	⑤ Product height variation Blank : Standard (Minimum low profile) 1: +1mm . . . . . 3: +3mm
② Number of Contacts :60, 80, 90, 120, 140	⑥ Packaging Type (71) : Tray packaging (91) : Tube packaging (92) : Embossed tape package
③ Connector type P :Header S :Receptacle	
④ Contact type SV :Board vertical type	

two-piece Connection Product

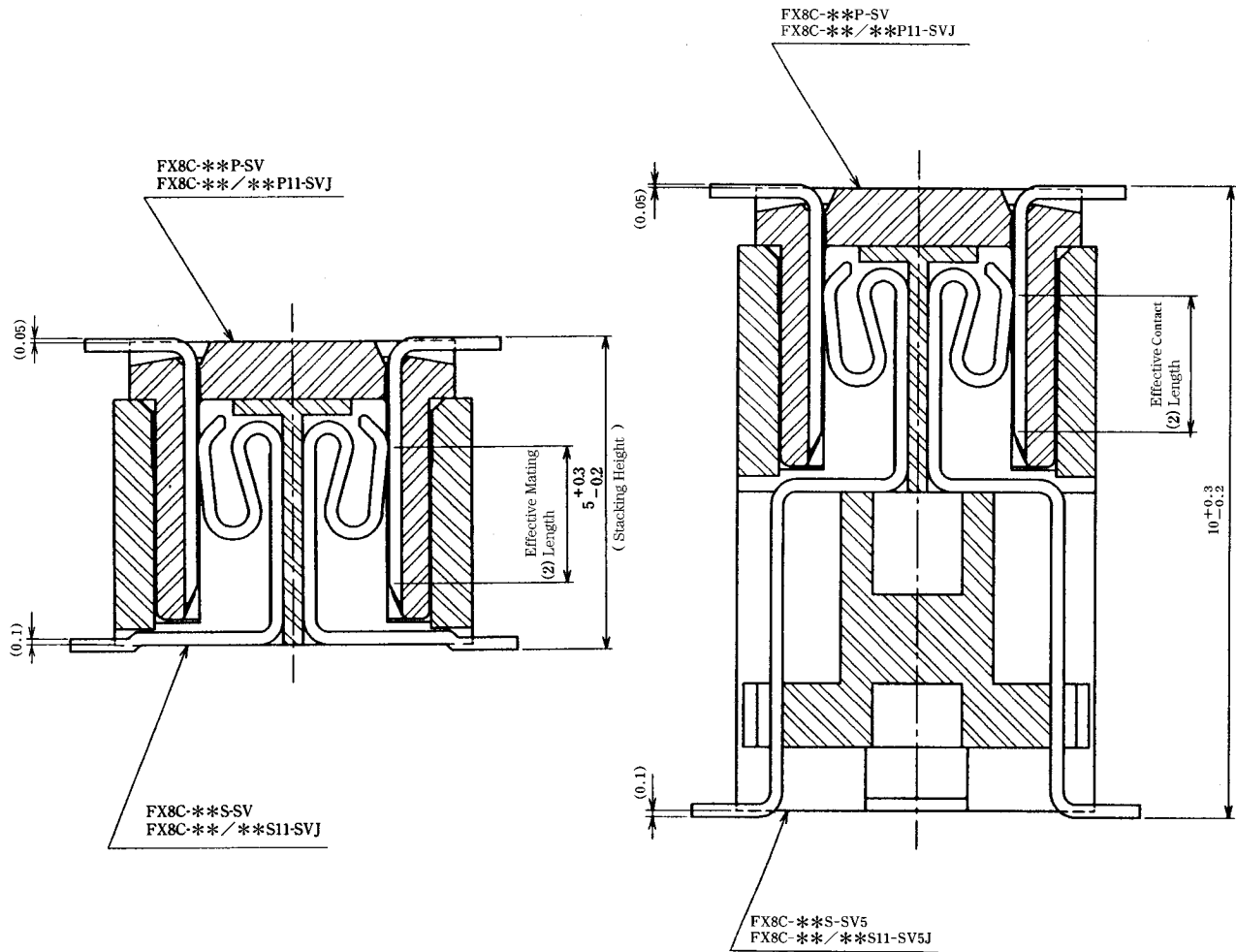
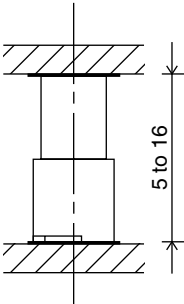
**FX8C - 120/120 P 11 - SV 1 J**  
① ② ③ ④ ⑤ ⑥ ⑦

① Series Name :FX8C	④ Connector to Connector Pitch
② Number of Contacts: 60×2, 80×2, 90×2, 100×2, 120×2, 140×2 Example: 120/120 = 240 contacts	⑤ Contact type SV : Board vertical type
	⑥ Product Height Variation Blank : Standard (Minimum lot profile) 1: +1mm . . . . . 3: +3mm
③ Connector Type : P : Header S : Receptacle	⑦ J: two-piece connection product

\*The standard packaging of the two-piece connection product is the tray packaging.

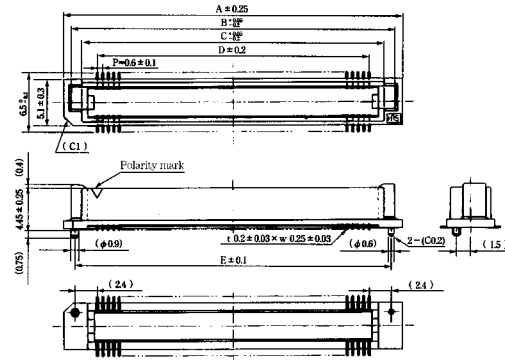
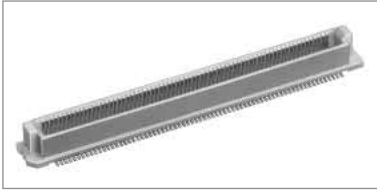
Stacking Height Variation

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



## Header (Single Product)

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



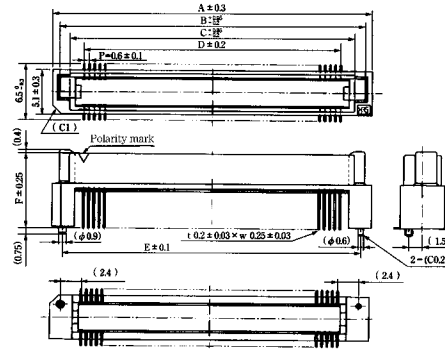
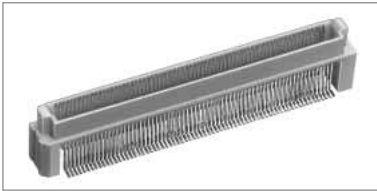
Unit:mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	Tube packaging Quantity (Pieces)	RoHS
FX8C- 60P-SV(92)	578-0501-9-92	60	24.60	23.00	20.70	17.40	22.20	21	YES
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	
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	

\*\*71: Tray packaging product 91: Tube packaging product  
92: Embossed tape packaging product  
Note 1: To order the tube packaging product, please determine the quantity for delivery, multiplying the tube packaging product by an integer.

Note 2: The embossed tape packaging product is prepared for 60 and 80 contacts only. In addition, the product will be procured per reel unit. Please refer to the delivery form item on page A182 for details.  
Note 3: Tray packaging product is not for board placement with automatic equipment.

[FX8C-\*\*-P-SV1]  
[FX8C-\*\*-P-SV2]  
[FX8C-\*\*-P-SV4]  
[FX8C-\*\*-P-SV6]



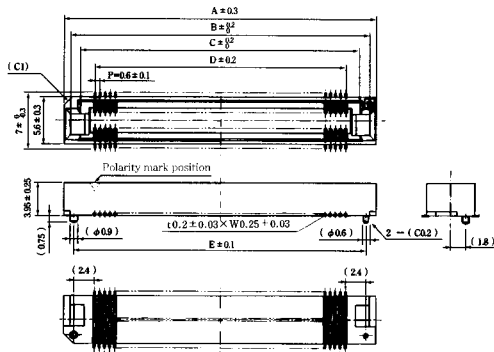
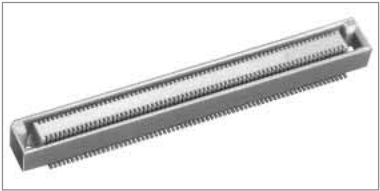
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	F	Tube packaging Quantity (Pieces)	RoHS
FX8C- 60P-SV1(92)	578-0521-6-92	60	24.60	23.00	20.70	17.40	22.20	5.45	21	YES
FX8C- 60P-SV2(92)	578-0541-3-92							6.45		
FX8C- 60P-SV4(92)	578-0581-8-92							8.45		
FX8C- 60P-SV6(92)	578-0601-3-92							10.45		
FX8C- 80P-SV1(92)	578-0523-1-92	80	30.60	29.00	26.70	23.40	28.20	5.45	17	
FX8C- 80P-SV2(92)	578-0543-9-92							6.45		
FX8C- 80P-SV4(92)	578-0583-3-92							8.45		
FX8C- 80P-SV6(92)	578-0603-9-92							10.45		
FX8C-100P-SV1(92)	578-0525-7-92	100	36.60	35.00	32.70	29.40	34.20	5.45	14	
FX8C-100P-SV2(92)	578-0545-4-92							6.45		
FX8C-100P-SV4(92)	578-0585-9-92							8.45		
FX8C-100P-SV6(92)	578-0605-4-92							10.45		
FX8C-120P-SV1(92)	578-0526-0-92	120	42.60	41.00	38.70	35.40	40.20	5.45	12	
FX8C-120P-SV2(92)	578-0546-7-92							6.45		
FX8C-120P-SV4(92)	578-0586-1-92							8.45		
FX8C-120P-SV6(92)	578-0606-7-92							10.45		
FX8C-140P-SV1(92)	578-0527-2-92	140	48.60	47.00	44.70	41.40	46.20	5.45	10	
FX8C-140P-SV2(92)	578-0547-0-92							6.45		
FX8C-140P-SV4(92)	578-0587-4-92							8.45		
FX8C-140P-SV6(93)	578-0607-0-93							10.45		

Note 5

\*\* 71: Tray packaging product 91: Tube packaging product 92: Embossed tape packaging product  
Note 1: To order the tube packaging product, please determine a quantity for delivery, multiplying the tube packaging product by an integer.  
Note 2: The embossed tape packaging product is prepared for 60 and 80 contacts only. In addition, the product will be sold per reel unit. Please refer to the packaging specification item on page A182 for details.  
Note 3: The locator material is installed between leads for the FX8C-P-SV6 type.  
Note 4: Tray packaging product is not for board placement with automatic equipment.  
Note 5: (93) spec is with vacuum pick-up tape, embossed tape packaging product.

■ Receptacle (Single Product)  
[FX8C-\*\*-S-SV]

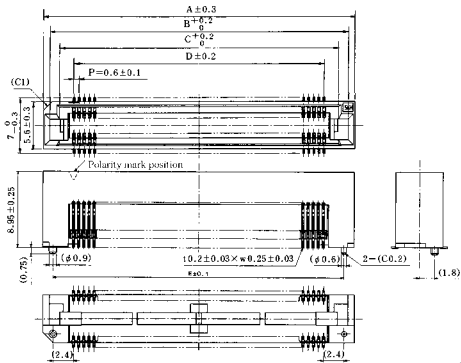


Unit:mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	Tube packaging Quantity (Pieces)	RoHS
FX8C- 60S-SV(92)	578-0801-2-92	60	24.60	23.05	20.80	17.40	22.20	21	YES
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	
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	

\*\* 71: Tray packaging product 91: Tube packaging product 92: Embossed tape packaging product  
Note 1: To order the tube packaging product, please determine a quantity for delivery, multiplying the tube packaging product by an integer.  
Note 2: The embossed tape packaging product is prepared for 60 and 80 contacts only. In addition, the product will be procured per reel unit. Please refer to the packaging specification item on page A182 for details.  
Note 3: Tray packaging product is not for board placement with automatic equipment.

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

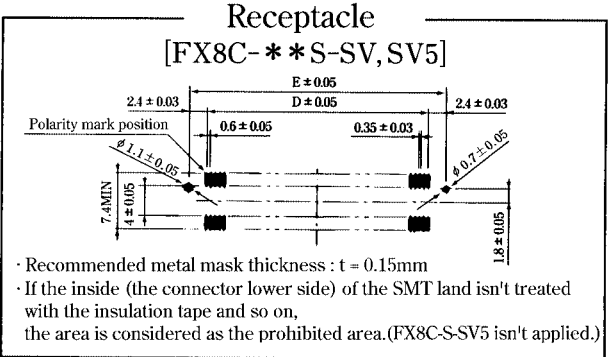
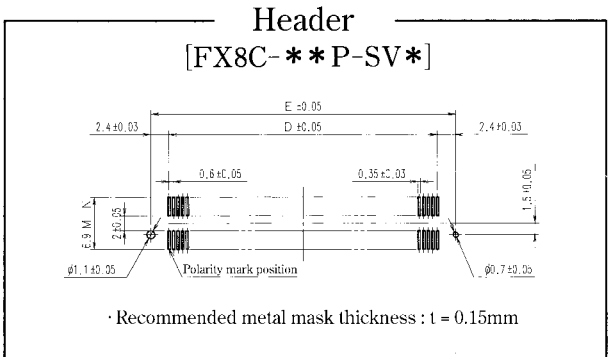


Unit:mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	Tube packaging Quantity (Pieces)	RoHS
FX8C- 60S-SV5(92)	578-0821-0-92	60	24.60	23.05	20.80	17.40	22.20	21	YES
FX8C- 80S-SV5(92)	578-0823-5-92	80	30.60	29.05	26.80	23.40	28.20	17	
FX8C-100S-SV5(92)	578-0825-0-92	100	36.60	35.05	32.80	29.40	34.20	14	
FX8C-120S-SV5(92)	578-0826-3-92	120	42.60	41.05	38.80	35.40	40.20	12	
FX8C-140S-SV5(92)	578-0827-6-92	140	48.60	47.05	44.80	41.40	46.20	10	

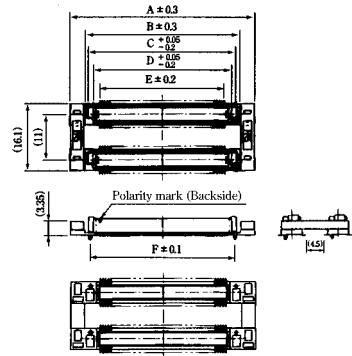
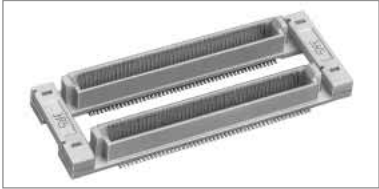
\*\* 71: Tray packaging product 91: Tube packaging product 92: Embossed tape packaging product  
Note 1: To order the tube packaging product, please determine a quantity for delivery, multiplying the tube packaging product by an integer.  
Note 2: The embossed tape package product is prepared for 60 and 80 contacts only. In addition, the product will be procured per reel unit. Please refer to the packaging specification item on page A182 for details.  
Note 3: Tray packaging product is not for board placement with automatic equipment.

◆ PCB mounting pattern



FX8C, FX8C Series 0.6mm Pitch Stacking Height 3mm to 16mm Connector

Header (two-pieces Connection Product)  
[FX8C-\*/\*/P11-SVJ]



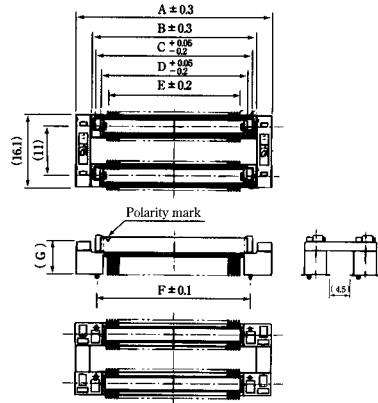
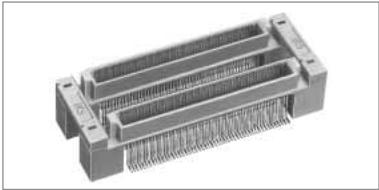
Unit:mm

Part Number	CL No.	Number 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 1: The two-piece connection product is packaged by tray.

Note 2: Tray packaging product is not for board placement with automatic equipment.

[FX8C-\*/\*/P11-SV1J]  
[FX8C-\*/\*/P11-SV2J]  
[FX8C-\*/\*/P11-SV4J]  
[FX8C-\*/\*/P11-SV6J]



Unit: mm

Part Number	CL No.	Number 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	

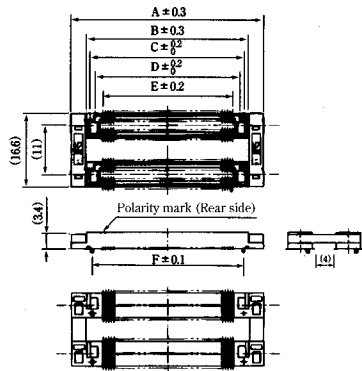
Note 1: The two-piece connection product is packaged by tray.

Note 2: Tray packaging product is not for board placement with automatic equipment.

Note 3: The locator material is installed between leads for the FX8C-\*/\*/P11-SV6J type.



■Receptacle (two-piece Connection Product)  
[FX8C-\*/\*\*S11-SVJ]

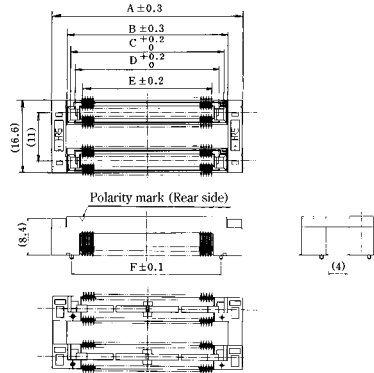


Unit:mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	F	RoHS
FX8C-060/060S11-SVJ(71)	578-0901-7-71	60×2	31.70	24.60	23.05	20.80	17.40	22.20	YES
FX8C-080/080S11-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	
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 1: The two-piece connection product is packaged by tray.  
Note 2: Tray packaging product is not for board placement with automatic equipment.

[FX8C-\*/\*\*S11-SV5J]

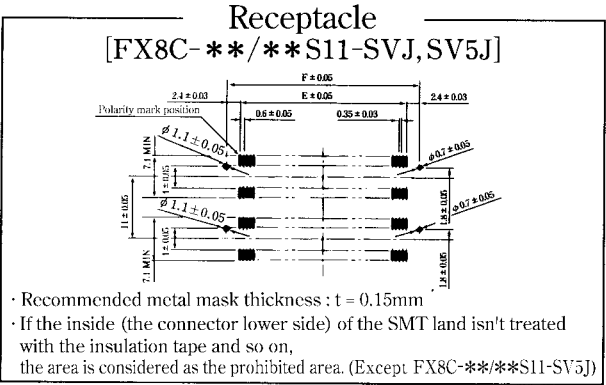
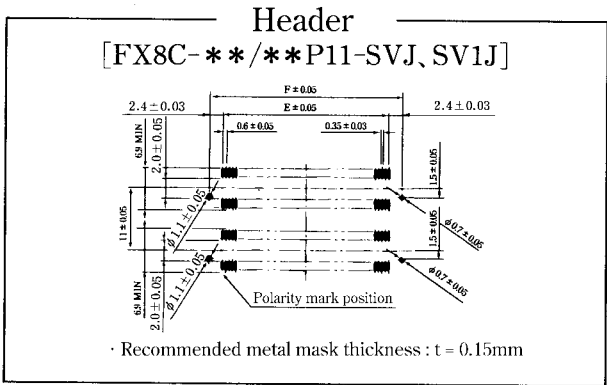


Unit:mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	F	RoHS
FX8C-060/060S11-SV5J(71)	578-0921-4-71	60×2	31.70	24.60	23.05	20.80	17.40	22.20	YES
FX8C-080/080S11-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	
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 1: The two-piece connection product is packaged by tray.  
Note 2: Tray packaging product is not for board placement with automatic equipment.

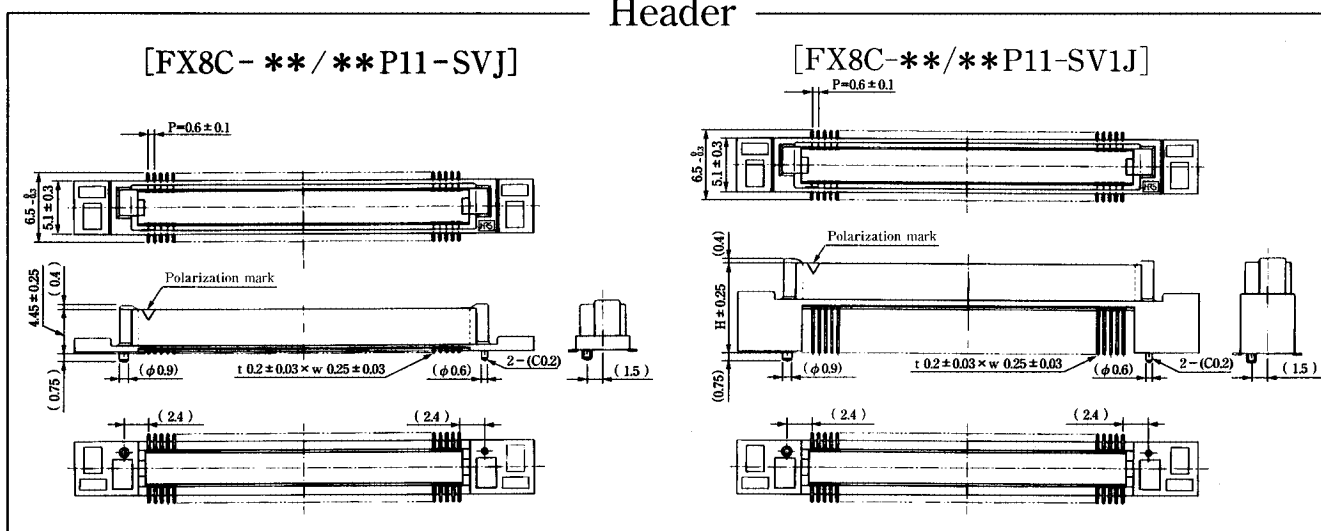
◆PCB mounting pattern



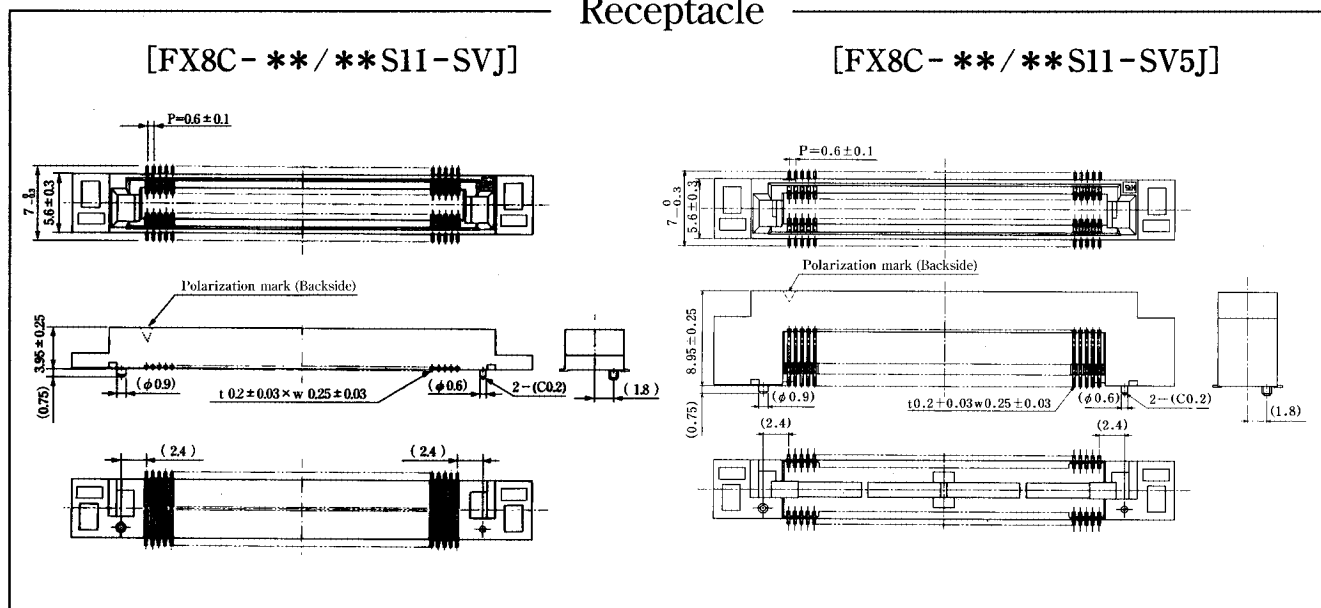
# FX8, FX8C Series 0.6mm Pitch Stacking Height 3mm to 16mm Connector

## ◆ Detailed Figure After Joint Removal (Single Product in two-piece Connection Product)

### Header



### Receptacle





## Connector Precautions

### 1. Tolerance Clearance on Mating Side

The effective contact length of the product is set to 2.0mm. Please use the product so as to set to less than 12mm the clearance between the header and the receptacle in the mating process.

### 2. Fixation Between Mounting Boards

If this product is fixed only by mating force, Please consider the fixing method so as not to apply loads such as vibration, shock and so on.

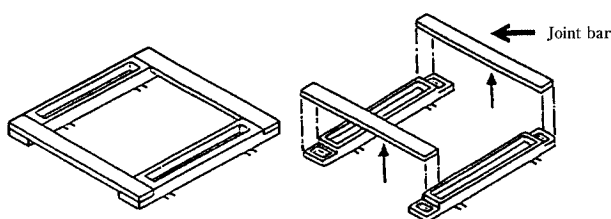
### 3. Stacking General Tolerance in Mating

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

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

### 4. Handling Two-piece Connection Product

Both joint bar edges of the two-piece connection product are fixed by joints, while the mating process can't be performed in that state. Before the mating process, please remove the joint bars as if pull it up. (Don't remove the joint bars before mounting on the board. )

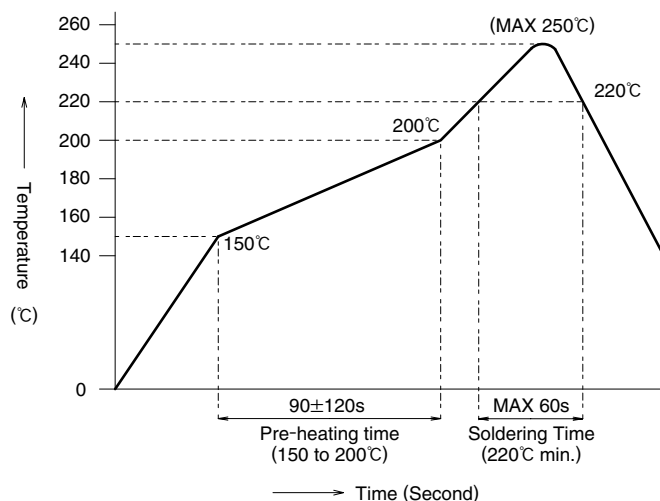


Before removing joint bar



After removing joint bar

### 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

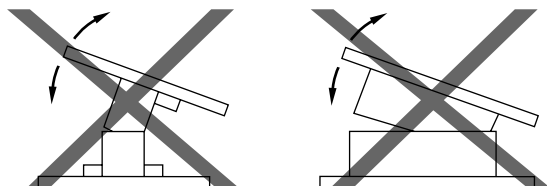
Reflow cycles : 2 cycles

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.

### 6. Cautions

This product is made as the thin formed product in order to be miniaturized.



FX8, FX8C Series 0.6mm Pitch Stacking Height 3mm to 16mm Connector

◆Packaging Type

Packaging Type	Number of Contacts	60 contacts	80 contacts	100 contacts	120 contacts	140 contacts
Tube packaging	Packaged Product Pieces	21 pieces	17 pieces	14 pieces	12-pieces	10pieces
	Sales Unit	Deliver the multiplied pieces. (Example) In case of 20 contacts,21 pieces, 4two-pieces,...				
	Total Tube Length	550mm±2mm				
Embossed Tape Packaging	Tape Width	44mm		56mm		72mm
	Product Pitch	12mm				
	Emboss Reel Diameter	Refer to the table on page A183 in this catalog.				
	Packaged Product Pieces	Refer to the table on page A183 in this catalog.				
	Sales Unit	Per reel				

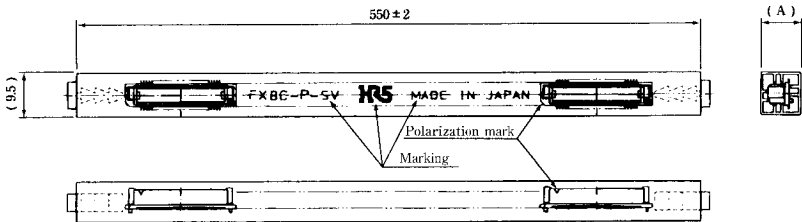
\*The above packaging type is , as listed for the single product only.  
In addition, the packaging type of the two-piece connection product is the tray packaging.

◆Packaging Specification

[Tube packaging]

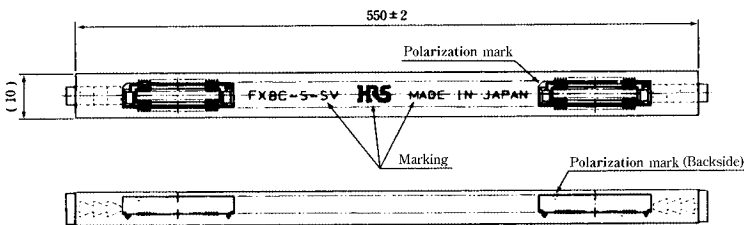
●Header

- [FX8-\*\*\*P-SV (91)]
- [FX8-\*\*\*P-SV1 (91)]
- [FX8-\*\*\*P-SV2 (91)]
- [FX8-\*\*\*P-SV4 (91)]
- [FX8-\*\*\*P-SV6 (91)]



●Receptacle

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

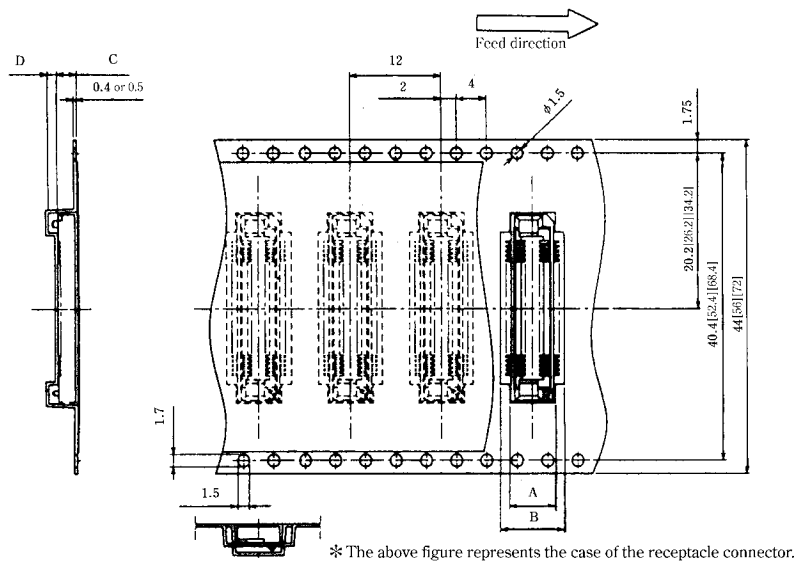


P/S	Part Number	A
Header	FX8C-***P-SV (91)	9
	FX8C-***P-SV1 (91)	10
	FX8C-***P-SV2 (91)	11
	FX8C-***P-SV4 (91)	13
	FX8C-***P-SV6 (91)	15
Receptacle	FX8C-***S-SV (91)	7.4
	FX8C-***S-SV5 (91)	12.4

FX8, FX8C Series 0.6mm Pitch Stacking Height 3mm to 16mm Connector

[Embossed Tape Package]

●Carrier Size Pattern

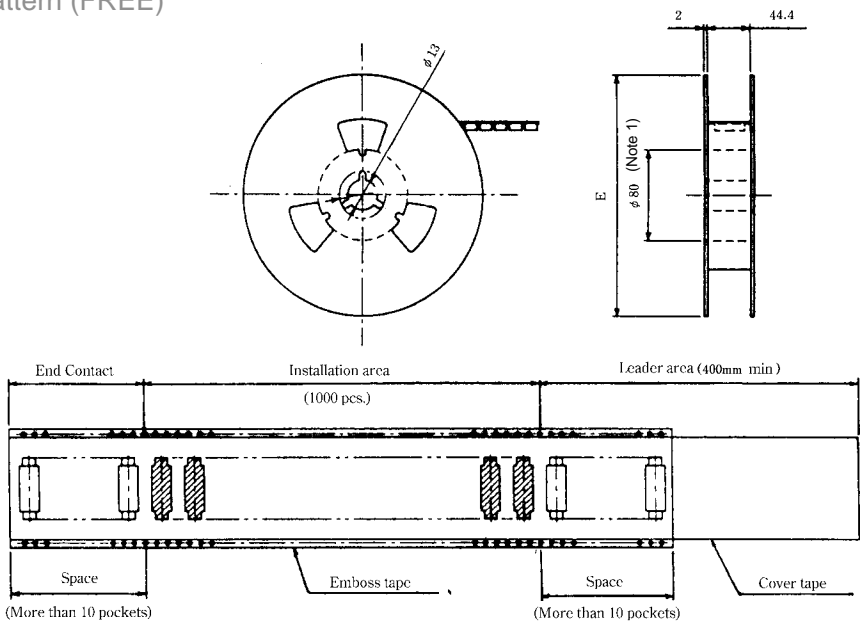


Unit: mm

P/S	Part Number	A	B	C	D	E	Product Pieces	
Header	FX8C-**-P-SV (92)	5.5	7.9	5.2	1.2	φ370	1000 pieces	
	FX8C-**-P-SV1 (92)	5.5	7.9	6.2	1.2	φ370	1000 pieces	
	FX8C-**-P-SV2 (92)	5.5	7.9	7.2	1.2	φ330	500 pieces	
	FX8C-**-P-SV4 (92)	5.5	7.9	9.2	1.2	φ370	500 pieces	Note 2
	FX8C-**-P-SV6 (92)	5.5	7.9	11.2	1.2	φ370	500 pieces	
Receptacle	FX8C-**-S-SV (92)	6.0	8.4	4.3	1.2	φ330	1000 pieces	Note 1
	FX8C-**-S-SV5 (92)	6.0	8.4	9.3	1.2	φ370	500 pieces	Note 2

\*\* : Number of Contacts

●Reel State Size Pattern (FREE)



Note 1: E dimension for FX8C-140S-SV(92) is φ370, core dia. is φ100.  
Note 2: E dimension for FX8C-120P-SV2(92), FX8C-120S-SV5(92), FX8C-140S-SV5(92) is φ380.