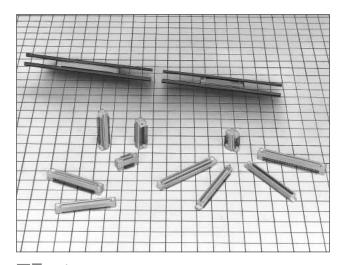
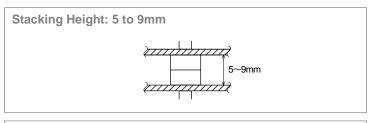


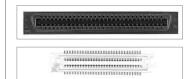
# 0.8mm Pitch Stacking Height 5 to 9mm Connector

#### **FX6 Series**





Mounting area 50% OFF, compared with the half pitch connector



Half pitch connector (FX2 series)

FX6 series
(If compared with 60 contacts)

#### ■Features

#### 1. Stacking Height 5 to 9mm

The board to board stacking height can be set at every millimeter between 5 and 9mm.

#### 2. Effective Contact Length 1.7mm

Despite the low profile type connector, the connector has the 1.7mm long effective contact length and provides a margin sufficient to contact.

#### 3. Mating Guide

The self-alignment for mating action exhibits a high guide level at  $\pm$  1mm, and makes the mating process easier by providing the guide rib.

#### 4. Automatic Mounting

The standard packaging specification specifies the stick package, considering the automatic mount, while the emboss package can also correspond to the connector with less than 80 contacts. (However, the product is limited to 80 contacts.)

#### 5. SMT Coplanarity

The lead coplanarity on the SMT soldered area is maintained with the high accuracy of less than 0.1mm.

## ■ Applications

Note PC, business equipments such as handy terminals, and other equipment which require miniaturization or light-weight.

### **■**Product Specifications

Rating	Current rating 0.5A	Operating Temperature Range -55℃ to +85℃ Note 1.	Storage Temperature Range -10°C to +60°C Note 2.
Rating	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	40m 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: 50m ohms max.	96 hours at temperature of 40°C and humidity of 90% to 95%		
	Insulation resistance: 100m ohms min.			
6. Temperature Cycle	Contact resistance: 50m ohms max:	(-55°C: 30 minutes 15 to 35°C: 2 to 3 minutes		
6. Temperature Cycle	Insulation resistance: 100m ohms min.	85°C: 30 minutes 15 to 35°C: 2 to 3minutes)5 cycles		
7. Durability (Mating/un-mating)	Contact resistance: 50m ohms max.	100 cycles		
8. Resistance to Soldering	No deformation of components affecting performance.	Reflow: At the recommended temperature profile		
heat		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. 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	
Insulation	PPS	Light brown	own UL94V-0		
Header Contact	- Phosphor bronze	Contact area	Gold plated		
Receptacle Contact	Friosprior bronze	Lead area	Tin plated		

Note 1: The black dots on the insulater will not affect performance.

Note 2 : FX6(A)-\*P-0.8SV(\*) is gold plated.

### **■**Ordering Information

FX6	(A) -	*	P	-	8.0	SV	1	(91)
0	2	3	4		6	6	7	8

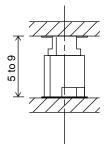
Series Name: FX6	Contact type SV: Board vertical type					
Blank: With boss	Product Height Variable Blank: Standard, 1: +1mm					
A : Without boss	2 : +2mm					
Number of Contacts : 20,40,50,60,80,100	Packaging Style					
Connector Type	(71) : Stick packaging (No pick & place tape)					
P: Header	(91): Stick packaging (Pick & place tape)					
S: Receptacle	(92) : Embossed tape packaging (No pick & place tape)					
Contact Pitch: 0.8mm	(93) : Embossed tape packaging (Pick & place Stick tape)					

## **■**Stacking Height Variation

Unit: mm

	FX6(A)-*S-0.8SV	FX6(A)-*S-0.8SV2
FX6(A)-*P-0.8SV	5	7
FX6(A)-*P-0.8SV1	6	8
FX6(A)-*P-0.8SV2	7	9

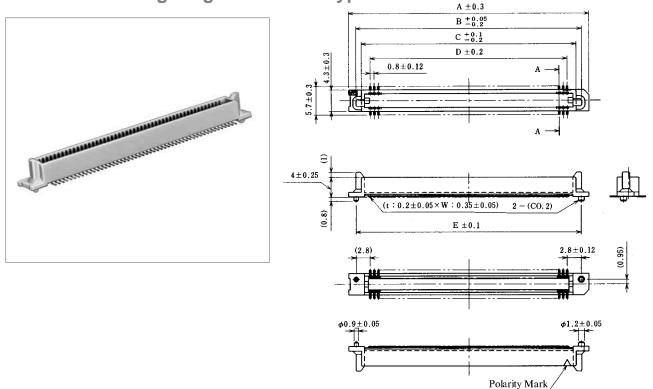
(\* indicates 20, 40, 50, 60, 80, and 100 contacts.)



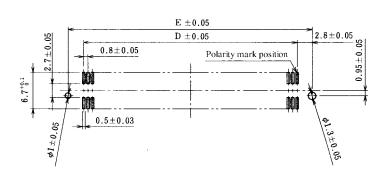
## ■Packaging Type

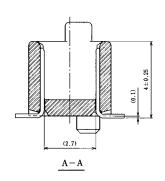
Packaging Type	Number of Contacts	20 contacts	40 contacts	50 contacts	60contacts	80 contacts	100 contacts		
Stick Packaging	Packaged Product Pieces	33 pieces	22 pieces	19 pieces	16 pieces	13 pieces	11 pieces		
Stick i ackaging	Sales Unit	Order by doubling t	Order by doubling the number of pieces contained in the product. (Example) In case of 20 contacts, 33 pieces, 66 p						
	Tape Width	24mm	44mm	44mm	44mm	56mm			
	Product Pitch								
Embossed Tape Packaging	Emboss Reel Diameter	FX6(A)-*P-	-0.8SV ······· -0.8SV.FX6(A -0.8SV1.FX6	A)-*S-0.8SV	2	····· <i>ϕ</i> 360mm	X		
	Packaged Product Pieces	1000 pieces packaged per reel							
	Sales Unit			Per reel			/ \		

### ■Header-Stacking Height: Standard type



## **●**PCB mounting pattern

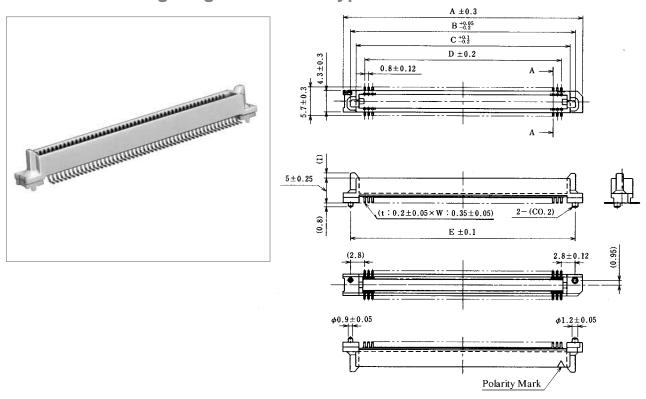




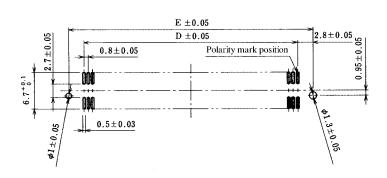
Unit: mm

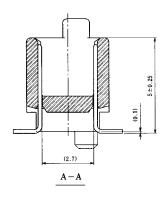
Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	RoHS
FX6- 20P-0.8SV(71)	576-0001-3-71	20	15.8	12.9	10.7	7.2	12.8	
FX6- 40P-0.8SV(71)	576-0003-9-71	40	23.8	20.9	18.7	15.2	20.8	
FX6- 50P-0.8SV(71)	576-0004-1-71	50	27.8	24.9	22.7	19.2	24.8	YES
FX6- 60P-0.8SV(71)	576-0005-4-71	60	31.8	28.9	26.7	23.2	28.8	163
FX6- 80P-0.8SV(71)	576-0007-0-71	80	39.8	36.9	34.7	31.2	36.8	
FX6-100P-0.8SV(71)	576-0008-2-71	100	47.8	44.9	42.7	39.2	44.8	

### ■Header-Stacking Height: Standard type



## **▶** PCB mounting pattern

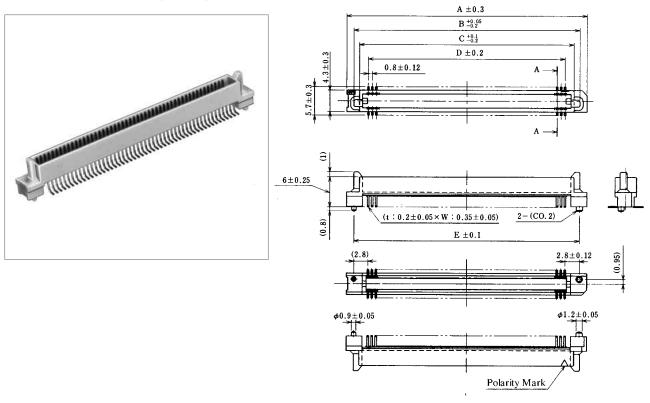




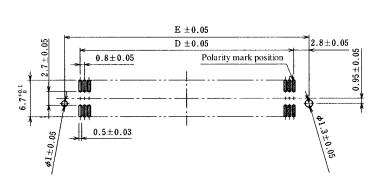
Unit: mm

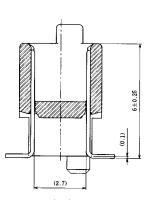
Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	RoHS
FX6- 20P-0.8SV1(71)	576-0021-0-71	20	15.8	12.9	10.7	7.2	12.8	
FX6- 40P-0.8SV1(71)	576-0023-6-71	40	23.8	20.9	18.7	15.2	20.8	
FX6- 50P-0.8SV1(71)	576-0024-9-71	50	27.8	24.9	22.7	19.2	24.8	YES
FX6- 60P-0.8SV1(71)	576-0025-1-71	60	31.8	28.9	26.7	23.2	28.8	
FX6- 80P-0.8SV1(71)	576-0027-7-71	80	39.8	36.9	34.7	31.2	36.8	
FX6-100P-0.8SV1(71)	576-0028-0-71	100	47.8	44.9	42.7	39.2	44.8	

### ■Header-Stacking Height: Standard+2mm type



## **●** PCB mounting pattern

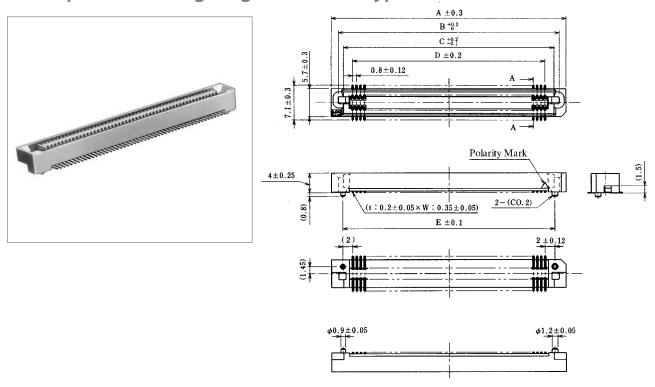




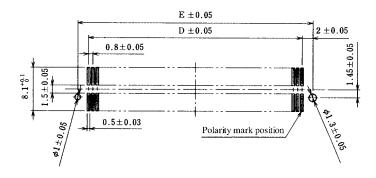
Unit: mm

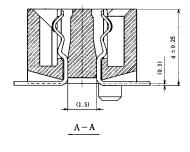
								O	
Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	RoHS	
FX6- 20P-0.8SV2(71)	576-0041-8-71	20	15.8	12.9	10.7	7.2	12.8		
FX6- 40P-0.8SV2(71)	576-0043-3-71	40	23.8	20.9	18.7	15.2	20.8		
FX6- 50P-0.8SV2(71)	576-0044-6-71	50	27.8	24.9	22.7	19.2	24.8	YES	
FX6- 60P-0.8SV2(71)	576-0045-9-71	60	31.8	28.9	26.7	23.2	28.8	123	
FX6- 80P-0.8SV2(71)	576-0047-4-71	80	39.8	36.9	34.7	31.2	36.8		
FX6-100P-0.8SV2(71)	576-0048-7-71	100	47.8	44.9	42.7	39.2	44.8		

### ■Receptacle-Stacking Height: Standard type



## **▶**PCB mounting pattern



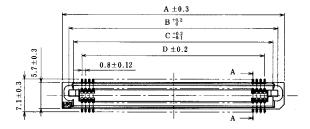


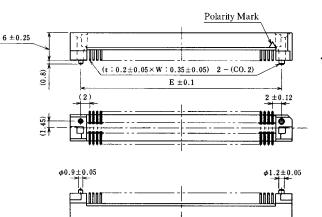
Unit: mm

Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	RoHS
FX6- 20S-0.8SV(71)	576-0101-8-71	20	15.8	12.95	10.9	7.2	11.2	
FX6- 40S-0.8SV(71)	576-0103-3-71	40	23.8	20.95	18.9	15.2	19.2	
FX6- 50S-0.8SV(71)	576-0104-6-71	50	27.8	24.95	22.9	19.2	23.2	YES
FX6- 60S-0.8SV(71)	576-0105-9-71	60	31.8	28.95	26.9	23.2	27.2	
FX6- 80S-0.8SV(71)	576-0107-4-71	80	39.8	36.95	34.9	31.2	35.2	
FX6-100S-0.8SV(71)	576-0108-7-71	100	47.8	44.95	42.9	39.2	43.2	

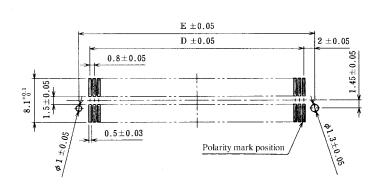
#### ■Receptacle-Stacking Height: Standard+2mm type

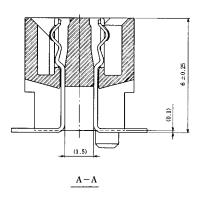






## **▶** PCB mounting pattern



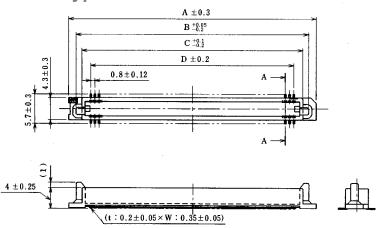


Unit: mm

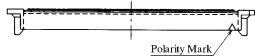
Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	RoHS
FX6- 20S-0.8SV2(71)	576-0121-5-71	20	15.8	12.95	10.9	7.2	11.2	
FX6- 40S-0.8SV2(71)	576-0123-0-71	40	23.8	20.95	18.9	15.2	19.2	
FX6- 50S-0.8SV2(71)	576-0124-3-71	50	27.8	24.95	22.9	19.2	23.2	YES
FX6- 60S-0.8SV2(71)	576-0125-6-71	60	31.8	28.95	26.9	23.2	27.2	
FX6- 80S-0.8SV2(71)	576-0127-1-71	80	39.8	36.95	34.9	31.2	35.2	
FX6-100S-0.8SV2(71)	576-0128-4-71	100	47.8	44.95	42.9	39.2	43.2	

### ■Header-Stacking Height: Standard type

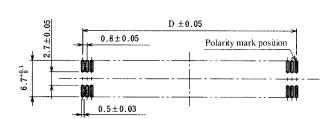


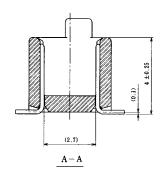






## **●**PCB mounting pattern



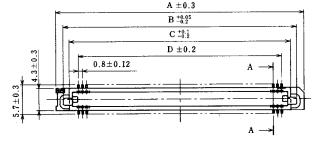


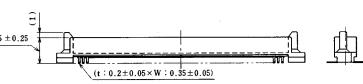
Unit: mm

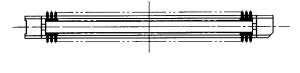
Part Number	CL No.	Number of Contacts	Α	В	С	D	RoHS
FX6A- 20P-0.8SV(71)	576-0201-2-71	20	15.8	12.9	10.7	7.2	YES
FX6A- 40P-0.8SV(71)	576-0203-8-71	40	23.8	20.9	18.7	15.2	
FX6A- 50P-0.8SV(71)	576-0204-0-71	50	27.8	24.9	22.7	19.2	
FX6A- 60P-0.8SV(71)	576-0205-3-71	60	31.8	28.9	26.7	23.2	123
FX6A- 80P-0.8SV(71)	576-0207-9-71	80	39.8	36.9	34.7	31.2	
FX6A-100P-0.8SV(71)	576-0208-1-71	100	47.8	44.9	42.7	39.2	

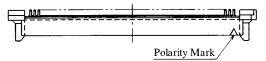
### ■Header-Stacking Height: Standard+1 type



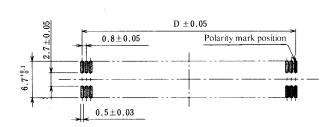


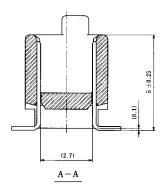






## **●**PCB mounting pattern



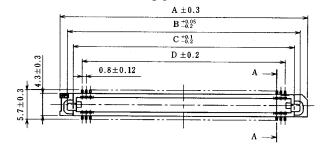


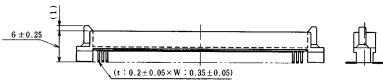
Unit: mm

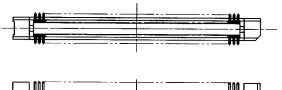
Part Number	CL No.	Number of Contacts	Α	В	С	D	RoHS
FX6A- 20P-0.8SV1(71)	576-0221-0-71	20	15.8	12.9	10.7	7.2	
FX6A- 40P-0.8SV1(71)	576-0223-5-71	40	23.8	20.9	18.7	15.2	
FX6A- 50P-0.8SV1(71)	576-0224-8-71	50	27.8	24.9	22.7	19.2	YES
FX6A- 60P-0.8SV1(71)	576-0225-0-71	60	31.8	28.9	26.7	23.2	123
FX6A- 80P-0.8SV1(71)	576-0227-6-71	80	39.8	36.9	34.7	31.2	
FX6A-100P-0.8SV1(71)	576-0228-9-71	100	47.8	44.9	42.7	39.2	

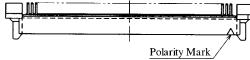
### ■Receptacle-Stacking Height: Standard+2mm type



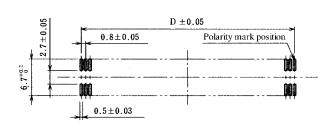


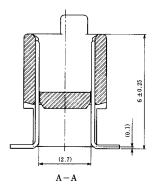






## **▶** PCB mounting pattern

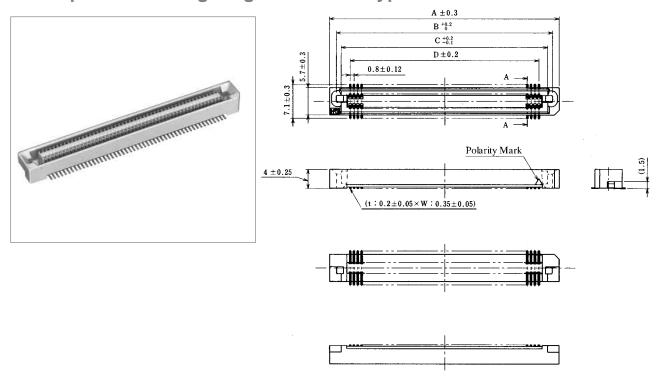




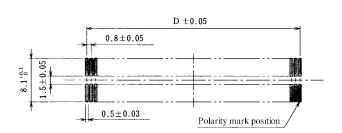
Unit: mm

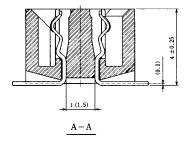
Part Number	CL No.	Number of Contacts	А	В	С	D	RoHS
FX6A- 20P-0.8SV2(71)	576-0241-7-71	20	15.8	12.9	10.7	7.2	
FX6A- 40P-0.8SV2(71)	576-0243-2-71	40	23.8	20.9	18.7	15.2	
FX6A- 50P-0.8SV2(71)	576-0244-5-71	50	27.8	24.9	22.7	19.2	YES
FX6A- 60P-0.8SV2(71)	576-0245-8-71	60	31.8	28.9	26.7	23.2	
FX6A- 80P-0.8SV2(71)	576-0247-3-71	80	39.8	36.9	34.7	31.2	
FX6A-100P-0.8SV2(71)	576-0248-6-71	100	47.8	44.9	42.7	39.2	

#### ■Receptacle-Stacking Height: Standard type



## **●** PCB mounting pattern

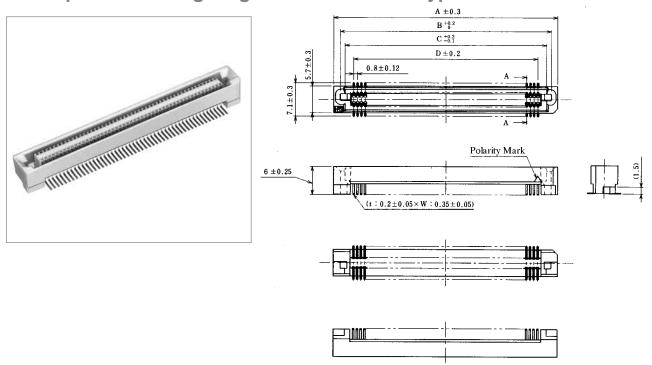




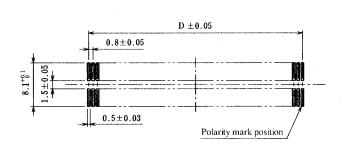
Unit: mm

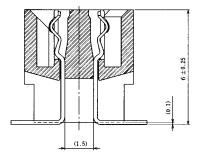
Part Number	CL No.	Number of Contacts	Α	В	С	D	RoHS
FX6A- 20S-0.8SV(71)	576-0301-7-71	20	15.8	12.95	10.9	7.2	YES
FX6A- 40S-0.8SV(71)	576-0303-2-71	40	23.8	20.95	18.9	15.2	
FX6A- 50S-0.8SV(71)	576-0304-5-71	50	27.8	24.95	22.9	19.2	
FX6A- 60S-0.8SV(71)	576-0305-8-71	60	31.8	28.95	26.9	23.2	
FX6A- 80S-0.8SV(71)	576-0307-3-71	80	39.8	36.95	34.9	31.2	
FX6A-100S-0.8SV(71)	576-0308-6-71	100	47.8	44.95	42.9	39.2	

### ■Receptacle-Stacking Height: Standard+2mm type



## **▶**PCB mounting pattern





Unit: mm

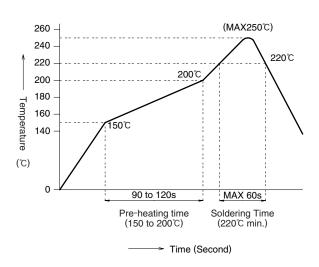
Part Number	CL No.	Number of Contacts	Α	В	С	D	RoHS
FX6A- 20S-0.8SV2(71)	576-0321-4-71	20	15.8	12.95	10.9	7.2	YES
FX6A- 40S-0.8SV2(71)	576-0323-0-71	40	23.8	20.95	18.9	15.2	
FX6A- 50S-0.8SV2(71)	576-0324-2-71	50	27.8	24.95	22.9	19.2	
FX6A- 60S-0.8SV2(71)	576-0325-5-71	60	31.8	28.95	26.9	23.2	
FX6A- 80S-0.8SV2(71)	576-0327-0-71	80	39.8	36.95	34.9	31.2	
FX6A-100S-0.8SV2(71)	576-0328-3-71	100	47.8	44.95	42.9	39.2	

#### **♦** Precautions

#### 1. Tolerance Clearance on Mating Side

The effective contact length of the product is set to 1.7mm. Please use the products as to set the clearance within 1.0mm between the header and the receptacle in the mating process.

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



#### **HRS** test conditions

Test boardGlass epoxy 110mm×55mm×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.

#### 3. Board to Board Size

The board to board size of the male/female connector shown in the application pattern doesn't include the solder paste thickness. Thus, after the connector is mounted on the board, consider that the board to board size will be widened in proportion to the solder paste thickness.