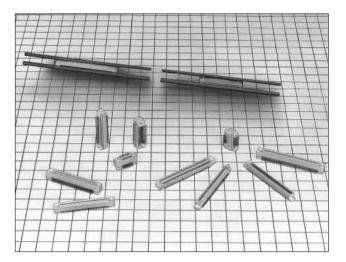
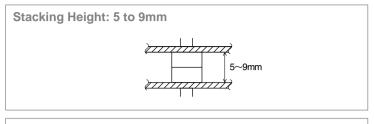


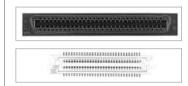
# 0.8mm Pitch Stacking Height 5 to 9mm Connector

#### **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  $\pm\,1$ mm, 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°C to +85°C Note 1.	Storage Temperature Range -10°C to +60°C Note 2.
Kating	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℃: 30 minutes 15 to 35℃: 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	The determination of compensition directing 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 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.

The product information in this catalog is for reference only. Please request the Engineering Drawing for the most current and accurate design information. All non-Rolf xed ser have been districted restillated from the properties on the Hirose website Rolfs search at www.hirose-connectors.com, or contact your Hirose sales representative.

#### **■**Material

Part	Material	Fi	nish	Remarks
Insulation	PPS	Light brown UL94V		UL94V-0
Header Contact	Phosphor bronze	Contact area	Gold plated	
Receptacle Contact	1 Hospitor brotize	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



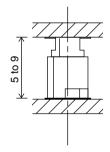
Series Name: FX6	6 Contact type SV: Board vertical type				
2 Blank: With boss	Product Height Variable Blank: Standard, 1: +1mm				
A : Without boss	2:+2mm				
3 Number of Contacts : 20,40,50,60,80,100	Packaging Style				
Connector Type	(71) : Stick packaging (No pick & place tape)				
P: Header	(91) : Stick packaging (Pick & place tape)				
S: Receptacle	(92) : Embossed tape packaging (No pick & place tape)				
6 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

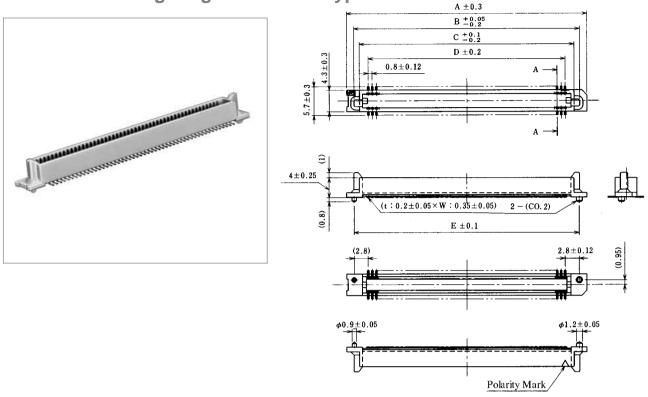
(\* indicates 20, 40, 50, 60, 80, and 100 contacts.)



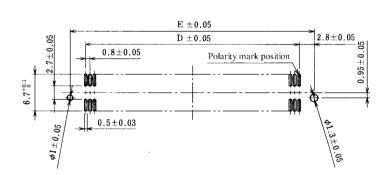
#### ■Packaging Type

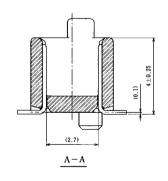
Packaging Type	Number of Contacts	20 contacts	40 contacts	50 contacts	60contacts	80 contacts	100 contacts	
Stick Packaging	Packaged Product Pieces	33 pieces	22 pieces	19 pieces	16 pieces	13 pieces	11 pieces	
Stick Fackaging	Sales Unit	Order by doubling t	Order by doubling the number of pieces contained in the product. (Example) In case of 20 contacts,33 pie					
	Tape Width	24mm	44mm	44mm	44mm	56mm		
	Product Pitch							
Embossed Tape Packaging	Emboss Reel Diameter	FX6(A)-*S-0.8SV ····································						
		FX6(A)-*P-0.8SV1.FX6(A)-*P-0.8SV2 ····································						
	Packaged Product Pieces	1000 pieces packaged per reel						
	Sales Unit			Per reel			]/ \	

### ■Header-Stacking Height: Standard type



## **●** PCB mounting pattern

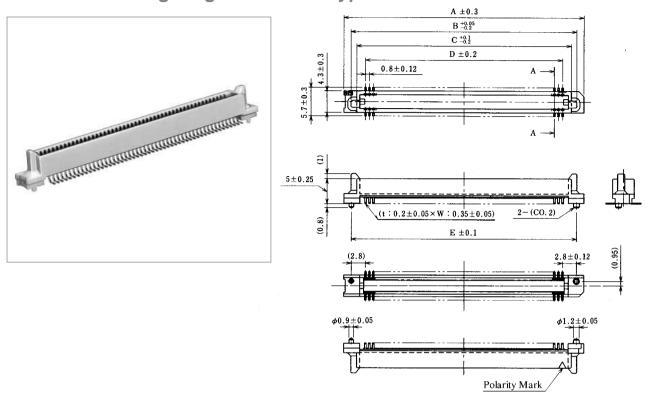




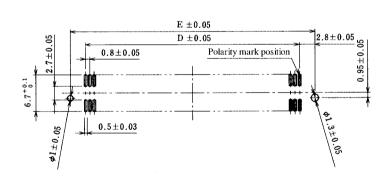
Unit: mm

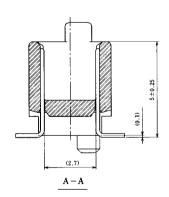
								•
Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	RoHS
FX6- 20P-0.8SV(71)	576-0001-3-71	20	15.8	12.9	10.7	7.2	12.8	
FX6- 40P-0.8SV(71)	576-0003-9-71	40	23.8	20.9	18.7	15.2	20.8	
FX6- 50P-0.8SV(71)	576-0004-1-71	50	27.8	24.9	22.7	19.2	24.8	YES
FX6- 60P-0.8SV(71)	576-0005-4-71	60	31.8	28.9	26.7	23.2	28.8	] 123
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

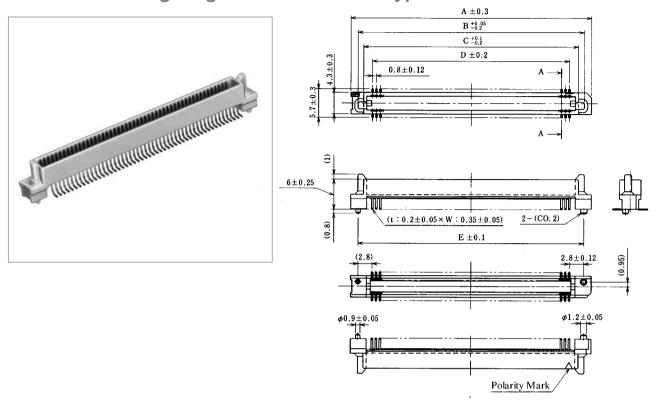




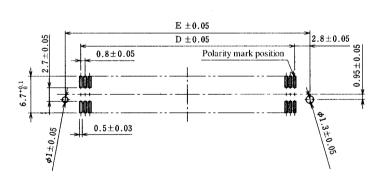
Unit: mm

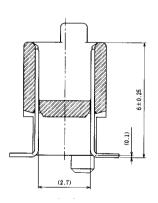
Part Number	CL No.	Number of Contacts	А	В	С	D	E	RoHS
FX6- 20P-0.8SV1(71)	576-0021-0-71	20	15.8	12.9	10.7	7.2	12.8	
FX6- 40P-0.8SV1(71)	576-0023-6-71	40	23.8	20.9	18.7	15.2	20.8	
FX6- 50P-0.8SV1(71)	576-0024-9-71	50	27.8	24.9	22.7	19.2	24.8	YES
FX6- 60P-0.8SV1(71)	576-0025-1-71	60	31.8	28.9	26.7	23.2	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

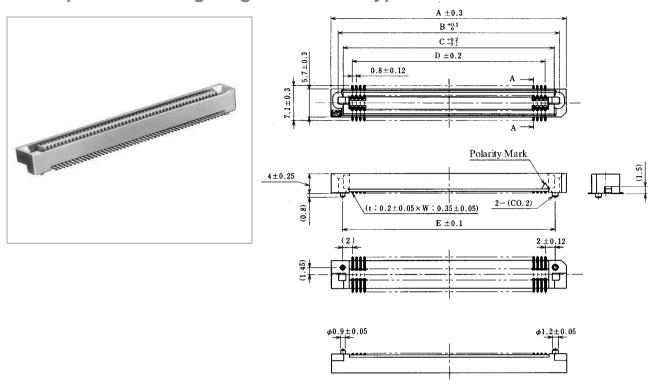




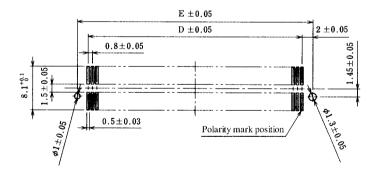
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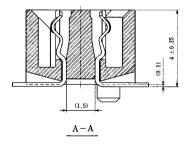
							•	Offic. Hilli
Part Number	CL No.	Number of Contacts	Α	В	С	D	Е	RoHS
FX6- 20P-0.8SV2(71)	576-0041-8-71	20	15.8	12.9	10.7	7.2	12.8	
FX6- 40P-0.8SV2(71)	576-0043-3-71	40	23.8	20.9	18.7	15.2	20.8	
FX6- 50P-0.8SV2(71)	576-0044-6-71	50	27.8	24.9	22.7	19.2	24.8	YES
FX6- 60P-0.8SV2(71)	576-0045-9-71	60	31.8	28.9	26.7	23.2	28.8	
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

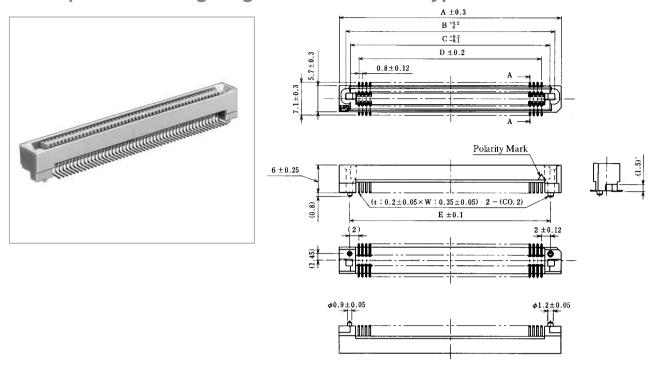




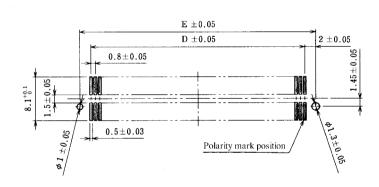
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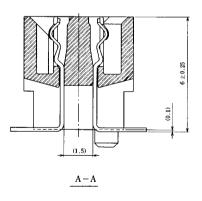
Part Number	CL No.	Number of Contacts	А	В	C	D	Е	RoHS
FX6- 20S-0.8SV(71)	576-0101-8-71	20	15.8	12.95	10.9	7.2	11.2	
FX6- 40S-0.8SV(71)	576-0103-3-71	40	23.8	20.95	18.9	15.2	19.2	
FX6- 50S-0.8SV(71)	576-0104-6-71	50	27.8	24.95	22.9	19.2	23.2	YES
FX6- 60S-0.8SV(71)	576-0105-9-71	60	31.8	28.95	26.9	23.2	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



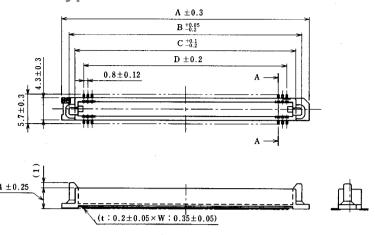


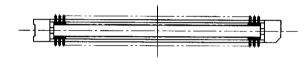
Unit: mm

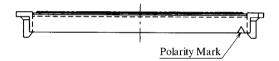
Part Number	CL No.	Number of Contacts	Α	В	С	D	E	RoHS
FX6- 20S-0.8SV2(71)	576-0121-5-71	20	15.8	12.95	10.9	7.2	11.2	
FX6- 40S-0.8SV2(71)	576-0123-0-71	40	23.8	20.95	18.9	15.2	19.2	
FX6- 50S-0.8SV2(71)	576-0124-3-71	50	27.8	24.95	22.9	19.2	23.2	YES
FX6- 60S-0.8SV2(71)	576-0125-6-71	60	31.8	28.95	26.9	23.2	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

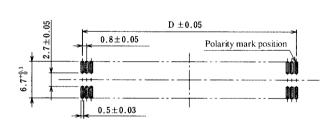


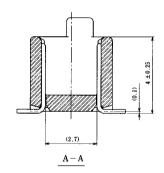






## **●**PCB mounting pattern



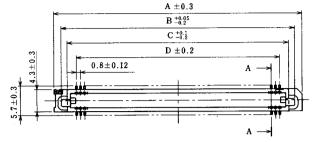


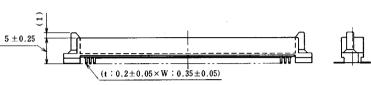
Unit: mm

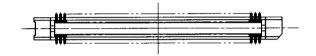
Part Number	CL No.	Number of Contacts	Α	В	С	D	RoHS
FX6A- 20P-0.8SV(71)	576-0201-2-71	20	15.8	12.9	10.7	7.2	
FX6A- 40P-0.8SV(71)	576-0203-8-71	40	23.8	20.9	18.7	15.2	
FX6A- 50P-0.8SV(71)	576-0204-0-71	50	27.8	24.9	22.7	19.2	YES
FX6A- 60P-0.8SV(71)	576-0205-3-71	60	31.8	28.9	26.7	23.2	
FX6A- 80P-0.8SV(71)	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	

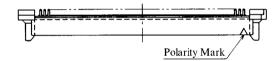
### ■Header-Stacking Height: Standard+1 type



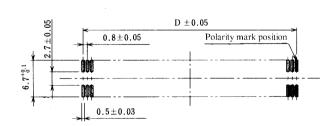


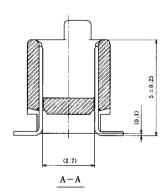






## **●** PCB mounting pattern

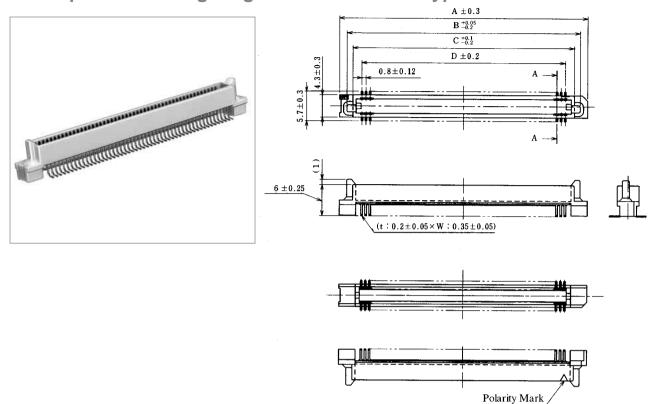




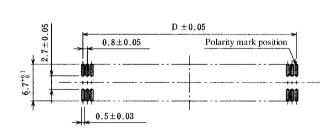
Unit: mm

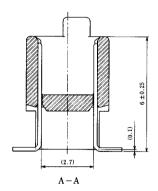
Part Number	CL No.	Number of Contacts	Α	В	С	D	RoHS
FX6A- 20P-0.8SV1(71)	576-0221-0-71	20	15.8	12.9	10.7	7.2	
FX6A- 40P-0.8SV1(71)	576-0223-5-71	40	23.8	20.9	18.7	15.2	
FX6A- 50P-0.8SV1(71)	576-0224-8-71	50	27.8	24.9	22.7	19.2	YES
FX6A- 60P-0.8SV1(71)	576-0225-0-71	60	31.8	28.9	26.7	23.2	1123
FX6A- 80P-0.8SV1(71)	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

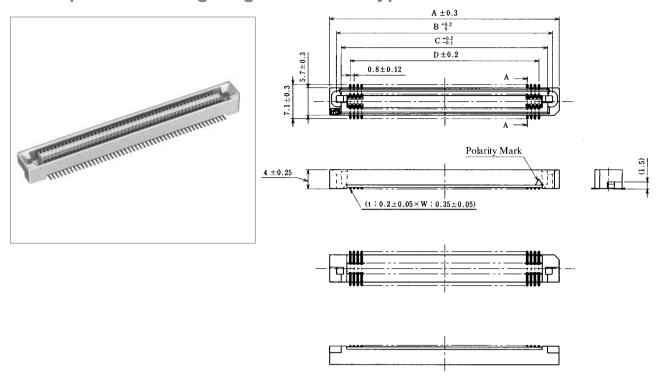




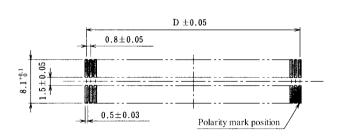
Unit: mm

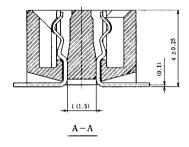
Part Number	CL No.	Number of Contacts	Α	В	С	D	RoHS
FX6A- 20P-0.8SV2(71)	576-0241-7-71	20	15.8	12.9	10.7	7.2	
FX6A- 40P-0.8SV2(71)	576-0243-2-71	40	23.8	20.9	18.7	15.2	
FX6A- 50P-0.8SV2(71)	576-0244-5-71	50	27.8	24.9	22.7	19.2	YES
FX6A- 60P-0.8SV2(71)	576-0245-8-71	60	31.8	28.9	26.7	23.2	11.5
FX6A- 80P-0.8SV2(71)	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

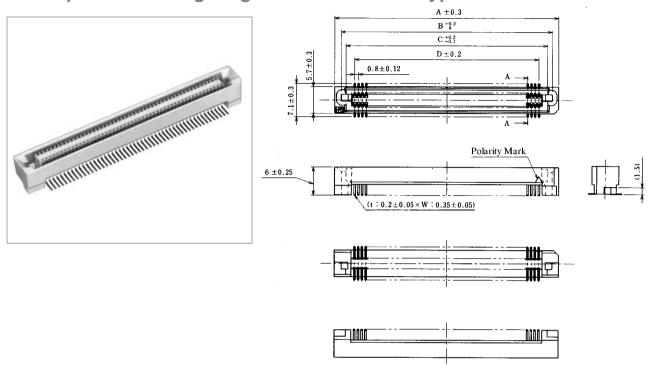




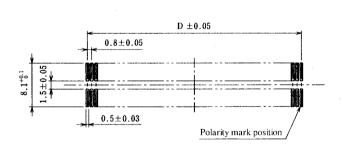
Unit: mm

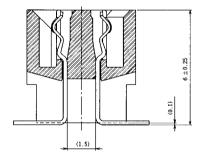
Part Number	CL No.	Number of Contacts	Α	В	С	D	RoHS
FX6A- 20S-0.8SV(71)	576-0301-7-71	20	15.8	12.95	10.9	7.2	
FX6A- 40S-0.8SV(71)	576-0303-2-71	40	23.8	20.95	18.9	15.2	
FX6A- 50S-0.8SV(71)	576-0304-5-71	50	27.8	24.95	22.9	19.2	YES
FX6A- 60S-0.8SV(71)	576-0305-8-71	60	31.8	28.95	26.9	23.2	11.5
FX6A- 80S-0.8SV(71)	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

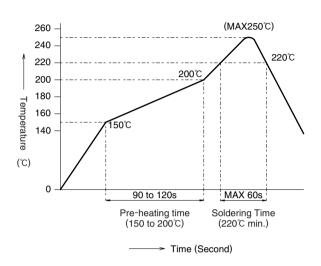
Part Number	CL No.	Number of Contacts	Α	В	С	D	RoHS
FX6A- 20S-0.8SV2(71)	576-0321-4-71	20	15.8	12.95	10.9	7.2	
FX6A- 40S-0.8SV2(71)	576-0323-0-71	40	23.8	20.95	18.9	15.2	
FX6A- 50S-0.8SV2(71)	576-0324-2-71	50	27.8	24.95	22.9	19.2	YES
FX6A- 60S-0.8SV2(71)	576-0325-5-71	60	31.8	28.95	26.9	23.2	ILS
FX6A- 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.

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