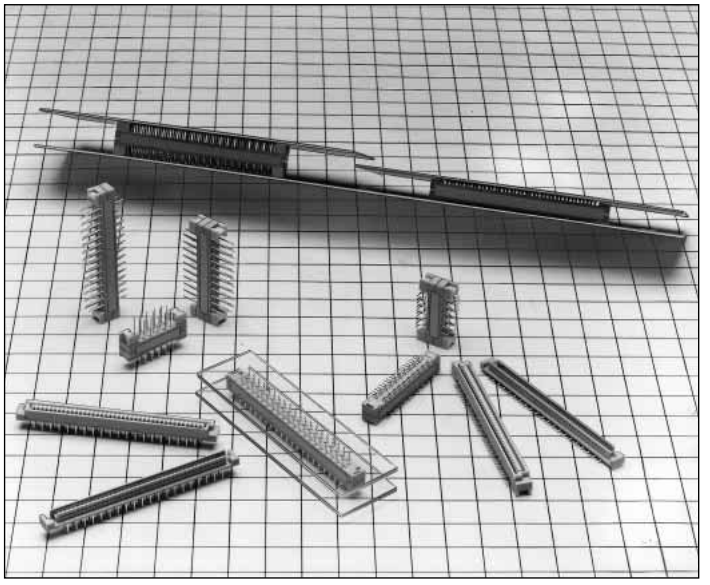
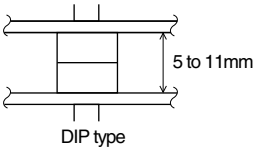
Stacking Height 5 to 11mm Half Pitch Connector

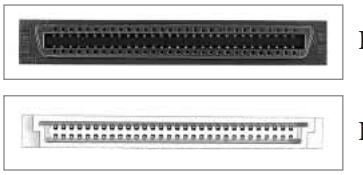
FX4 Series



Stacking Height Flexible



The mounting area 70% reduced, compared with conventional product (FX2 series)



(Compared with 60 contacts)

■Features

The FX4 series is a miniature board to board connectors, where the stacking height can be set at the 1mm interval.

●Through hole Type

1. Small and Light

The mounting space and weight is reduced about 30%, compared to the conventional product (HRS FX2 series), respectively, and the mounting area about 70% reduced, compared to the conventional one.

2. Stacking Height 5 to 11mm

The board to board stacking height can be set per 1mm from 5mm up to 11mm.

3. Flux Swell Prevention

When solder is dipped, the flux swell from the board rear side is completely prevented.

4. Mis-insertion Prevention and Low Insertion/Extraction Force Mechanism

The connection area is designed to completely prevent the mis-insertion.

Moreover, the low insertion/extraction mechanism is adopted.

■Applications

Computers, peripheral equipments, business equipments, etc.

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■Product Specifications

Rating	Current rating 0.5A Voltage rating 125V AC	Operating Temperature Range -55℃ to +85℃ (Note 1) Operating Humidity Range 40% to 80%	Storage Temperature Range -10℃ to +60℃ (Note 2) Storage Humidity Range 40% to 70%

Item	Specification	Condition
1. Insulation Resistance	100M ohms min.	Measured at 250V PC
2. Withstanding Voltage	No flashover or insulation breakdown.	300V AC for 1 minute
3. Resistance	45m 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: 55m ohms max. Insulation resistance: 100M ohms min.	96 hours at temperature of 40℃ and humidity of 90% to 95%
6. Temperature Cycle	Contact resistance : 55m ohms max. Insulation resistance : 100M ohms min.	(-55℃: 30 minutes 15 to 35℃: 2 to 3 minutes 85℃: 30 minutes 15 to 35℃: 2 to 3minutes) 5 cycles
7. Durability (Mating/un-mating)	Contact resistance : 55m ohms max.	300 cycles
8. Resistance to Soldering heat	No deformation of components affecting performance.	Solder bath: 260℃ for 10 seconds Manual soldering: 360℃ 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
Insulator	Polyamide	Beige	UL94V-0
Receptacle Contact	Phosphor bronze	Selective gold plated	————
Header Contact		Selective gold plated	————

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

■Ordering Information

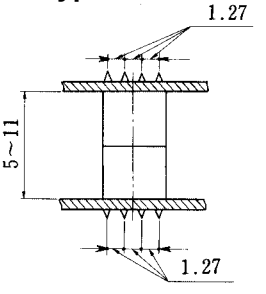
●Dip Type

FX4C 1 - 80 P - 1.27 DSA L
❶ ❷ ❸ ❹ ❺ ❻ ❼

❶ Series Name : FX4C	❹ Connector Type P : Header S : Receptacle
❷ Product Height Variable: None: Standard 1: +1mm 2: +2mm 3: +3mm	❺ Contact Pitch : 1.27mm
❸ Number of Contacts: 20, 32, 40, 52, 60, 68, 80	❻ Contact type DSA : Straight
	❼ L: Board prefixed pin

◆Application Pattern and Stacking Height Combination

●Through hole Type



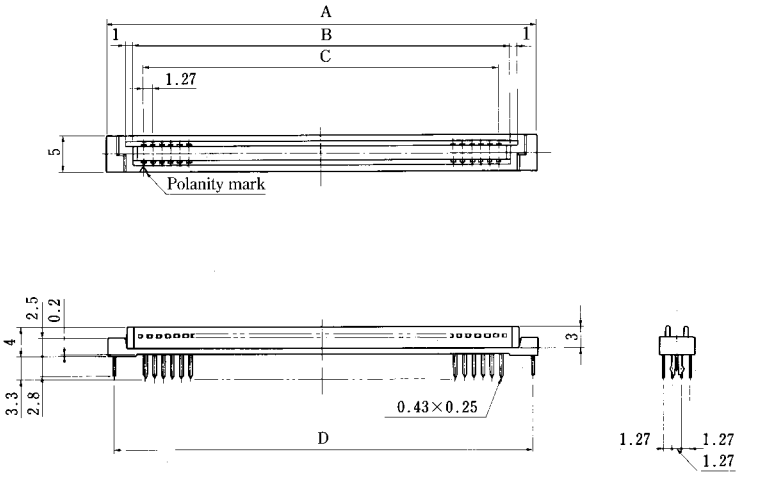
Unit: mm

Header \ Receptacle	FX4C -∗S (Catalog page A124)	FX4C2-∗S (Catalog page A125)	FX4C3-∗S (Catalog page A126)
FX4C -∗P (Catalog page A121)	5	7	8
FX4C1-∗P (Catalog page A122)	6	8	9
FX4C3-∗P (Catalog page A123)	8	10	11

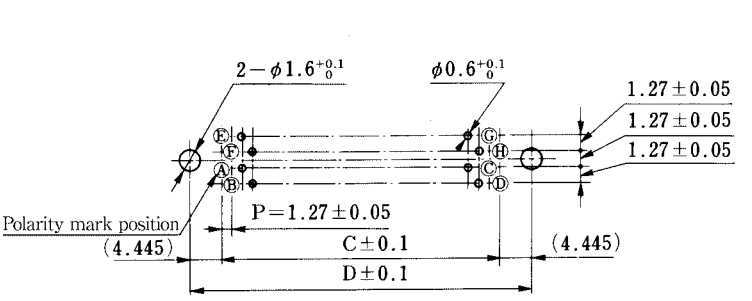
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■Header (Through hole Type)-Stacking Height: Standard type





◆PCB mounting pattern



n= number of contacts

Ⓐ a1	Ⓔ b1
Ⓑ a2	Ⓕ b2
Ⓒ $a\frac{n}{2}-1$	Ⓖ $b\frac{n}{2}-1$
Ⓓ $a\frac{n}{2}$	Ⓗ $b\frac{n}{2}$

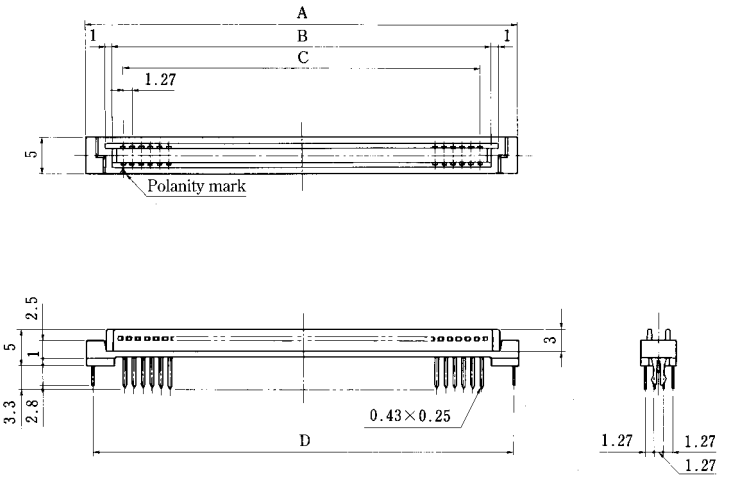
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	RoHS
FX4C-20P-1.27DSA(71)	574-0001-0-71	20	21.87	14.58	11.43	—	YES
FX4C-20P-1.27DSAL(71)	574-0051-9-71					20.32	
FX4C-32P-1.27DSA(71)	574-0002-3-71	32	29.49	22.2	19.05	—	
FX4C-32P-1.27DSAL(71)	574-0052-1-71					27.94	
FX4C-40P-1.27DSA(71)	574-0003-6-71	40	34.57	27.28	24.13	—	
FX4C-40P-1.27DSAL(71)	574-0053-4-71					33.02	
FX4C-52P-1.27DSA(71)	574-0004-9-71	52	42.19	34.9	31.75	—	
FX4C-52P-1.27DSAL(71)	574-0054-7-71					40.64	
FX4C-60P-1.27DSA(71)	574-0005-1-71	60	47.27	39.98	36.83	—	
FX4C-60P-1.27DSAL(71)	574-0055-0-71					45.72	
FX4C-68P-1.27DSA(71)	574-0006-4-71	68	52.35	45.06	41.91	—	
FX4C-68P-1.27DSAL(71)	574-0056-2-71					50.8	
FX4C-80P-1.27DSA(71)	574-0007-7-71	80	59.97	52.68	49.53	—	
FX4C-80P-1.27DSAL(71)	574-0057-5-71					58.42	

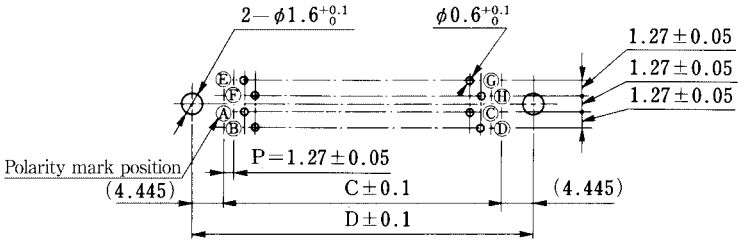
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■Header (Through hole Type)-Stacking Height: Standard+1mm type





◆PCB mounting pattern



n= number of contacts

Ⓐ a1 Ⓔ b1

Ⓑ a2 Ⓕ b2

Ⓒ $a\frac{n}{2}-1$ Ⓖ $b\frac{n}{2}-1$

Ⓓ $a\frac{n}{2}$ Ⓗ $b\frac{n}{2}$

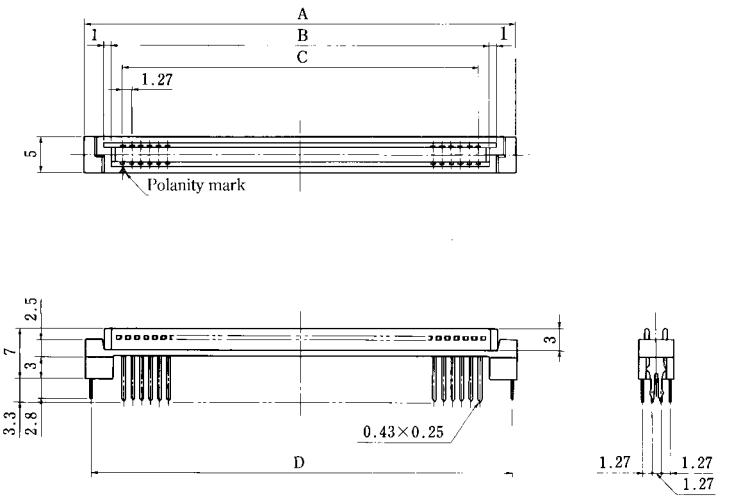
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	RoHS
FX4C1-20P-1.27DSA(71)	574-0011-4-71	20	21.87	14.58	11.43	—	YES
FX4C1-20P-1.27DSAL(71)	574-0061-2-71					20.32	
FX4C1-32P-1.27DSA(71)	574-0012-7-71	32	29.49	22.2	19.05	—	
FX4C1-32P-1.27DSAL(71)	574-0062-5-71					27.94	
FX4C1-40P-1.27DSA(71)	574-0013-0-71	40	34.57	27.28	24.13	—	
FX4C1-40P-1.27DSAL(71)	574-0063-8-71					33.02	
FX4C1-52P-1.27DSA(71)	574-0014-2-71	52	42.19	34.9	31.75	—	
FX4C1-52P-1.27DSAL(71)	574-0064-0-71					40.64	
FX4C1-60P-1.27DSA(71)	574-0015-5-71	60	47.27	39.98	36.83	—	
FX4C1-60P-1.27DSAL(71)	574-0065-3-71					45.72	
FX4C1-68P-1.27DSA(71)	574-0016-8-71	68	52.35	45.06	41.91	—	
FX4C1-68P-1.27DSAL(71)	574-0066-6-71					50.8	
FX4C1-80P-1.27DSA(71)	574-0017-0-71	80	59.97	52.68	49.53	—	
FX4C1-80P-1.27DSAL(71)	574-0067-9-71					58.42	

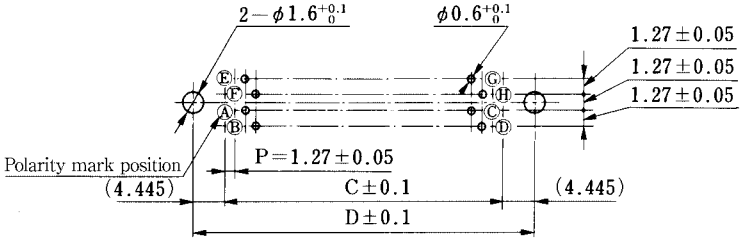
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■Header (Through hole Type)-Stacking Height: Standard+3mm type





◆PCB mounting pattern



n= number of contacts

Ⓐ a1	Ⓔ b1
Ⓑ a2	Ⓕ b2
Ⓒ $a\frac{n}{2}-1$	Ⓖ $b\frac{n}{2}-1$
Ⓓ $a\frac{n}{2}$	Ⓗ $b\frac{n}{2}$

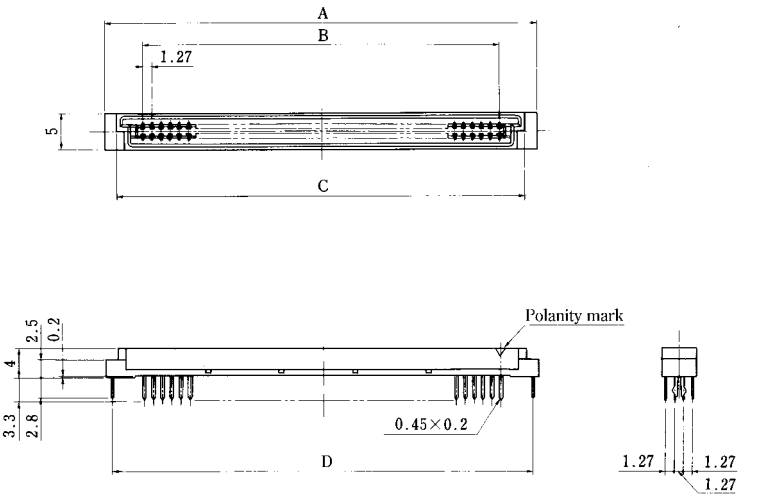
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	RoHS
FX4C3-20P-1.27DSA(71)	574-0031-1-71	20	21.87	14.58	11.43	—	YES
FX4C3-20P-1.27DSAL(71)	574-0081-0-71					20.32	
FX4C3-32P-1.27DSA(71)	574-0032-4-71	32	29.49	22.2	19.05	—	
FX4C3-32P-1.27DSAL(71)	574-0082-2-71					27.94	
FX4C3-40P-1.27DSA(71)	574-0033-7-71	40	34.57	27.28	24.13	—	
FX4C3-40P-1.27DSAL(71)	574-0083-5-71					33.02	
FX4C3-52P-1.27DSA(71)	574-0034-0-71	52	42.19	34.9	31.75	—	
FX4C3-52P-1.27DSAL(71)	574-0084-8-71					40.64	
FX4C3-60P-1.27DSA(71)	574-0035-2-71	60	47.27	39.98	36.83	—	
FX4C3-60P-1.27DSAL(71)	574-0085-0-71					45.72	
FX4C3-68P-1.27DSA(71)	574-0036-5-71	68	52.35	45.06	41.91	—	
FX4C3-68P-1.27DSAL(71)	574-0086-3-71					50.8	
FX4C3-80P-1.27DSA(71)	574-0037-8-71	80	59.97	52.68	49.53	—	
FX4C3-80P-1.27DSAL(71)	574-0087-6-71					58.42	

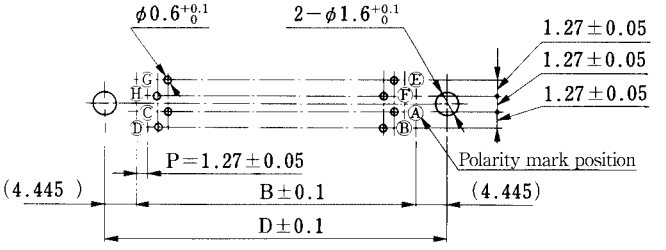
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■Receptacle (Through hole Type)-Stacking Height: Standard type





◆PCB mounting pattern



n= number of contacts

Ⓐ a1	Ⓔ b1
Ⓑ a2	Ⓕ b2
Ⓒ $a\frac{n}{2}-1$	Ⓖ $b\frac{n}{2}-1$
Ⓓ $a\frac{n}{2}$	Ⓗ $b\frac{n}{2}$

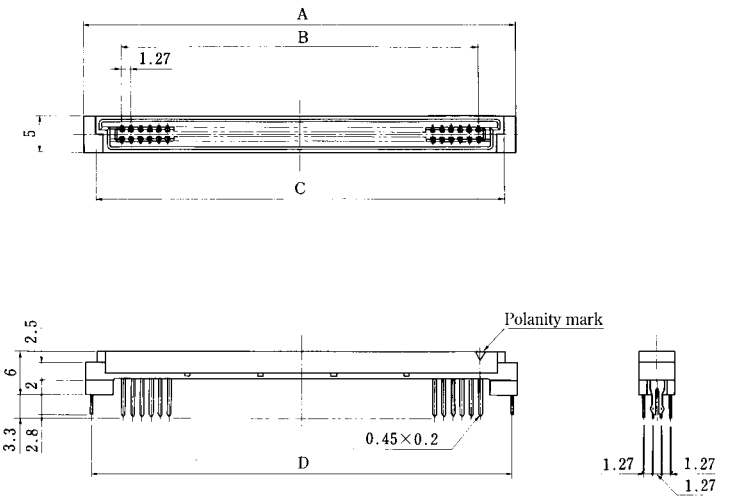
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	RoHS
FX4C-20S-1.27DSA(71)	574-0101-5-71	20	21.87	11.43	18.48	—	YES
FX4C-20S-1.27DSAL(71)	574-0151-3-71					20.32	
FX4C-32S-1.27DSA(71)	574-0102-8-71	32	29.49	19.05	26.1	—	
FX4C-32S-1.27DSAL(71)	574-0152-6-71					27.94	
FX4C-40S-1.27DSA(71)	574-0103-0-71	40	34.57	24.13	31.18	—	
FX4C-40S-1.27DSAL(71)	574-0153-9-71					33.02	
FX4C-52S-1.27DSA(71)	574-0104-3-71	52	42.19	31.75	38.8	—	
FX4C-52S-1.27DSAL(71)	574-0154-1-71					40.64	
FX4C-60S-1.27DSA(71)	574-0105-6-71	60	47.27	36.83	43.88	—	
FX4C-60S-1.27DSAL(71)	574-0155-4-71					45.72	
FX4C-68S-1.27DSA(71)	574-0106-9-71	68	52.35	41.91	48.96	—	
FX4C-68S-1.27DSAL(71)	574-0156-7-71					50.8	
FX4C-80S-1.27DSA(71)	574-0107-1-71	80	59.97	49.53	56.58	—	
FX4C-80S-1.27DSAL(71)	574-0157-0-71					58.42	

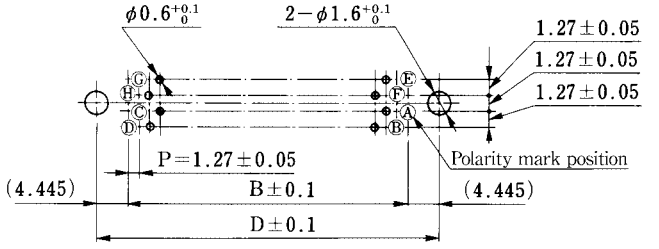
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■Receptacle (Through hole Type)-Stacking Height: Standard+2mm type





◆PCB mounting pattern



n= number of contacts

Ⓐ a1	Ⓔ b1
Ⓑ a2	Ⓕ b2
Ⓒ $a\frac{n}{2}-1$	Ⓖ $b\frac{n}{2}-1$
Ⓓ $a\frac{n}{2}$	Ⓗ $b\frac{n}{2}$

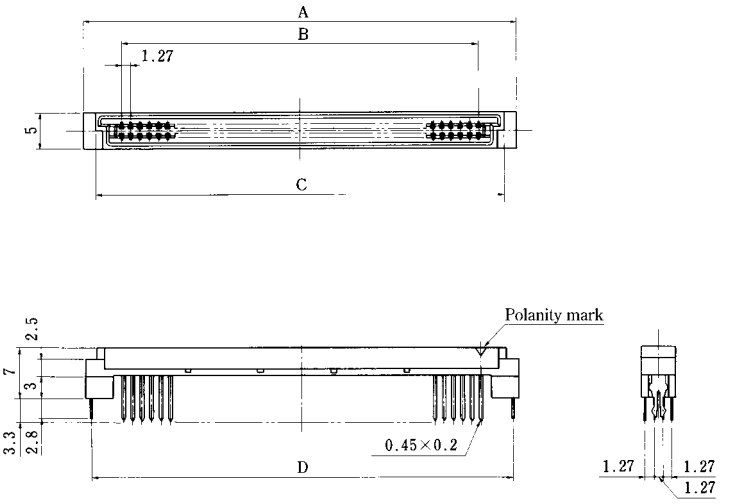
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	RoHS
FX4C2-20S-1.27DSA(71)	574-0121-2-71	20	21.87	11.43	18.48	—	YES
FX4C2-20S-1.27DSAL(71)	574-0171-0-71					20.32	
FX4C2-32S-1.27DSA(71)	574-0122-5-71	32	29.49	19.05	26.1	—	
FX4C2-32S-1.27DSAL(71)	574-0172-3-71					27.94	
FX4C2-40S-1.27DSA(71)	574-0123-8-71	40	34.57	24.13	31.18	—	
FX4C2-40S-1.27DSAL(71)	574-0173-6-71					33.02	
FX4C2-52S-1.27DSA(71)	574-0124-0-71	52	42.19	31.75	38.8	—	
FX4C2-52S-1.27DSAL(71)	574-0174-9-71					40.64	
FX4C2-60S-1.27DSA(71)	574-0125-3-71	60	47.27	36.83	43.88	—	
FX4C2-60S-1.27DSAL(71)	574-0175-1-71					45.72	
FX4C2-68S-1.27DSA(71)	574-0126-6-71	68	52.35	41.91	48.96	—	
FX4C2-68S-1.27DSAL(71)	574-0176-4-71					50.8	
FX4C2-80S-1.27DSA(71)	574-0127-9-71	80	59.97	49.53	56.58	—	
FX4C2-80S-1.27DSAL(71)	574-0177-7-71					58.42	

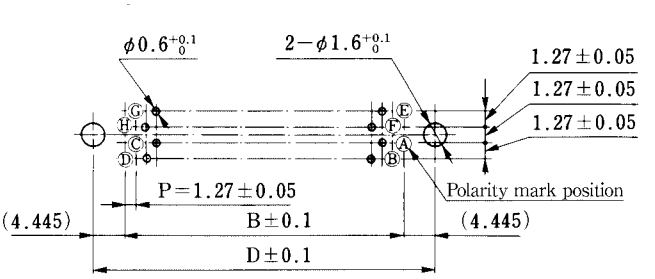
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■Receptacle (Through hole Type)-Stacking Height: Standard+3mm type





◆PCB mounting pattern



n= number of contacts

Ⓐ a1	Ⓔ b1
Ⓑ a2	Ⓕ b2
Ⓒ $a\frac{n}{2}-1$	Ⓖ $b\frac{n}{2}-1$
Ⓓ $a\frac{n}{2}$	Ⓗ $b\frac{n}{2}$

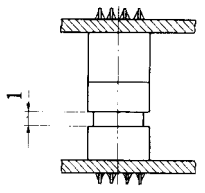
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	RoHS
FX4C3-20S-1.27DSA(71)	574-0131-6-71	20	21.87	11.43	18.48	—	YES
FX4C3-20S-1.27DSAL(71)	574-0181-4-71					20.32	
FX4C3-32S-1.27DSA(71)	574-0132-9-71	32	29.49	19.05	26.1	—	
FX4C3-32S-1.27DSAL(71)	574-0182-7-71					27.94	
FX4C3-40S-1.27DSA(71)	574-0133-1-71	40	34.57	24.13	31.18	—	
FX4C3-40S-1.27DSAL(71)	574-0183-0-71					33.02	
FX4C3-52S-1.27DSA(71)	574-0134-4-71	52	42.19	31.75	38.8	—	
FX4C3-52S-1.27DSAL(71)	574-0184-2-71					40.64	
FX4C3-60S-1.27DSA(71)	574-0135-7-71	60	47.27	36.83	43.88	—	
FX4C3-60S-1.27DSAL(71)	574-0185-5-71					45.72	
FX4C3-68S-1.27DSA(71)	574-0136-0-71	68	52.35	41.91	48.96	—	
FX4C3-68S-1.27DSAL(71)	574-0186-8-71					50.8	
FX4C3-80S-1.27DSA(71)	574-0137-2-71	80	59.97	49.53	56.58	—	
FX4C3-80S-1.27DSAL(71)	574-0187-0-71					58.42	

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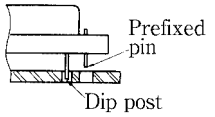
◆Connector Precautions

1. Tolerance Clearance on Mating Side



The effective connecting length of the product is set to 1.5mm. Please use the product to specify the clearance between the header and the receptacle in the connection process within 1mm.

2. Prefixed Process to Board (Through hole Type)



If the prefixed work is required for mounting on the board, please use the prefixed pin type. (Applicable board thickness t = 1.6±0.1)

Cautions: When the connector is installed in the board, the dip post is guided into the board through-hole in order to prevent the dip post breakage, and then insert the board in parallel to the connector so as to push in the prefixed pin.

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