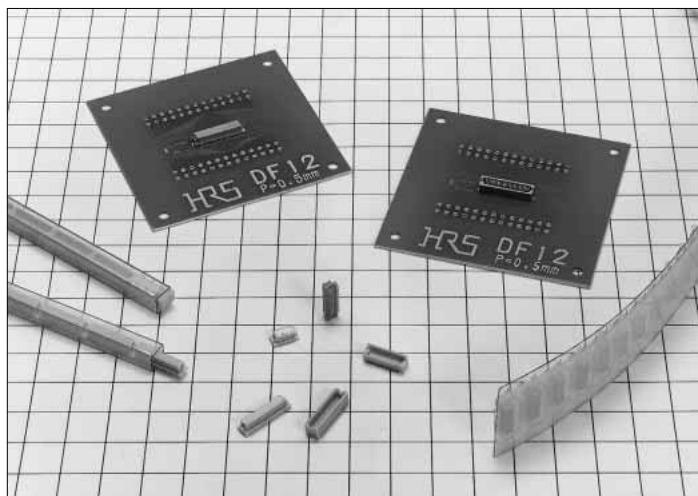


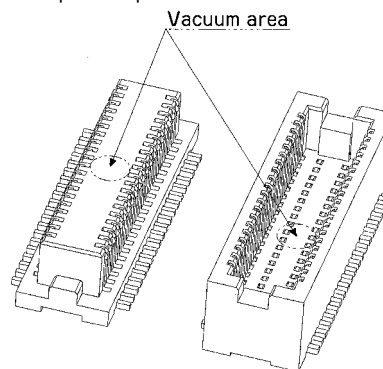
0.5mm Pitch SMT Board to Board Connector

DF12 Series



Correspond to automatic mounting

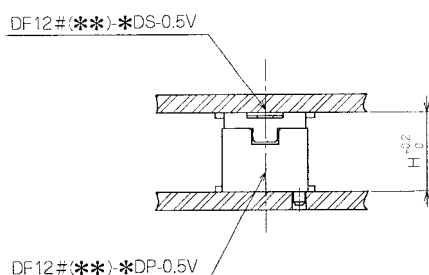
The vacuum pick-up area secures the automatic mounting machine for pick and place.



Features

1. Broad Variations of Stacking Height

In addition to 0.5mm pitch ultra-miniature size connector, the stacking height of 3mm, 3.5mm, 4mm, and 5mm are provided.



Header/Receptacle	DF12#(3.0)-*DS-0.5V Combination stacking height	DF12#-*DS-0.5V Combination stacking height
DF12#(3.0)-*DP-0.5V	3.0	—
DF12#(3.5)-*DP-0.5V	—	3.5
DF12#(4.0)-*DP-0.5V	—	4.0
DF12#(5.0)-*DP-0.5V	—	5.0

Note 1 : (**) of the product name DF12# (**) indicates the stacking height.

Note 2 : The stacking height doesn't include the soldering paste thickness.

[Stacking Height Variation]

Stacking Height		3.0mm	3.5mm	4.0mm	5.0mm
Number of Contacts	10 contacts	○	—	—	—
	14 contacts	○	—	—	—
	20 contacts	○	○	○	○
	30 contacts	○	○	○	○
	32 contacts	○	—	○	—
	36 contacts	○	○	○	○
	40 contacts	○	○	○	○
	50 contacts	○	○	○	○
	60 contacts	○	○	○	○
	80 contacts	○	—	—	—

2. Corresponding to Automatic Mounting

The connector has the vacuum pick-up area to enable automatic mounting with the embossed tape packaging.

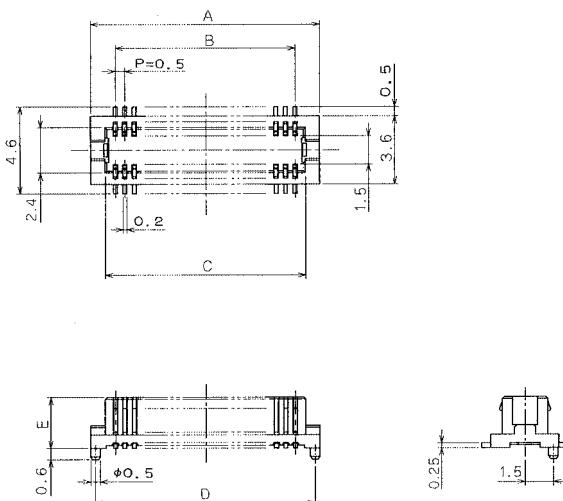
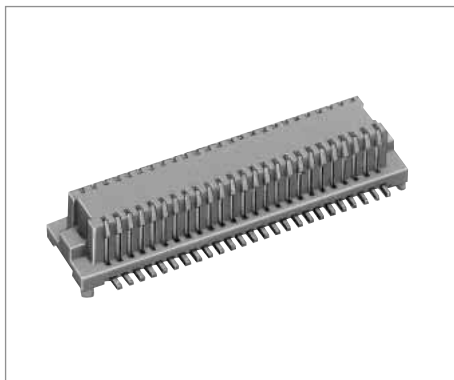
3. Metal Fitting Available

The product including the metal fitting to prevent solder peeling is provided, considering the mounting on FPC.

Applications

Mobile phone, LCD(Liquid Crystal Display), Note PC

Receptacle Without metal fitting



Product Height: 3mm Product

Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	Remarks	RoHS
DF12A (3.0)-10DS-0.5V (81)	537-0626-9-81	10	4.6	2.0	3.1	4.1	2.2	Without metal fitting With boss	YES
DF12A (3.0)-14DS-0.5V (81)	537-0915-6-81	14	5.6	3.0	4.1	5.1			
DF12A (3.0)-20DS-0.5V (81)	537-0628-4-81	20	7.1	4.5	5.6	6.6			
DF12A (3.0)-30DS-0.5V (81)	537-0630-6-81	30	9.6	7.0	8.1	9.1			
DF12A (3.0)-32DS-0.5V (81)	537-0637-5-81	32	10.1	7.5	8.6	9.6			
DF12A (3.0)-36DS-0.5V (81)	537-0631-9-81	36	11.1	8.5	9.6	10.6			
DF12A (3.0)-40DS-0.5V (81)	537-0632-1-81	40	12.1	9.5	10.6	11.6			
DF12A (3.0)-50DS-0.5V (81)	537-0634-7-81	50	14.6	12.0	13.1	14.1			
DF12A (3.0)-60DS-0.5V (81)	537-0636-2-81	60	17.1	14.5	15.6	16.6			
DF12A (3.0)-80DS-0.5V (81)	537-0638-8-81	80	22.1	19.5	20.6	21.6			
DF12C (3.0)-10DS-0.5V (81)	537-0686-0-81	10	4.6	2.0	3.1	—	2.2	Without metal fitting Without boss	
DF12C (3.0)-14DS-0.5V (81)	537-0917-1-81	14	5.6	3.0	4.1	—			
DF12C (3.0)-20DS-0.5V (81)	537-0688-6-81	20	7.1	4.5	5.6	—			
DF12C (3.0)-30DS-0.5V (81)	537-0690-8-81	30	9.6	7.0	8.1	—			
DF12C (3.0)-32DS-0.5V (81)	537-0697-7-81	32	10.1	7.5	8.6	—			
DF12C (3.0)-36DS-0.5V (81)	537-0691-0-81	36	11.1	8.5	9.6	—			
DF12C (3.0)-40DS-0.5V (81)	537-0692-3-81	40	12.1	9.5	10.6	—			
DF12C (3.0)-50DS-0.5V (81)	537-0694-9-81	50	14.6	12.0	13.1	—			
DF12C (3.0)-60DS-0.5V (81)	537-0696-4-81	60	17.1	14.5	15.6	—			
DF12C (3.0)-80DS-0.5V (81)	537-0212-6-81	80	22.1	19.5	20.6	—			

Product Height: 3.5 to 5mm Product

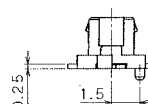
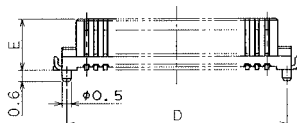
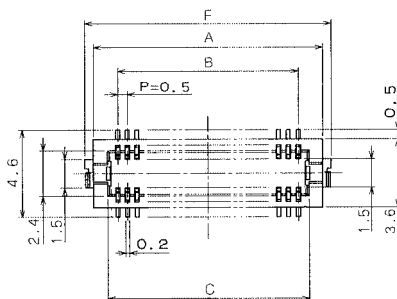
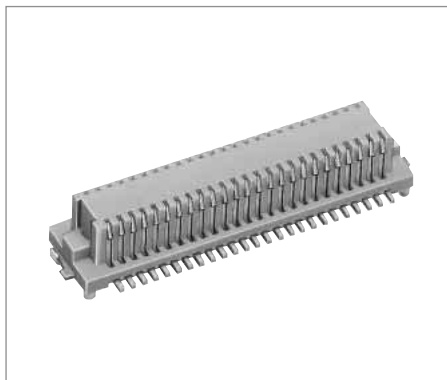
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	Remarks	RoHS
DF12A-20DS-0.5V (81)	537-0078-5-81	20	7.1	4.5	5.6	6.6	2.7	Without metal fitting With boss	YES
DF12A-30DS-0.5V (81)	537-0080-7-81	30	9.6	7.0	8.1	9.1			
DF12A-32DS-0.5V (81)	537-0087-6-81	32	10.1	7.5	8.6	9.6			
DF12A-36DS-0.5V (81)	537-0081-0-81	36	11.1	8.5	9.6	10.6			
DF12A-40DS-0.5V (81)	537-0082-2-81	40	12.1	9.5	10.6	11.6			
DF12A-50DS-0.5V (81)	537-0084-8-81	50	14.6	12.0	13.1	14.1			
DF12A-60DS-0.5V (81)	537-0086-3-81	60	17.1	14.5	15.6	16.6			
DF12C-20DS-0.5V (81)	537-0203-5-81	20	7.1	4.5	5.6	——	2.7	Without metal fitting Without boss	
DF12C-30DS-0.5V (81)	537-0205-0-81	30	9.6	7.0	8.1	——			
DF12C-32DS-0.5V (81)	537-0212-6-81	32	10.1	7.5	8.6	——			
DF12C-36DS-0.5V (81)	537-0206-3-81	36	11.1	8.5	9.6	——			
DF12C-40DS-0.5V (81)	537-0207-6-81	40	12.1	9.5	10.6	——			
DF12C-50DS-0.5V (81)	537-0209-1-81	50	14.6	12.0	13.1	——			
DF12C-60DS-0.5V (81)	537-0211-3-81	60	17.1	14.5	15.6	——			

Note 1: Please order the embossed tape packaging product per reel. (1000 pcs./reel)

DF12 Series 0.5mm Pitch SM Board to Board Connector

■Receptacle With metal fitting



●Product Height: 3mm Product

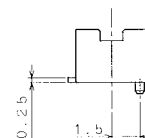
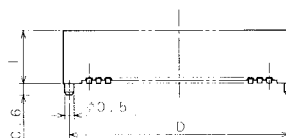
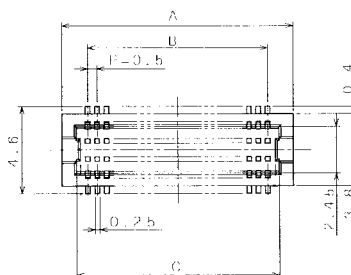
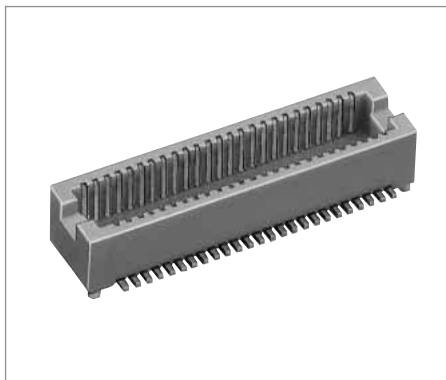
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	F	Remarks	RoHS
DF12 (3.0)-10DS-0.5V (86)	537-0601-8-86	10	4.6	2.0	3.1	4.1	2.2	5.5	With metal fitting With boss	YES
DF12 (3.0)-14DS-0.5V (86)	537-0914-3-86	14	5.6	3.0	4.1	5.1		6.5		
DF12 (3.0)-20DS-0.5V (86)	537-0603-3-86	20	7.1	4.5	5.6	6.6		8.0		
DF12 (3.0)-30DS-0.5V (86)	537-0605-9-86	30	9.6	7.0	8.1	9.1		10.5		
DF12 (3.0)-32DS-0.5V (86)	537-0612-4-86	32	10.1	7.5	8.6	9.6		11.0		
DF12 (3.0)-36DS-0.5V (86)	537-0606-1-86	36	11.1	8.5	9.6	10.6		12.0		
DF12 (3.0)-40DS-0.5V (86)	537-0607-4-86	40	12.1	9.5	10.6	11.6		13.0		
DF12 (3.0)-50DS-0.5V (86)	537-0609-0-86	50	14.6	12.0	13.1	14.1		15.5		
DF12 (3.0)-60DS-0.5V (86)	537-0611-1-86	60	17.1	14.5	15.6	16.6		18.0		
DF12 (3.0)-80DS-0.5V (86)	537-0613-7-86	80	22.1	19.5	20.6	21.6		23.0		
DF12B (3.0)-10DS-0.5V (86)	537-0651-6-86	10	4.6	2.0	3.1	4.1	2.2	5.5	With metal fitting Without boss	
DF12B (3.0)-14DS-0.5V (86)	537-0916-9-86	14	5.6	3.0	4.1	5.1		6.5		
DF12B (3.0)-20DS-0.5V (86)	537-0653-1-86	20	7.1	4.5	5.6	—		8.0		
DF12B (3.0)-30DS-0.5V (86)	537-0655-7-86	30	9.6	7.0	8.1	—		10.5		
DF12B (3.0)-32DS-0.5V (86)	537-0662-2-86	32	10.1	7.5	8.6	—		11.0		
DF12B (3.0)-36DS-0.5V (86)	537-0656-0-86	36	11.1	8.5	9.6	—		12.0		
DF12B (3.0)-40DS-0.5V (86)	537-0657-2-86	40	12.1	9.5	10.6	—		13.0		
DF12B (3.0)-50DS-0.5V (86)	537-0659-8-86	50	14.6	12.0	13.1	—		15.5		
DF12B (3.0)-60DS-0.5V (86)	537-0661-0-86	60	17.1	14.5	15.6	c		18.0		
DF12B (3.0)-80DS-0.5V (86)	537-0663-5-86	80	22.1	19.5	20.6	21.6		23.0		

Part Number	CL No.	Number of Contacts	A	B	C	D	E	F	Remarks	RoHS
DF12-20DS-0.5V (86)	537-0003-6- 86	20	7.1	4.5	5.6	6.6	2.7	8.0	With metal fitting With boss	YES
DF12-30DS-0.5V (86)	537-0005-1- 86	30	9.6	7.0	8.1	9.1		10.5		
DF12-32DS-0.5V (86)	537-0012-7- 86	32	10.1	7.5	8.6	9.6		11.0		
DF12-36DS-0.5V (86)	537-0006-4- 86	36	11.1	8.5	9.6	10.6		12.0		
DF12-40DS-0.5V (86)	537-0007-7- 86	40	12.1	9.5	10.6	11.6		13.0		
DF12-50DS-0.5V (86)	537-0009-2- 86	50	14.6	12.0	13.1	14.1		15.5		
DF12-60DS-0.5V (86)	537-0011-4- 86	60	17.1	14.5	15.6	16.6		18.0		
DF12B-20DS-0.5V (86)	537-0303-0- 86	20	7.1	4.5	5.6	——	2.7	8.0	With metal fitting Without boss	
DF12B-30DS-0.5V (86)	537-0305-5- 86	30	9.6	7.0	8.1	——		10.5		
DF12B-32DS-0.5V (86)	537-0312-0- 86	32	10.1	7.5	8.6	9.6		11.0		
DF12B-36DS-0.5V (86)	537-0306-8- 86	36	11.1	8.5	9.6	——		12.0		
DF12B-40DS-0.5V (86)	537-0307-0- 86	40	12.1	9.5	10.6	——		13.0		
DF12B-50DS-0.5V (86)	537-0309-6- 86	50	14.6	12.0	13.1	——		15.5		
DF12B-60DS-0.5V (86)	537-0311-8- 86	60	17.1	14.5	15.6	——		18.0		

Note : Please order the embossed tape packaging product per reel. (1000 pcs./reel)

Header Without metal fitting



Stacking Height: 3.5 to 5mm Product

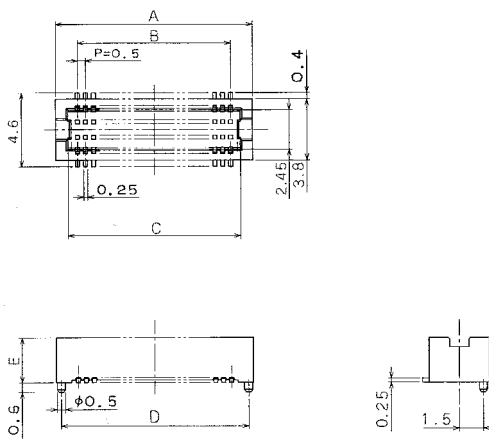
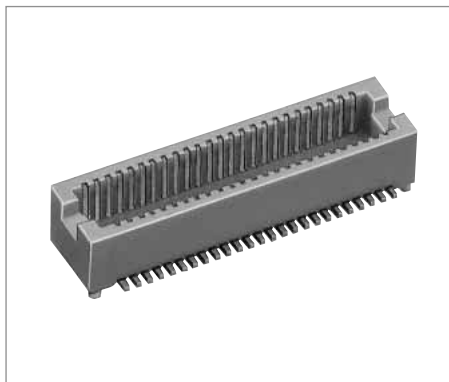
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	Remarks	RoHS
DF12D (3.0)-10DP-0.5V (81)	537-0791-5- 81	10	4.7	2.0	3.2	4.1	2.3	Without metal fitting With boss	YES
DF12D (3.0)-14DP-0.5V (81)	537-0920-6- 81	14	5.7	3.0	4.2	5.1			
DF12D (3.0)-20DP-0.5V (81)	537-0793-0- 81	20	7.2	4.5	5.7	6.6			
DF12D (3.0)-30DP-0.5V (81)	537-0795-6- 81	30	9.7	7.0	8.2	9.1			
DF12D (3.0)-32DP-0.5V (81)	537-0802-0- 81	32	10.2	7.5	8.7	9.6			
DF12D (3.0)-36DP-0.5V (81)	537-0796-9- 81	36	11.2	8.5	9.7	10.6			
DF12D (3.0)-40DP-0.5V (81)	537-0797-1- 81	40	12.2	9.5	10.7	11.6			
DF12D (3.0)-50DP-0.5V (81)	537-0799-7- 81	50	14.7	12.0	13.2	14.1			
DF12D (3.0)-60DP-0.5V (81)	537-0801-7- 81	60	17.2	14.5	15.7	16.6			
DF12D (3.0)-80DP-0.5V (81)	537-0803-2- 81	80	22.2	19.5	20.7	21.6			
DF12E (3.0)-10DP-0.5V (81)	537-0826-8- 81	10	4.7	2.0	3.2	——	2.3	Without metal fitting Without boss	
DF12E (3.0)-14DP-0.5V (81)	537-0921-9- 81	14	5.7	3.0	4.2	——			
DF12E (3.0)-20DP-0.5V (81)	537-0828-3- 81	20	7.2	4.5	5.7	——			
DF12E (3.0)-30DP-0.5V (81)	537-0830-5- 81	30	9.7	7.0	8.2	——			
DF12E (3.0)-32DP-0.5V (81)	537-0837-4- 81	32	10.2	7.5	8.7	——			
DF12E (3.0)-36DP-0.5V (81)	537-0831-8- 81	36	11.2	8.5	9.7	——			
DF12E (3.0)-40DP-0.5V (81)	537-0832-0- 81	40	12.2	9.5	10.7	——			
DF12E (3.0)-50DP-0.5V (81)	537-0834-6- 81	50	14.7	12.0	13.2	——			
DF12E (3.0)-60DP-0.5V (81)	537-0836-1- 81	60	17.2	14.5	15.7	——			
DF12E (3.0)-80DP-0.5V (81)	537-0838-7- 81	80	22.2	19.5	20.7	——			

Note : Order the emboss package product per reel. (1000 pcs./reel)

DF12 Series 0.5mm Pitch SM Board to Board Connector

Header Without metal fitting



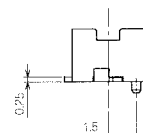
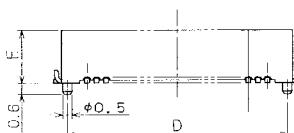
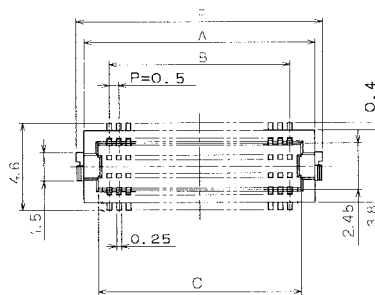
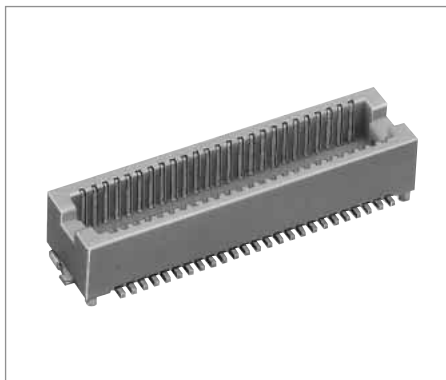
Stacking Height: 3.5 to 5mm Product

Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	Remarks	RoHS		
DF12D (3.5)-20DP-0.5V (81)	537-0428-5- 81	20	7.2	4.5	5.7	6.6	2.8	Without metal fitting With boss	YES		
DF12D (3.5)-30DP-0.5V (81)	537-0430-7- 81	30	9.7	7.0	8.2	9.1					
DF12D (3.5)-36DP-0.5V (81)	537-0431-0- 81	36	11.2	8.5	9.7	10.6					
DF12D (3.5)-40DP-0.5V (81)	537-0432-2- 81	40	12.2	9.5	10.7	11.6					
DF12D (3.5)-50DP-0.5V (81)	537-0434-8- 81	50	14.7	12.0	13.2	14.1					
DF12D (3.5)-60DP-0.5V (81)	537-0436-3- 81	60	17.2	14.5	15.7	16.6					
DF12D (4.0)-20DP-0.5V (81)	537-0453-2- 81	20	7.2	4.5	5.7	6.6	3.3				
DF12D (4.0)-30DP-0.5V (81)	537-0455-8- 81	30	9.7	7.0	8.2	9.1					
DF12D (4.0)-36DP-0.5V (81)	537-0456-0- 81	36	11.2	8.5	9.7	10.6					
DF12D (4.0)-40DP-0.5V (81)	537-0457-3- 81	40	12.2	9.5	10.7	11.6					
DF12D (4.0)-50DP-0.5V (81)	537-0459-9- 81	50	14.7	12.0	13.2	14.1					
DF12D (4.0)-60DP-0.5V (81)	537-0461-0- 81	60	17.2	14.5	15.7	16.6					
DF12D (5.0)-20DP-0.5V (81)	537-0478-3- 81	20	7.2	4.5	5.7	6.6	4.3				
DF12D (5.0)-30DP-0.5V (81)	537-0480-5- 81	30	9.7	7.0	8.2	9.1					
DF12D (5.0)-36DP-0.5V (81)	537-0481-8- 81	36	11.2	8.5	9.7	10.6					
DF12D (5.0)-40DP-0.5V (81)	537-0482-0- 81	40	12.2	9.5	10.7	11.6					
DF12D (5.0)-50DP-0.5V (81)	537-0484-6- 81	50	14.7	12.0	13.2	14.1					
DF12D (5.0)-60DP-0.5V (81)	537-0486-1- 81	60	17.2	14.5	15.7	16.6					
DF12E (3.5)-20DP-0.5V (81)	537-0528-0- 81	20	7.2	4.5	5.7	——	2.8				
DF12E (3.5)-30DP-0.5V (81)	537-0530-1- 81	30	9.7	7.0	8.2	——					
DF12E (3.5)-36DP-0.5V (81)	537-0531-4- 81	36	11.2	8.5	9.7	——					
DF12E (3.5)-40DP-0.5V (81)	537-0532-7- 81	40	12.2	9.5	10.7	——					
DF12E (3.5)-50DP-0.5V (81)	537-0534-2- 81	50	14.7	12.0	13.2	——					
DF12E (3.5)-60DP-0.5V (81)	537-0536-8- 81	60	17.2	14.5	15.7	——					
DF12E (4.0)-20DP-0.5V (81)	537-0553-7- 81	20	7.2	4.5	5.7	——	3.3				
DF12E (4.0)-30DP-0.5V (81)	537-0555-2- 81	30	9.7	7.0	8.2	——					
DF12E (4.0)-36DP-0.5V (81)	537-0556-5- 81	36	11.2	8.5	9.7	——					
DF12E (4.0)-40DP-0.5V (81)	537-0557-8- 81	40	12.2	9.5	10.7	——					
DF12E (4.0)-50DP-0.5V (81)	537-0559-3- 81	50	14.7	12.0	13.2	——					
DF12E (4.0)-60DP-0.5V (81)	537-0561-5- 81	60	17.2	14.5	15.7	——					
DF12E (5.0)-20DP-0.5V (81)	537-0578-8- 81	20	7.2	4.5	5.7	——	4.3				
DF12E (5.0)-30DP-0.5V (81)	537-0580-0- 81	30	9.7	7.0	8.2	——					
DF12E (5.0)-36DP-0.5V (81)	537-0581-2- 81	36	11.2	8.5	9.7	——					
DF12E (5.0)-40DP-0.5V (81)	537-0582-5- 81	40	12.2	9.5	10.7	——					
DF12E (5.0)-50DP-0.5V (81)	537-0584-0- 81	50	14.7	12.0	13.2	——					
DF12E (5.0)-60DP-0.5V (81)	537-0586-6- 81	60	17.2	14.5	15.7	——					

Note : Please order the embossed tape packaging product per reel. (1000 pcs./reel)

Header With metal fitting



●Stacking Height: 3mm Product

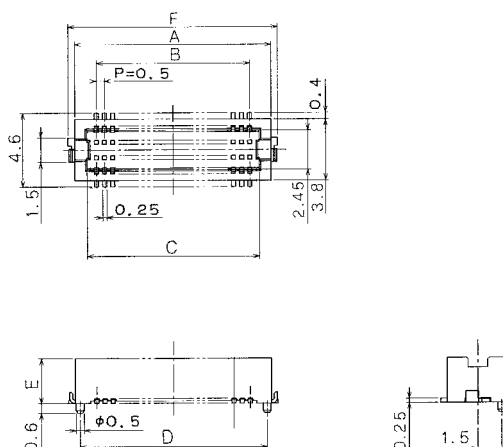
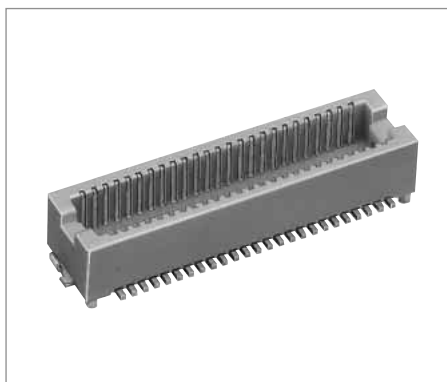
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	F	Remarks	RoHS
DF12 (3.0)-10DP-0.5V (86)	537-0721-0- 86	10	4.7	2.0	3.2	4.1	2.3	5.5	With metal fitting With boss	YES
DF12 (3.0)-14DP-0.5V (86)	537-0918-4- 86	14	5.7	3.0	4.2	5.1		6.5		
DF12 (3.0)-20DP-0.5V (86)	537-0723-5- 86	20	7.2	4.5	5.7	6.6		8.0		
DF12 (3.0)-30DP-0.5V (86)	537-0725-0- 86	30	9.7	7.0	8.2	9.1		10.5		
DF12 (3.0)-32DP-0.5V (86)	537-0732-6- 86	32	10.2	7.5	8.7	9.6		11.0		
DF12 (3.0)-36DP-0.5V (86)	537-0726-3- 86	36	11.2	8.5	9.7	10.6		12.0		
DF12 (3.0)-40DP-0.5V (86)	537-0727-6- 86	40	12.2	9.5	10.7	11.6		13.0		
DF12 (3.0)-50DP-0.5V (86)	537-0729-1- 86	50	14.7	12.0	13.2	14.1		15.5		
DF12 (3.0)-60DP-0.5V (86)	537-0731-3- 86	60	17.2	14.5	15.7	16.6		18.0		
DF12 (3.0)-80DP-0.5V (86)	537-0733-9- 86	80	22.2	19.5	20.7	21.6		23.0		
DF12 (3.0)-10DP-0.5V (86)	537-0756-4- 86	10	4.7	2.0	3.2	——	2.3	5.5	With metal fitting Without boss	
DF12 (3.0)-14DP-0.5V (86)	537-0919-7- 86	14	5.7	3.0	4.2	——		6.5		
DF12B (3.0)-20DP-0.5V (86)	537-0758-0- 86	20	7.2	4.5	5.7	——		8.0		
DF12B (3.0)-30DP-0.5V (86)	537-0760-1- 86	30	9.7	7.0	8.2	——		10.5		
DF12B (3.0)-32DP-0.5V (86)	537-0767-0- 86	32	10.2	7.5	8.7	——		11.0		
DF12B (3.0)-36DP-0.5V (86)	537-0761-4- 86	36	11.2	8.5	9.7	——		12.0		
DF12B (3.0)-40DP-0.5V (86)	537-0762-7- 86	40	12.2	9.5	10.7	——		13.0		
DF12B (3.0)-50DP-0.5V (86)	537-0764-2- 86	50	14.7	12.0	13.2	——		15.5		
DF12B (3.0)-60DP-0.5V (86)	537-0766-8- 86	60	17.2	14.5	15.7	——		18.0		
DF12B (3.0)-80DP-0.5V (86)	537-0768-3- 86	80	22.2	19.5	20.7	——		23.0		

Note : Please order the embossed tape packaging product per reel. (1000 pcs./reel)

DF12 Series 0.5mm Pitch SM Board to Board Connector

Header With metal fitting



Stacking Height: 3.5 to 5mm Product

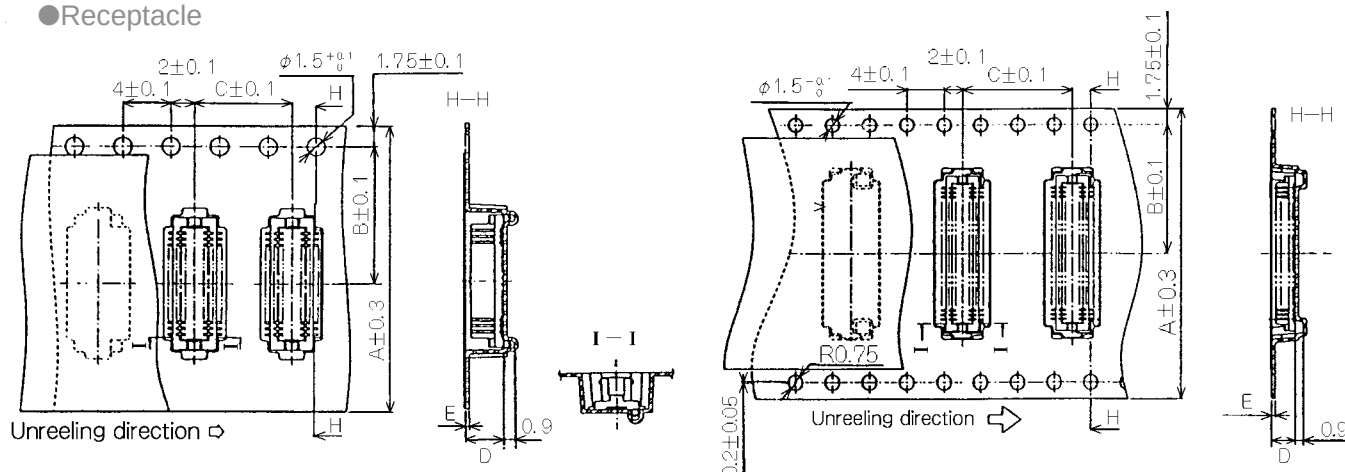
Unit: mm

Part Number	CL No.	Number of Contacts	A	B	C	D	E	F	Remarks	RoHS		
DF12 (3.5)-20DP-0.5V (86)	537-0028-7- 86	20	7.2	4.5	5.7	6.6	2.8	8.0	With metal fitting With boss	YES		
DF12 (3.5)-30DP-0.5V (86)	537-0030-9- 86	30	9.7	7.0	8.2	9.1		10.5				
DF12 (3.5)-36DP-0.5V (86)	537-0031-1- 86	36	11.2	8.5	9.7	10.6		12.0				
DF12 (3.5)-40DP-0.5V (86)	537-0032-4- 86	40	12.2	9.5	10.7	11.6		13.0				
DF12 (3.5)-50DP-0.5V (86)	537-0034-0- 86	50	14.7	12.0	13.2	14.1		15.5				
DF12 (3.5)-60DP-0.5V (86)	537-0036-5- 86	60	17.2	14.5	15.7	16.6		18.0				
DF12 (4.0)-20DP-0.5V (86)	537-0053-4- 86	20	7.2	4.5	5.7	6.6	3.3	8.0			With metal fitting With boss	
DF12 (4.0)-30DP-0.5V (86)	537-0055-0- 86	30	9.7	7.0	8.2	9.1		10.5				
DF12 (4.0)-32DP-0.5V (86)	537-0926-2-86	32	10.2	7.5	8.7	9.6		11.0				
DF12 (4.0)-36DP-0.5V (86)	537-0056-2- 86	36	11.2	8.5	9.7	10.6		12.0				
DF12 (4.0)-40DP-0.5V (86)	537-0057-5- 86	40	12.2	9.5	10.7	11.6		13.0				
DF12 (4.0)-50DP-0.5V (86)	537-0059-0- 86	50	14.7	12.0	13.2	14.1		15.5				
DF12 (4.0)-60DP-0.5V (86)	537-0061-2- 86	60	17.2	14.5	15.7	16.6	18.0					
DF12 (5.0)-20DP-0.5V (86)	537-0153-9- 86	20	7.2	4.5	5.7	6.6	4.3	8.0				
DF12 (5.0)-30DP-0.5V (86)	537-0155-4- 86	30	9.7	7.0	8.2	9.1		10.5				
DF12 (5.0)-36DP-0.5V (86)	537-0156-7- 86	36	11.2	8.5	9.7	10.6		12.0				
DF12 (5.0)-40DP-0.5V (86)	537-0157-0- 86	40	12.2	9.5	10.7	11.6		13.0				
DF12 (5.0)-50DP-0.5V (86)	537-0159-5- 86	50	14.7	12.0	13.2	14.1		15.5				
DF12 (5.0)-60DP-0.5V (86)	537-0161-7- 86	60	17.2	14.5	15.7	16.6		18.0				
DF12B (3.5)-20DP-0.5V (86)	537-0328-0- 86	20	7.2	4.5	5.7	——	2.8	8.0	With metal fitting Without boss			
DF12B (3.5)-30DP-0.5V (86)	537-0330-2- 86	30	9.7	7.0	8.2	——		10.5				
DF12B (3.5)-36DP-0.5V (86)	537-0331-5- 86	36	11.2	8.5	9.7	——		12.0				
DF12B (3.5)-40DP-0.5V (86)	537-0332-8- 86	40	12.2	9.5	10.7	——		13.0				
DF12B (3.5)-50DP-0.5V (86)	537-0334-3- 86	50	14.7	12.0	13.2	——		15.5				
DF12B (3.5)-60DP-0.5V (86)	537-0336-9- 86	60	17.2	14.5	15.7	——		18.0				
DF12B (4.0)-20DP-0.5V (86)	537-0353-8- 86	20	7.2	4.5	5.7	——	3.3	8.0				
DF12B (4.0)-30DP-0.5V (86)	537-0355-3- 86	30	9.7	7.0	8.2	——		10.5				
DF12B (4.0)-32DP-0.5V (86)	537-0927-5-86	32	10.2	7.5	8.7	——		11.0				
DF12B (4.0)-36DP-0.5V (86)	537-0356-6- 86	36	11.2	8.5	9.7	——		12.0				
DF12B (4.0)-40DP-0.5V (86)	537-0357-9- 86	40	12.2	9.5	10.7	——		13.0				
DF12B (4.0)-50DP-0.5V (86)	537-0359-4- 86	50	14.7	12.0	13.2	——		15.5				
DF12B (4.0)-60DP-0.5V (86)	537-0361-6- 86	60	17.2	14.5	15.7	——	18.0					
DF12B (5.0)-20DP-0.5V (86)	537-0378-9- 86	20	7.2	4.5	5.7	——	4.3	8.0				
DF12B (5.0)-30DP-0.5V (86)	537-0380-0- 86	30	9.7	7.0	8.2	——		10.5				
DF12B (5.0)-36DP-0.5V (86)	537-0381-3- 86	36	11.2	8.5	9.7	——		12.0				
DF12B (5.0)-40DP-0.5V (86)	537-0382-6- 86	40	12.2	9.5	10.7	——		13.0				
DF12B (5.0)-50DP-0.5V (86)	537-0384-1- 86	50	14.7	12.0	13.2	——		15.5				
DF12B (5.0)-60DP-0.5V (86)	537-0386-7- 86	60	17.2	14.5	15.7	——		18.0				

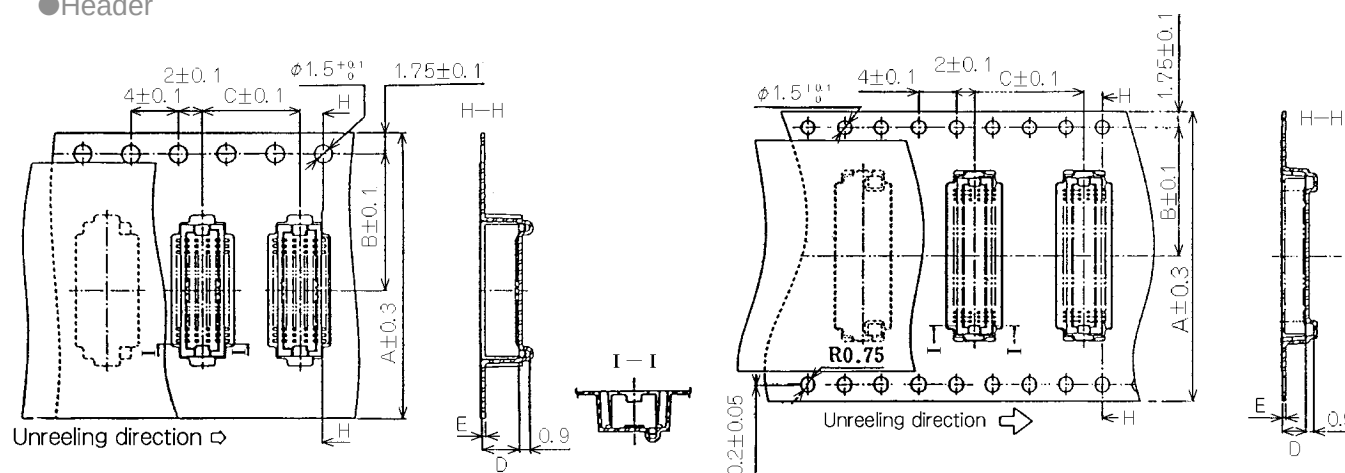
Note : Please order the embossed tape packaging product per reel. (1000 pcs./reel)

◆ Embossed Carrier tape Dimensions

● Receptacle



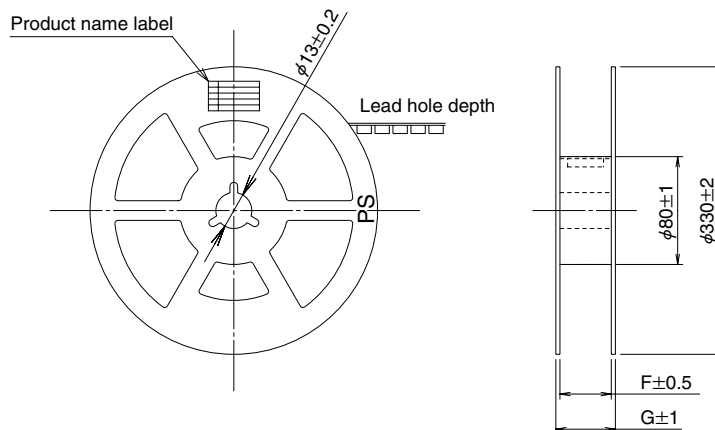
● Header



Connector	A	B	C	D	E	F	G	Connector	A	B	C	D	E	F	G
DF12# (3.0) -10DS-0.5V	16	7.5	12	2.6	0.30	17.5	21.5	DF12# (3.5) -20DP-0.5V	16	7.5	12	3.1	0.38	17.5	21.5
DF12# (3.0) -14DS-0.5V	16	7.5	12	2.6	0.38	17.5	21.5	DF12# (3.5) -30DP-0.5V	24	11.5	12	3.1	0.38	25.5	29.5
DF12# (3.0) -20DS-0.5V	16	7.5	12	2.6	0.38	17.5	21.5	DF12# (3.5) -36DP-0.5V	24	11.5	8	3.1	0.30	25.5	29.5
DF12# (3.0) -30DS-0.5V	24	11.5	12	2.6	0.38	25.5	29.5	DF12# (3.5) -40DP-0.5V	24	11.5	12	3.1	0.38	25.5	29.5
DF12# (3.0) -32DS-0.5V	24	11.5	12	2.6	0.38	25.5	29.5	DF12# (3.5) -50DP-0.5V	24	11.5	8	3.1	0.30	25.5	29.5
DF12# (3.0) -36DS-0.5V	24	11.5	12	2.6	0.38	25.5	29.5	DF12# (3.5) -60DP-0.5V	32	14.2	12	3.1	0.38	33.5	37.5
DF12# (3.0) -40DS-0.5V	24	11.5	12	2.6	0.38	25.5	29.5	DF12# (3.5) -20DP-0.5V	16	7.5	12	3.6	0.38	17.5	21.5
DF12# (3.0) -50DS-0.5V	24	11.5	12	2.6	0.38	25.5	29.5	DF12# (4.0) -30DP-0.5V	24	11.5	12	3.6	0.38	25.5	29.5
DF12# (3.0) -60DS-0.5V	32	14.2	12	2.6	0.38	33.5	37.5	DF12# (4.0) -32DP-0.5V	24	11.5	12	3.6	0.30	25.5	29.5
DF12# (3.0) -80DS-0.5V	44	20.2	12	2.6	0.38	45.5	49.5	DF12# (4.0) -36DP-0.5V	24	11.5	8	3.6	0.30	25.5	29.5
DF12# (3.0) -10DP-0.5V	16	7.5	12	2.6	0.30	17.5	21.5	DF12# (4.0) -40DP-0.5V	24	11.5	12	3.6	0.38	25.5	29.5
DF12# (3.0) -14DP-0.5V	16	7.5	12	2.6	0.38	17.5	21.5	DF12# (4.0) -50DP-0.5V	24	11.5	8	3.6	0.30	25.5	29.5
DF12# (3.0) -20DP-0.5V	16	7.5	12	2.6	0.38	17.5	21.5	DF12# (4.0) -60DP-0.5V	32	14.2	12	3.6	0.38	33.5	37.5
DF12# (3.0) -30DP-0.5V	24	11.5	12	2.6	0.38	25.5	29.5	DF12# (5.0) -20DP-0.5V	16	7.5	12	4.6	0.38	17.5	21.5
DF12# (3.0) -32DP-0.5V	24	11.5	12	2.6	0.38	25.5	29.5	DF12# (5.0) -30DP-0.5V	24	11.5	12	4.6	0.38	25.5	29.5
DF12# (3.0) -36DP-0.5V	24	11.5	12	2.6	0.38	25.5	29.5	DF12# (5.0) -36DP-0.5V	24	11.5	12	4.6	0.38	25.5	29.5
DF12# (3.0) -40DP-0.5V	24	11.5	12	2.6	0.38	25.5	29.5	DF12# (5.0) -40DP-0.5V	24	11.5	12	4.6	0.38	25.5	29.5
DF12# (3.0) -50DP-0.5V	24	11.5	12	2.6	0.38	25.5	29.5	DF12# (5.0) -50DP-0.5V	24	11.5	8	4.6	0.30	25.5	29.5
DF12# (3.0) -60DP-0.5V	32	14.2	12	2.6	0.38	33.5	37.5	DF12# (5.0) -60DP-0.5V	32	14.2	12	4.6	0.38	33.5	37.5
DF12# (3.0) -80DP-0.5V	44	20.2	12	2.6	0.38	45.5	49.5								
DF12#-20DS-0.5V	16	7.5	12	3.1	0.38	17.5	21.5								
DF12#-30DS-0.5V	24	11.5	12	3.1	0.38	25.5	29.5								
DF12#-32DS-0.5V	24	11.5	12	3.1	0.30	25.5	29.5								
DF12#-36DS-0.5V	24	11.5	8	3.1	0.30	25.5	29.5								
DF12#-40DS-0.5V	24	11.5	12	3.1	0.38	25.5	29.5								
DF12#-50DS-0.5V	24	11.5	8	3.1	0.30	25.5	29.5								
DF12#-60DS-0.5V	32	14.2	12	3.1	0.38	33.5	37.5								

DF12 Series 0.5mm Pitch SMT Board to Board Connector

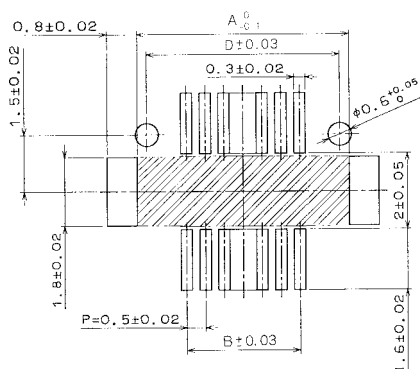
●Reel Dimensions



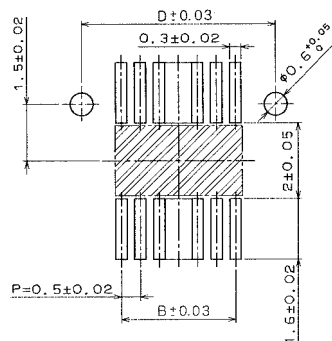
Refer to former page for F, G dimensions.

◆Recommended PCB mounting pattern

■DF12 with metal fitting



■DF12 without metal fitting



Note 1 : Refer to A195 to A200 for sides A, B, and D.

Note 2 : If the boss isn't included, the boss shown in the above figure isn't required.

Note 3 :  If the pattern is included in the shaded area, and not treated with resist, it could touch the connector contact .

◆Precautions for Use

1.Recommended Temperature Profile (SMT)	Temperature (°C) 250 200 150 100 50 Room temperature 0 50 100 150 200 250 300 Time (sec) 250°C 220°C 180°C 150°C 90 to 120sec Preheating 60sec max Soldering Note1: UP to 2 cycles of Reflow soldering are possible under the same conditions, provided that there is a return to normal temperature between the first and second cycle. Note2: The temperature profile indicates the board surface temperature at the point of contacts with the connector terminals.
2.Recommended Manual Soldering Condition (SMT)	Soldering iron temperature: 350°C, Soldering time: Within 3 seconds
3.Recommended Screen Thickness and open area ratio(Pattern area ratio)	0.12mm Open area ratio: 70%
4.Board Warp(SMT)	Maximum 0.02mm in the connector center area, based on both connector edges
5.Cleaning Condition	Refer to "Nylon Connector Use Hand book".
6.Cautions	■ The receptacle is designed in a structure where contacts are exposed. Touching it with bare hands would cause contact failure or electrostatic element damage. ■ Where no board is mounted, the insertion or extraction will cause damage or contact deformation. ■ Avoid retaining the board with the connector only, and fix the board by any other means than the connector. ■ Excessive scoop insertion or extraction may result in damage. ■ In the manual soldering process, don't carry out the flux coating which will cause a flux blister on the connector. ■ The color phase of this product may be slightly different from that of the formed product according to the manufacturing lot. However, the difference doesn't affect the performance.