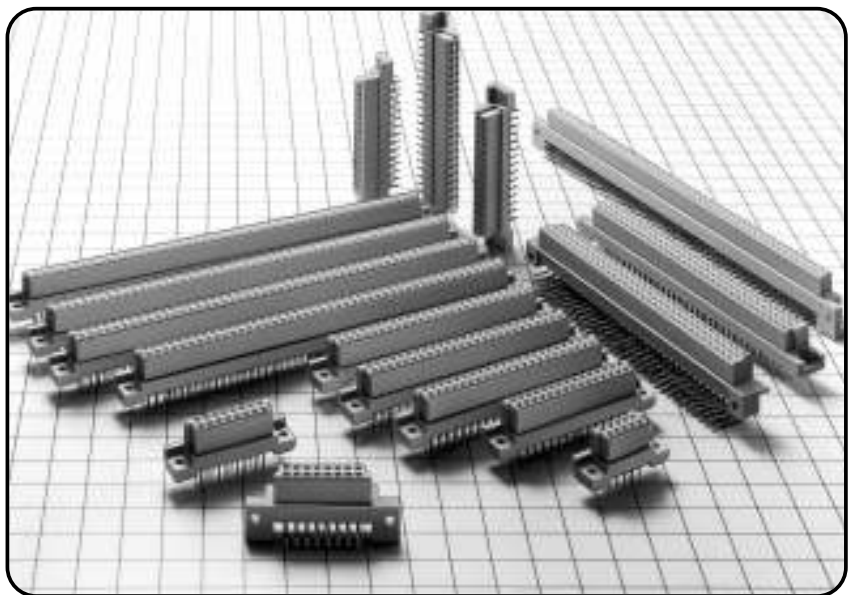
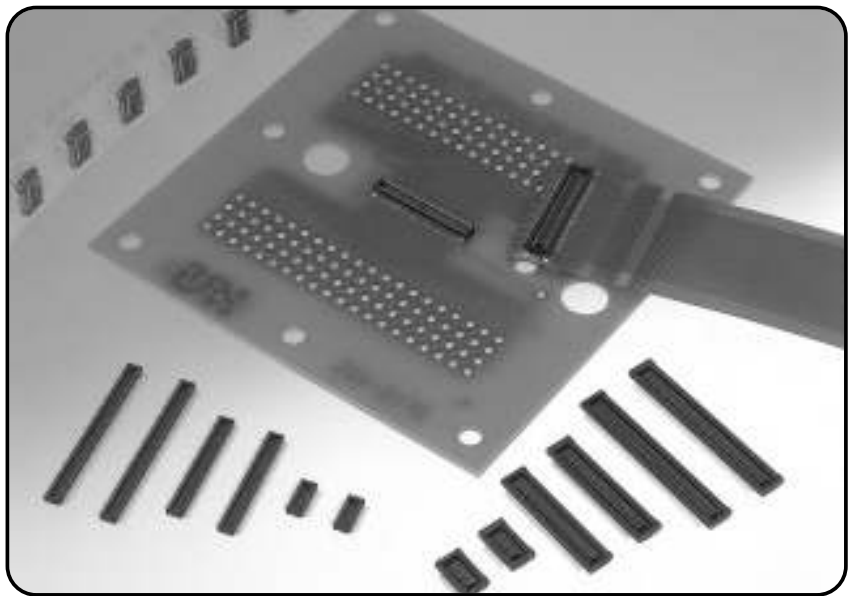


Board-to-Board Connectors





Board-to-Board Connectors

Board to Board Connectors (SMT, Through hole, Wrapping)

Board Mounting Type	Contact Pitch (mm)	Stack Height	Remarks	Series Name	Page
SMT	0.4	0.9mm	Board to Board/Board to FPC Connectors	DF30	103
		1.5mm	Board to Board/Board to FPC Connectors	DF18	103
		-	Vertical connection	DF28	104
	0.5	1.5mm	Low profile type	DF23	104
			2 to 2.5mm	DF16	105
			3 to 5mm	DF12	105
		5 to 8mm	Shockproof type	DF17	106
		2 to 3mm	With Ground plates	FX11	106
		4 to 5mm		FX10	107
		19, 23, 30mm	High speed, matched-impedance	IT1	107
	0.6	3 to 4mm		FX8	108
		5 to 16mm		FX8C	108
	0.65	4 to 8mm		DF15	109
	0.8	5 to 9mm		FX6	109
	1	4.5mm	Standard interface for VESA FPD1-1	DF9	110
		-	Vertical connection type	FX5	110
	1.1	1.2, 1.7mm	Compression type	DF26	111
SMT-Through hole	1.27	5 to 11mm(SMT6 to 11mm)		FX4	111
		12 to 16mm	Board to wire type available	FX2	112
Through hole	1.27	-	Disk Unit Connection	FX2M3	112
		28.2 to 66mm	Mate with FX2 series	FX2M6	113
			Vertical connection type, Board to wire type available	HIF6A	113
SMT-Through hole	2		Vertical connection type available	FX1	114
			Discrete wire Connection available	DF3	114
				DF11	115
Through hole	2.5	-	For 2.5 inch HDD	MA18	115
	2.54		Vertical Post Header	MDF14A	116
Through hole-Wrapping	2.54		Bottom Entry type	MDF7	116
			Vertical connection type available	HIF3H	117

Press-fit Connection Connectors

Board Mounting Type	Contact Pitch (mm)	Remarks	Series Name	Page
Press-fit	2	2mm Hard Metric Connectors	PCN21	117
	5	High Current, High Density, Power Connectors	MCN51	118

Compliant to IEC604-2/DIN41612

Board Mounting Type	Contact Pitch (mm)	Stack Height	Remarks	Series Name	Page
Through hole	2.54	-	Standard type	PCN10	118
			Contact construction: Double-sided two-point contact type	PCN12	119
Contact construction: Single-sided two-point contact type			PCN13	119	
Coaxial and High Current Contact Composite type			PCN10F	120	
Press fit type			PCN11	120	
Wrapping					

0.4mm pitch, 0.9mm height, board to board / board to FPC connectors DF30 Series



Features

- Space saving design with miniaturized PCB mounting area to the maximum contributes to high-density packaging of application.
- Dimples on header contact enhances wiping operation, which improves contact reliability.
- Wide self alignment range on the receptacle surface to ensure high mating reliability in a limited space.
- Varieties of No. of positions, especially small number for LCD and camera module connections for mobile phones.
- Wide vacuum pick up area for automatic mounting in spite of ultra small.

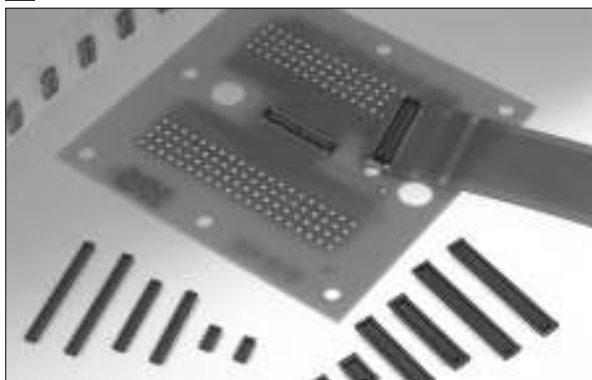
Applications

Compact electronic equipment like mobile phone, PDA, Mobile PC, Digital video camera (DVC), Digital camera (DSC)

Specifications

Item	Requirements
No. of Positions	20-22-24-30-34-40-50-60-70-80
Current rating (A)	0.3
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.4
Contact Pitch (mm)	0.4
Contact Layout	Double row
Stack Height (mm)	0.9
Operating Temperature Range (°C)	-35 to 85
Insulator	LCP (UL94V-0, Color: Black)

0.4mm pitch, 1.5mm above the board, board to board / board to FPC connectors DF18 Series



Features

- Space-saving design with the connector occupying area reduced to the limits.
- The female contact has a long enough spring length, thus ensuring high reliability.
- Low stack, yet providing fine mating.
- Four reinforced fittings provide greater adhesion to the board, protecting against solder peeling and providing a stronger ground.
- A miniature design, yet the connector has the vacuum area, which enables the automatic mounting by the embossed tape packaging.

Applications

DVC, DSC, Mobile Phones, LCDs

Specifications

Item	Requirements
No. of Positions	20-30-40-50-60-70-80,100
Current rating (A)	0.3
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.4
Contact Pitch (mm)	0.4
Contact Layout	Double row
Stack Height (mm)	1.5
Operating Temperature Range (°C)	-35 to 85
Insulator	LCP (UL94V-0, Color: Black)

Circular Connectors

Rectangular Connectors

Coaxial Connectors

Memory Card

Modular Connectors

Card Edge Connectors

Board-to-Board Connectors

Board-to-Wire Connectors

FPC/FFC Connectors

Optical Connectors and Devices

Microwave Components

0.4mm pitch connectors DF28 Series



Features

- Width:4.05mm, length:32.4mm and space on PCB:0.875 sq.mm/pin of both receptacle and header.
- All bottom surface of the connector with no pattern-prohibited area.
- Spring length is enough to ensure high contact reliability. Effective mating length is 0.9mm.
- Solder penetration prevention with nickel barriered receptacle and single-piece header.
- 0.45mm self alignment secures good insertion workability

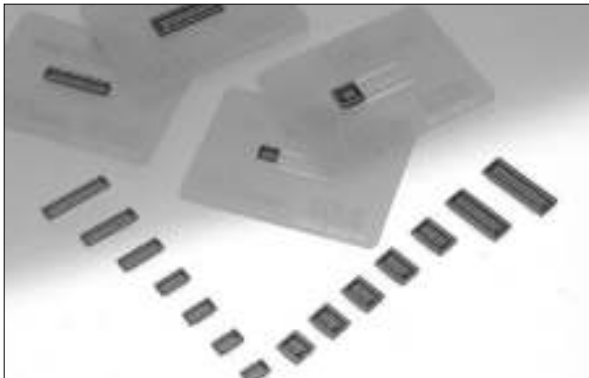
Applications

Digital still camera(DSC) and Digital video camera(DVC) etc. required downsizing49)

Specifications

Item	Requirements
No. of Positions	150
Current rating (A)	0.3
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.4
Contact Pitch (mm)	0.4
Contact Layout	Double row
Stack Height (mm)	-
Operating Temperature Range (°C)	-35 to 85
Insulator	LCP (UL94V-0, Color: Black)

0.5mm pitch low profile board to board / board to FPC connectors DF23 Series



Features

- The stacking height of 1.5mm ideal for low-profile mounting.
- Contacts in a wide variety. Connectors with 10 to 20 contacts in 2-contact increments are ideal for use in small LCD connections in cellular phones.
- Positive click sensation when completely mated confirms correct insertion and connection of all contacts.
- The large range of alignment of 0.3mm allows for smooth insertion.
- A miniature design, yet the connector has the vacuum area, which enables the automatic mounting by the embossed tape packaging.

Applications

Mobile Phones, Information terminal equipment, Notebook PCs, Digital cameras

Specifications

Item	Requirements
No. of Positions	10-14-16-18-20-30-40-50
Current rating (A)	0.3
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.5
Contact Pitch (mm)	0.5
Contact Layout	Double row
Stack Height (mm)	1.5
Operating Temperature Range (°C)	-35 to 85
Insulator	LCP (UL94V-0, Color: Black)

0.5mm pitch low profile connectors

DF16 Series



Features

- In addition to 0.5mm pitch miniaturization, the stacking height of 2mm and 2.5mm are provided.
- The bellows female contact has sufficient spring characteristic despite the low profile, and achieves high contact reliability.
- The click feeling is considered to facilitate insertion check when the connector is mated.
- The connector has the vacuum area, which enables the automatic mounting by the embossed tape packaging.
- The product including the metal fitting to prevent solder peeling is prepared, considering the mounting on FPC.

Applications

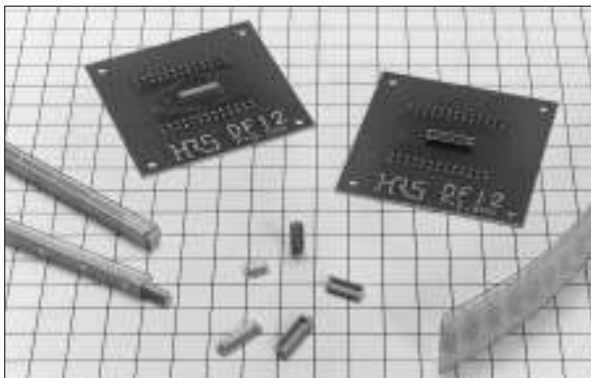
Mobile Phones, PC cards, Liquid Crystal Displays (LCDs)

Specifications

Item	Requirements
No. of Positions	14-16-20-30-34-40-50-60-80
Current rating (A)	0.3
PCB Mount Type	SMT
Contact Plating	Gold, tin-lead
Terminal Pitch (mm)	0.5
Contact Pitch (mm)	0.5
Contact Layout	Double row
Stack Height (mm)	2-2.5
Operating Temperature Range (°C)	-35 to 85
Insulator	Polyamide (UL94V-0, Color: White beige (natural))

0.5mm pitch connectors

DF12 Series



Features

- 0.5mm pitch models with the stacking height of 3mm, 3.5mm, 4mm, and 5mm are provided.
- For the protection of the solder joints from peeling off due to mechanical stress, products with reinforced brackets provided are available. These products ensure ease of FPC mounting as well.
- Specifications with a guide post for manual work and those with no guide post for automatic mounting are available.

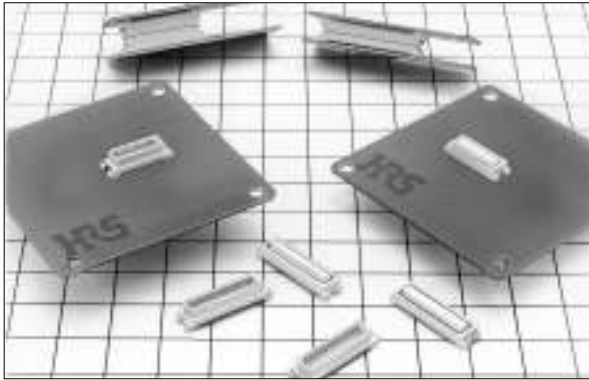
Applications

Portable terminals, LCDs (Liquid Crystal Displays), MO (Magneto-Optic) discs, PCs

Specifications

Item	Requirements
No. of Positions	20-30-32-36-40-50-60
Current rating (A)	0.3
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.5
Contact Pitch (mm)	0.5
Contact Layout	Double row
Stack Height (mm)	3-3.5-4-5
Operating Temperature Range (°C)	-45 to 125
Insulator	Polyamide (UL94V-0, Color: White beige (natural))

0.5mm pitch connectors DF17 Series



Features

- The receptacle is designed in a box structure and has also enhanced shock-proof, pinch-proof, and scoop-proof performance.
- In addition, the receptacle contact has employed the high scoop-proof bellows type.
- In order to grade up the strength against the mechanical stress, the metal fitting specification is also available.
- The stacking height can be selected (per millimeter) between 4mm and 8mm in combination of the receptacle with the header.
- Models with or without positioning guide posts are selectable.

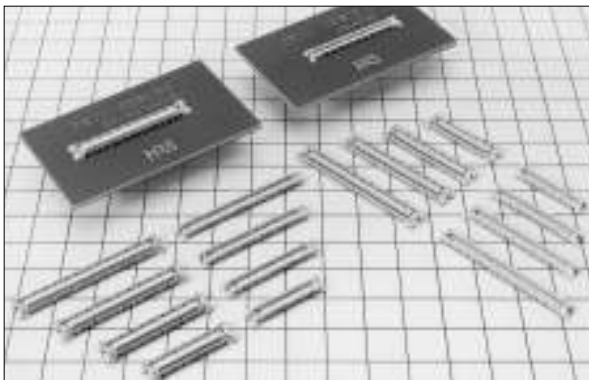
Applications

Mobile Phones, LCDs, Compact information equipment

Specifications

Item	Requirements
No. of Positions	20-26-30-40-50-60-70-80-100
Current rating (A)	0.3
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.5
Contact Pitch (mm)	0.5
Contact Layout	Double row
Stack Height (mm)	4-5-5.5-6-6.5-7-8
Operating Temperature Range (°C)	-35 to 85
Insulator	Polyamide (UL94V-0, Color: White)

0.5mm pitch, connectors with ground plate, stack height: 2mm to 3mm FX11 Series



Features

- The transmission characteristics have been improved through a design that fixes ground plates to both sides of the header and receptacle.
- Signal and ground are arranged in a ratio of 10:1 to stabilize the ground.
- Reinforced fittings provide greater adhesion to the ground, protecting against solder peeling.
- Low-profile connectors, yet a solder gap has been designed into the contact SMT portion to prevent solder from swelling.
- The secured mating length of the contact block is 0.55mm for the 2mm type, and 1mm for the 2.5mm or 3mm type to ensure high contact reliability.

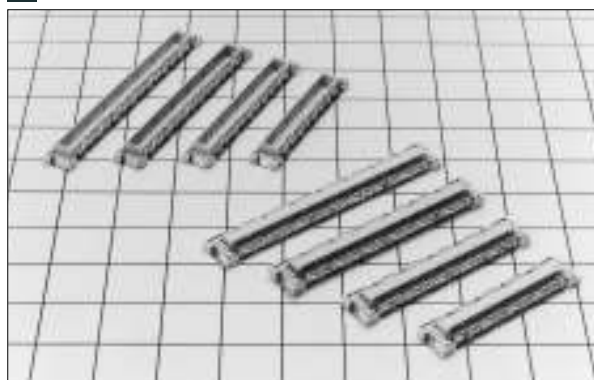
Applications

Notebook PCs, PDA, Compact electronic equipment

Specifications

Item	Requirements
No. of Positions	60-68-80-92-100-116-120-140
Current rating (A)	0.3
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.5
Contact Pitch (mm)	0.5
Contact Layout	Double row
Stack Height (mm)	2-2.5-3
Operating Temperature Range (°C)	-55 to 85
Insulator	LCP (UL94V-0, Color: Beige)

0.5mm pitch, connectors with ground plate, stack height: 4mm to 5mm FX10 Series



Features

- Connectors incorporating a ground plate for board-to-board connections.
- The signal and ground are arranged in a ratio of 10 to 1 with the ground plate SMT directly connected to the board.
- The reinforced fittings provide greater adhesion to the board, protecting against solder peeling and ensuring a stronger ground.
- The signal contact spacing of 0.5mm produces a smaller connector supporting high-density PCB mounting.
- The mating length of the contact part (signal contacts) is 1.1mm.

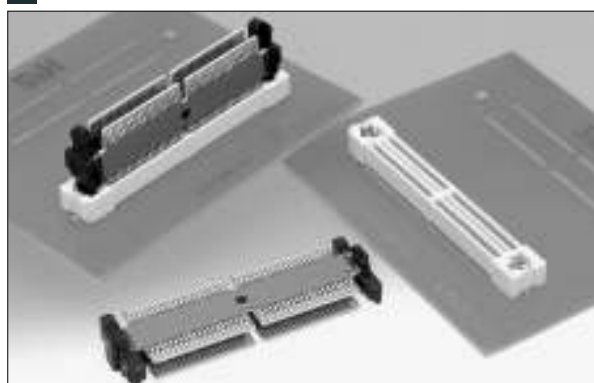
Applications

Notebook PCs, PDA, Compact electronic equipment

Specifications

Item	Requirements
No. of Positions	80-96-100-120-140-144-168
Current rating (A)	0.3
PCB Mount Type	SMT
Terminal Pitch (mm)	0.5
Contact Pitch (mm)	0.5
Contact Layout	Double row
Stack Height (mm)	4-5
Operating Temperature Range (°C)	-55 to 85
Insulator	LCP (UL94V-0, Color: Beige)

High speed, matched-impedance, connector system IT1 Series



Features

- The multi-layer PCB with strip line design of transmission lines provides matched impedance of 50 ohm.
- Use of double contact points on each of the contacts assures highly reliable performance.
- The standard signal-to-ground ratio is 10:2, which makes reliable matching of the characteristic impedance of each transmission line.
- Designed with a tolerance of ± 0.2 mm of the relative position of the mating connector in both the X- and Y-axis direction for multi-connector mounting.
- Ground lines can be added to support high level, high speed transmission or additional power supply line can be added to use as composite connector for power/signal application.

Applications

Router, Server, Communications equipment

Specifications

Item	Requirements
No. of Positions	168-252
Current rating (A)	0.4
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.5
Contact Pitch (mm)	0.5
Contact Layout	Double row×2
Stack Height (mm)	19-23-30
Operating Temperature Range (°C)	-55 to 85
Insulator	LCP (UL94V-0, Color: Beige), PBT (UL94V-0, Color: Black)

Circular Connectors

Rectangular Connectors

Coaxial Connectors

Memory Card

Modular Connectors

Card Edge Connectors

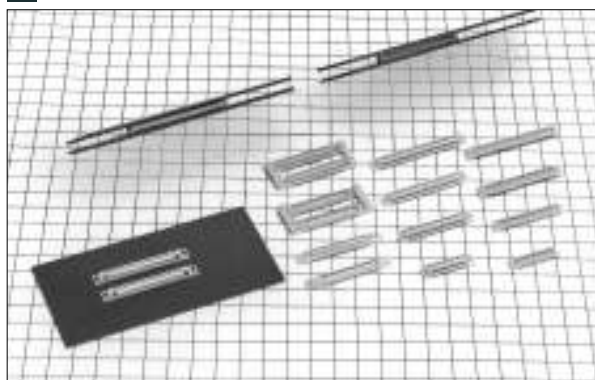
Board-to-Board Connectors

Board-to-Wire Connectors

FPC/FFC Connectors

Optical Connectors and Devices

Microwave Components

0.6mm pitch connectors, stack height: 3mm to 4mm**FX8 Series****Features**

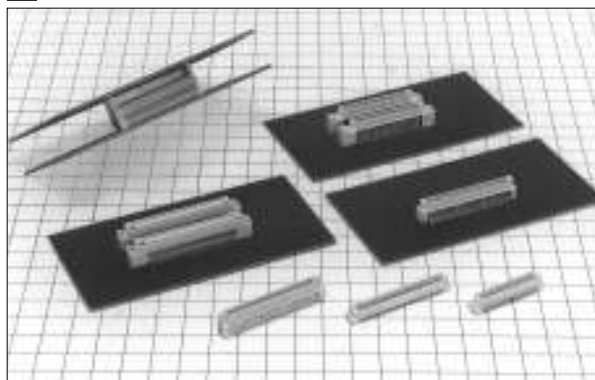
- The board to board stacking height corresponds to 3 and 4mm.
- The coplanarity of the SMT solder area lead is maintained at the high accuracy of less than 0.1mm.
- The very small guide rib is provided, and secures ± 0.6 mm self-alignment, considering the mating operability into accounts.
- The boss prevents mis-insertion in the board to cause due to the boss position and boss diameter.
- Models with two pieces of connectors combined secure the mount position accuracy.

Applications

Notebook PCs, Office equipment, Built-in applications

Specifications

Item	Requirements
No. of Positions	60-80-90-100-120-140-160-180-200-240-280
Current rating (A)	0.4
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.6
Contact Pitch (mm)	0.6
Stack Height (mm)	3-4
Operating Temperature Range (°C)	-55 to 85
Insulator	PPS (UL94V-0, Color: Light brown)
Remarks	FX8 series connectors and FX8C series connectors are note mate with each other.

0.6mm pitch connectors, stack height: 5mm to 16mm**FX8C Series****Features**

- The board to board stacking height corresponds to 5 and 16mm.
- The coplanarity of the SMT solder area lead is maintained at the high accuracy of less than 0.1mm.
- The very small guide rib is provided, and secures ± 0.6 mm self-alignment, considering the mating operability into accounts.
- The boss prevents mis-insertion in the board to cause due to the boss position and boss diameter.
- Models with two pieces of connectors combined secure the mount position accuracy.

Applications

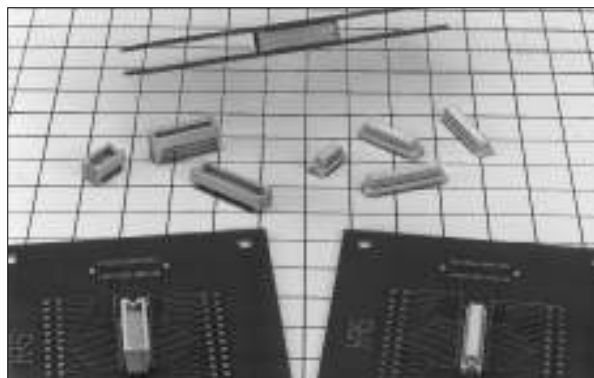
Notebook PCs, Office equipment, Built-in applications

Specifications

Item	Requirements
No. of Positions	60-80-100-120-140-160-200-240-280
Current rating (A)	0.4
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.6
Contact Pitch (mm)	0.6
Contact Layout	Double row
Stack Height (mm)	5-6-7-9-10-11-12-14-16
Operating Temperature Range (°C)	-55 to 85
Insulator	PPS (UL94V-0, Color: Light brown)
Remarks	FX8 series connectors and FX8C series connectors are note mate with each other.

0.65mm pitch connectors

DF15 Series



Features

- This series considers the service efficiency to set the pitch to 0.65mm, corresponding to the 0.5mm-pitch DF12 series.
- This connector widely covers the definition of the mounting space or the board-to-board size together with the DF12 series.
- The board to board size is specified at 1mm steps between 4 and 8mm.
- The connector has the vacuum area, which enables the automatic mounting by the embossed tape packaging.
- The product including the metal fitting to prevent solder peeling is prepared, considering the mounting on FPC.

Applications

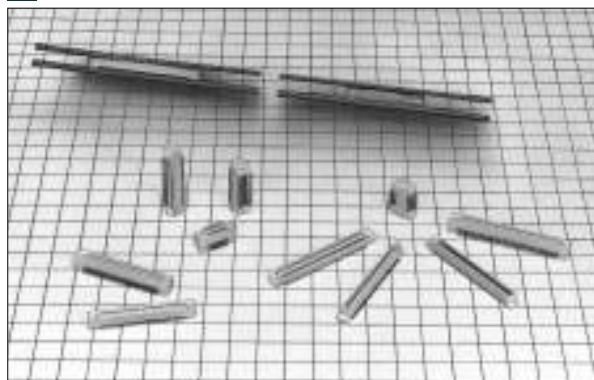
Mobile Phones, Liquid Crystal Displays (LCD), Magneto-Optical (MO) discs, PCs

Specifications

Item	Requirements
No. of Positions	20-30-40-50
Current rating (A)	0.3
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.65
Contact Pitch (mm)	0.65
Contact Layout	Double row
Stack Height (mm)	4-5-6-7-8
Operating Temperature Range (°C)	-35 to 85
Insulator	Polyamide (UL94V-0, Color: Beige (natural))

0.8mm pitch connectors, stack height: 5mm to 9mm

FX6 Series



Features

- The board-to-board stacking height can be set between 5 and 9mm at 1mm steps.
- Despite the low-profile type connector, the connector has the 1.7mm long effective contact length and provides a sufficient margin.
- The self-alignment for mating action exhibits a high guide level at ± 1 mm, and makes the mating process easier.
- The standard specifications are designed for stick packaging in consideration of automatic mounting, and emboss packaging is supported as well.
- The lead coplanarity on the SMT soldered area is maintained with the high accuracy of less than 0.1mm.

Applications

Notebook PCs, Handheld terminals, Office equipment

Specifications

Item	Requirements
No. of Positions	20-40-50-60-80-100
Current rating (A)	0.5
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	0.8
Contact Pitch (mm)	0.8
Contact Layout	Double row
Stack Height (mm)	5-6-7-8-9
Operating Temperature Range (°C)	-55 to 85
Insulator	PPS (UL94V-0, Color: Light brown)

Circular Connectors

Rectangular Connectors

Coaxial Connectors

Memory Card

Modular Connectors

Card Edge Connectors

Board-to-Board Connectors

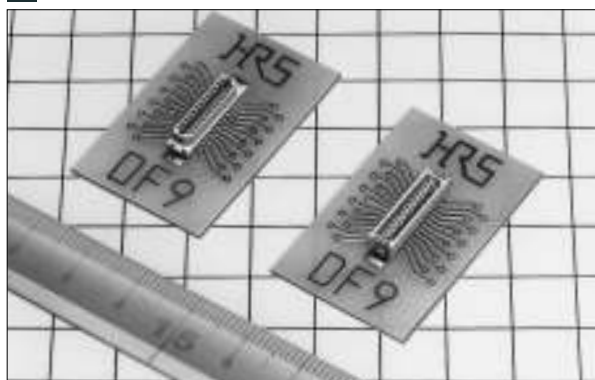
Board-to-Wire Connectors

FPC/FPC Connectors

Optical Connectors and Devices

Microwave Components

1mm pitch connectors, standard interface for VESA FPDI-1 DF9 Series



Features

- The 31 and 41 contact connectors comply with the standard connector specification for the flat panel display interface, which US VESA has selected as FPDI-1.
- The mating area is designed in a trapezoidal structure, and perfectly prevents mis-insertion despite the miniature size.
- The easy lock mechanism assures the firm insertion and extraction properties as well as insertion/extraction feeling touch.
- The contact is constructed without the material fragile surface in the contact portion, and provides smooth insertion and extraction.
- Two types of plating, tin plating and gold plating, are prepared.

Applications

LCDs (Liquid Crystal Displays), Mobile Phones, PCs

Specifications

Item	Requirements
No. of Positions	9-11-13-15-17-19-21-23-25-31-41-51
Current rating (A)	0.5
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	1
Contact Pitch (mm)	1
Contact Layout	Double row
Stack Height (mm)	2.9-4.3
Operating Temperature Range (°C)	-45 to 125
Insulator	Polyamide (UL94V-0, Color: Beige, natural)
Industry Standard	VESA

1mm pitch connectors for vertical connection FX5 Series



Features

- Two header types, low profile and high profile, are prepared according to the connecting height variation.
- The connecting sequence is designed with 2 stages, which provides the end user with ease of maintenance.
- The self-alignment is highly sufficient to the guide level, and the guide rib is provided to achieve easy mating.
- The coplanarity of SMT soldered area secures the high accuracy of 0.1mm.
- The connector is miniaturized about 30% in the mounting area, compared with conventional half pitch connectors.

Applications

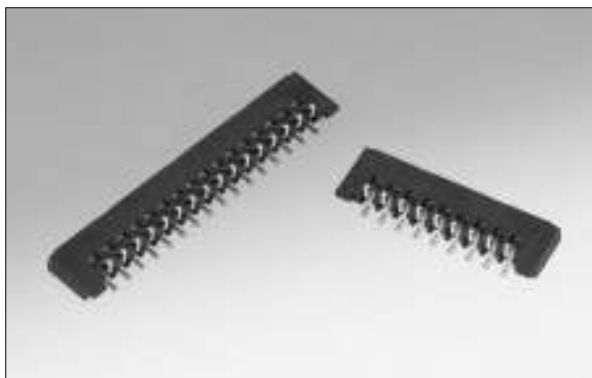
Notebook PCs, Office equipment

Specifications

Item	Requirements
No. of Positions	20-40-52-56-68-80
Current rating (A)	0.5
PCB Mount Type	SMT, through hole
Contact Plating	Gold
Terminal Pitch (mm)	0.5-2
Contact Pitch (mm)	1
Contact Layout	Double row
Operating Temperature Range (°C)	-55 to 85
Insulator	Polyamide (UL94V-0, Color: Beige)

1.1mm pitch compression connectors

DF26 Series



Features

- Board-to-board stacking height of 1.2mm and 1.7mm are provided.
- The contacts having 0.7mm range of movement enable stable connection.
- The space-saving design of these connectors permits an increase in the mounting density as compared to equivalent products.
- One piece board to board for mounting and piece part cost reduction.

Applications

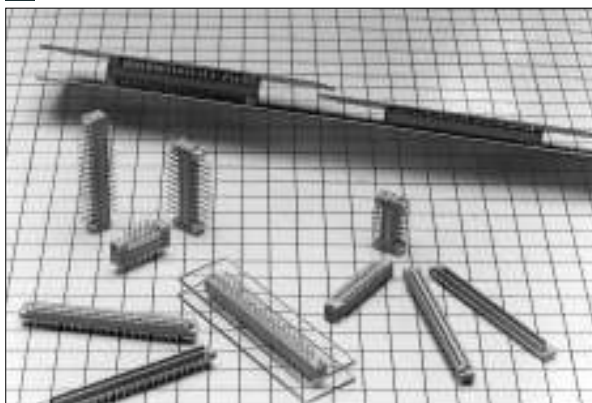
LCD, Mobile phone, notebook PC, Compact Office equipment, Miniature consumer appliance

Specifications

Item	Requirements
No. of Positions	9-16
Current rating (A)	0.5
PCB Mount Type	SMT
Contact Plating	Gold
Terminal Pitch (mm)	1.1
Contact Pitch (mm)	1.1
Contact Layout	Single row
Stack Height (mm)	1.2-1.7
Operating Temperature Range (°C)	-35 to 85
Insulator	LCP (UL94V-0, Color: Black)

1.27mm pitch connectors, stack height: 5mm to 11mm

FX4 Series



Features

- Miniature board-to-board connectors making it possible to set the stacking height at 1mm intervals.
- The board-to-board stacking height of dip connectors can be set from 5mm up to 11mm.
- The dip type prevents the flux from swelling, and the mating part is designed to prevent mis-insertion. Moreover, the low insertion/extraction mechanism is adopted.
- The SMT type is compact and lightweight, and the stacking height is 6 to 11mm.
- The SMT type is designed to prevent mis-insertion. Moreover, the low insertion/extraction mechanism is adopted, and the selection of positioning bosses is possible.

Applications

Computers, Peripheral equipment, Terminal equipment, Office equipment

Specifications

Item	Requirements
No. of Positions	20-32-40-52-60-68-80
Current rating (A)	0.5
PCB Mount Type	SMT, through hole
Contact Plating	Gold
Terminal Pitch (mm)	1.27-2.54
Contact Pitch (mm)	1.27
Contact Layout	Double row
Stack Height (mm)	5-6-7-8-9-10-11
Operating Temperature Range (°C)	-55 to 85
Insulator	Polyamide (UL94V-0, Color: Beige)

Circular Connectors

Rectangular Connectors

Coaxial Connectors

Memory Card

Modular Connectors

Card Edge Connectors

Board-to-Board Connectors

Board-to-Wire Connectors

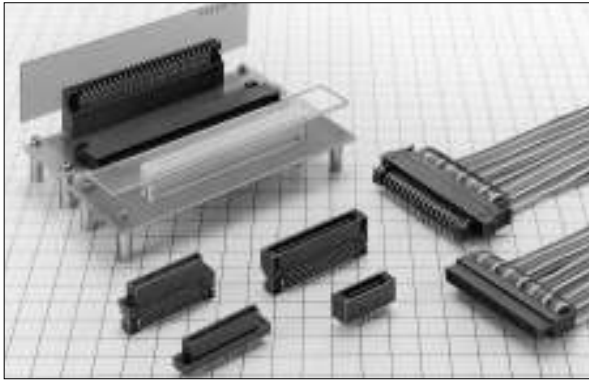
FFC/FFC Connectors

Optical Connectors and Devices

Microwave Components

1.27mm pitch connectors

FX2 Series



Features

- Models in a wide variety allow various connections.
- The ribbon cable connection type allows easy one-touch operation with either single hand.
- The board stack height of board-to-board type can be set from 12 up to 16mm with flux swell prevention.
- Employing the inner lock system, complete lock and eject actions can be performed with easy operation.
- The SMT right angle type is equipped with a metal tab to secure soldering strength. The straight type can choose the use of the metal tab.

Applications

Computers, Peripheral equipment, Terminal equipment, Office equipment

Specifications

Item	Requirements
No. of Positions	20-32-40-52-60-68-80-100-120
Current rating (A)	0.5
PCB Mount Type	SMT, through hole
Contact Plating	Gold
Terminal Pitch (mm)	0.635-1.27-2.54
Contact Pitch (mm)	1.27
Contact Layout	Double row
Stack Height (mm)	12-12.1-12.2-12.3-13-13.2-14-14.1-14.2-15-16
Operating Temperature Range (°C)	-55 to 85
Insulator	Polyamide, PBT (UL94V-0, Color: Black), PPS (UL94V-0, Color: Light brown)

Plug-in connectors for disk unit

FX2M3 Series



Features

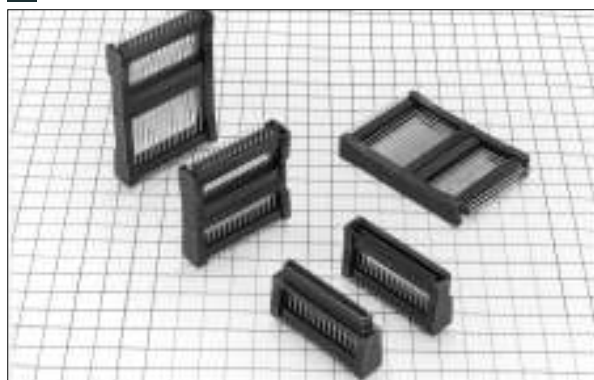
- The total number of contacts contains 128 contacts, out of which 120 are half pitch signal contacts, and the remaining 8 are used for the ground.
- Considering the plug and play, 3 stages sequential structure is employed.
- The signal contact area of the straight dip type has completely prevented flux swell due to solder dipping.
- The socket side connector allow to connect the bus line.
- The socket type employs the floating mechanism for the panel installation.

Applications

Office computers, Data processing equipment

Specifications

Item	Requirements
No. of Positions	60-128
Current rating (A)	0.5
PCB Mount Type	SMT, through hole
Contact Plating	Gold, tin-lead
Terminal Pitch (mm)	1.27-2.54
Operating Temperature Range (°C)	-55 to 85
Insulator	Polyamide, PBT (UL94V-0, Color: Black), PPS (UL94V-0, Color: Light brown).

1.27mm pitch connectors, stack height: 28.2mm to 66mm**FX2M6 Series****Features**

- Half-pitch, high stacking height connectors.
- Contributing to a cost reduction by eliminating cable or PCB expansion.

Applications

Computers, Peripheral equipment, Terminal equipment, Office equipment

Specifications

Item	Requirements
No. of Positions	60
Current rating (A)	0.5
PCB Mount Type	Through hole
Contact Plating	Gold
Terminal Pitch (mm)	2.54
Contact Pitch (mm)	1.27
Contact Layout	Double row
Stack Height (mm)	28.2-28.4-29.2-30.2-30.4-34.4-36.4-44-44.2-45.2-46.2-50-60-66
Operating Temperature Range (°C)	-55 to 85
Insulator	Polyamide, PBT (UL94V-0, Color: Black), PPS (UL94V-0, Color: Light brown)
Remarks	Stack height: 28.2mm to 66mm

1.27mm pitch, pin contact type connectors**HIF6A Series****Features**

- 1.27mm pitch, two-piece and board-to-board connectors.
- Parallel and vertical board-to-board connections are available.
- The guide prevents mis-insertion.
- Possible to choose from with or without board mounting holes.

Applications

Computers, Peripheral equipment, Terminal equipment, PCCs, Electronic equipment, Office equipment

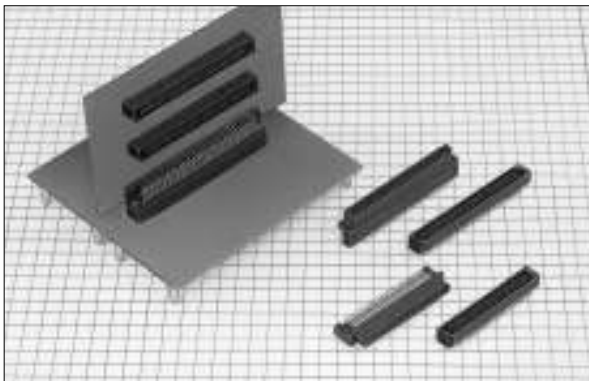
Specifications

Item	Requirements
No. of Positions	20-26-32-34-40-50-52-60-68-80-100
Current rating (A)	0.5
PCB Mount Type	Through hole
Contact Plating	Gold
Terminal Pitch (mm)	2.54
Contact Pitch (mm)	1.27
Contact Layout	Double row
Operating Temperature Range (°C)	-55 to 85
Insulator	PBT (UL94V-0, Color: Black)

Circular
ConnectorsRectangular
ConnectorsCoaxial
ConnectorsMemory Card
ConnectorsModular
ConnectorsCard Edge
ConnectorsBoard-to-Board
ConnectorsBoard-to-Wire
ConnectorsFPC/FFC
ConnectorsOptical Connectors
and DevicesMicrowave
Components

1.27mm pitch connectors

FX1 Series



Features

- The alignment of the mating area in 4-row allows to double the number of contacts in a mounting area equivalent to that of conventional DIN connectors.
- Two-thirds of total contact numbers are used for half pitch signaling contact, while the other one-third thereof is used for the power ground contact.
- The FX1 series is designed in a mechanism that can afford the time different contact at two steps, and the FX1V series is designed in a mechanism that can afford the time different contact at three steps.
- The insertion guide is provided to both ends of connector, and the inductive area is widened in order to prevent mis-insertion.

Applications

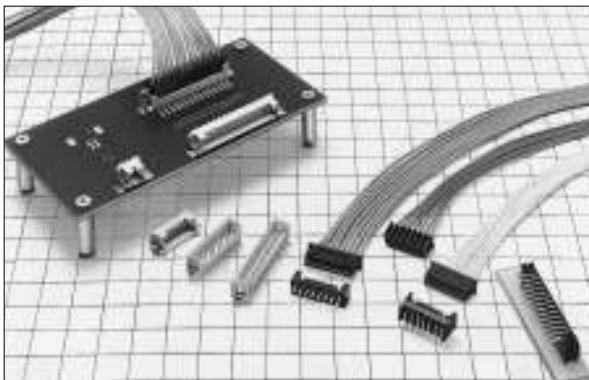
Medium-size and compact computers, EWS units, Exchanger, Measurement equipment, Industrial equipment

Specifications

Item	Requirements
No. of Positions	144-192-216-288
Current rating (A)	0.5
PCB Mount Type	Through hole
Contact Plating	Gold
Terminal Pitch (mm)	2.54
Contact Pitch (mm)	1.27
Contact Layout	Double row
Operating Temperature Range (°C)	-55 to 85
Insulator	PPS (UL94V-0, Color: Black), PBT (UL94V-0, Color: Black), LCP (UL94V-0, Color: Black)

2mm pitch board to board / board to wire connectors

DF3 Series



Features

- The board to board pin headers come with kinked contacts to temporary help keeping the connector in the position.
- Wide variation including ID socket, crimp socket, In-line plug, pin header and receptacle, etc.
- Applicable wires: Crimping: AWG#26, AWG#28 (UL1061), IDC: AWG#22 to AWG#28
- SMT headers are available.

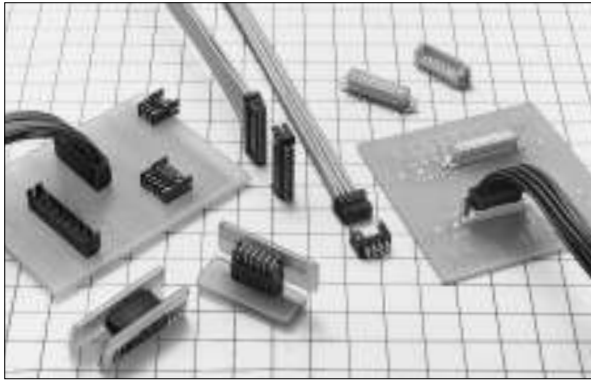
Applications

Copy machines, Printers, Office equipment

Specifications

Item	Requirements
No. of Positions	2-3-4-5-6-7-8-9-10-11-12-13-14-15
Current rating (A)	1-3
PCB Mount Type	SMT, through hole
Contact Plating	Gold, tin, tin-lead
Terminal Pitch (mm)	2
Contact Pitch (mm)	2
Contact Layout	Single row, double row
Stack Height (mm)	6.6-7.5
Operating Temperature Range (°C)	-45--30 to 65-85-125
Applicable PCB Thickness (mm)	1.6
Insulator	Polyamide (UL94V-0, Color: Black)

2mm pitch board to board / board to wire connectors DF11 Series



Features

- Double rows of 2mm pitch contact condensed within the 5mm width.
- Crimping or ID wiring is available with PCB to cable, cable to cable, and PCB to PCB connectors.
- Gold or Tin can be selected for the plating according to application, while an SMT product lineup.
- Applicable wires: AWG#22 to AWG#30
- Using the full automatic IDC machine, complicated multi-harness wiring can be easily connected, reducing the man-hour and eliminating the manual work process.

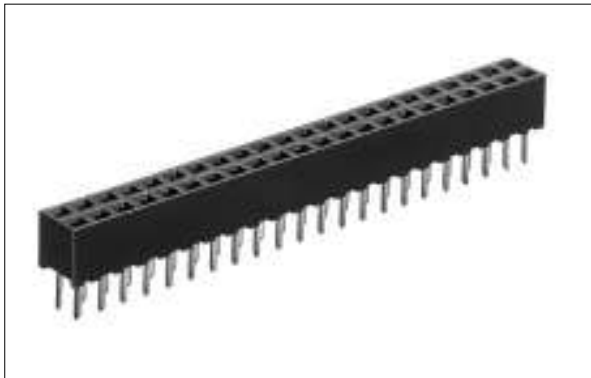
Applications

Copy machines, Printers, Office equipment

Specifications

Item	Requirements
No. of Positions	4-6-8-10-12-14-16-18-20-22-24-26-28-30-32-40
Current rating (A)	0.5-1-2
PCB Mount Type	SMT, through hole
Contact Plating	Gold, tin, tin-lead
Terminal Pitch (mm)	2
Contact Pitch (mm)	2
Contact Layout	Double row
Stack Height (mm)	7.55-7.8-8.2-8.45
Operating Temperature Range (°C)	-30 to 85
Insulator	Polyamide (UL94V-0, Color: Black)

2mm pitch for miniature HDD and main port connection MA18 Series



Features

- Products incorporating a pullout knob are available for improvement in operability.
- Four types of terminal lengths are available.

Applications

2.5 inch HDD

Specifications

Item	Requirements
No. of Positions	44
Current rating (A)	1
PCB Mount Type	Through hole
Contact Plating	Gold
Contact Pitch (mm)	2
Contact Layout	Double row
Operating Temperature Range (°C)	-55 to 85
Insulator	PBT (UL94V-0, Color: Black)

Circular Connectors

Rectangular Connectors

Coaxial Connectors

Memory Card

Modular Connectors

Card Edge Connectors

Board-to-Board Connectors

Board-to-Wire Connectors

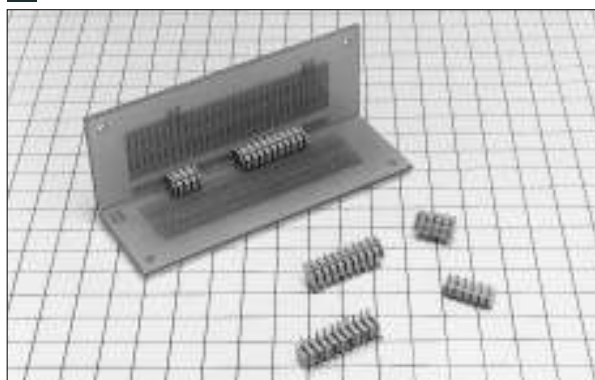
FPC/FFC Connectors

Optical Connectors and Devices

Microwave Components

2.5mm pitch vertical post headers

MDF14A Series



Features

- The post header is developed in the special design capable of vertically connecting boards that do not require insertion or extraction.
- By adopting the 0.8mm round pin as the post pin, the pin strength can be enhanced.
- Kink-processed products are provided to fix the board temporarily.
- The post header corresponds to individual pin extraction specifications.

Applications

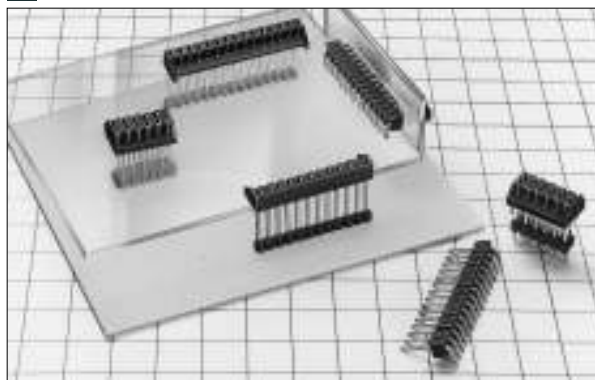
A variety of power supply equipment, Secondary power supply for a variety of equipment

Specifications

Item	Requirements
No. of Positions	4-5-6-7-8-9-10
Current rating (A)	5
PCB Mount Type	Through hole
Contact Plating	Tin-lead
Contact Pitch (mm)	2.5
Contact Layout	Single row
Operating Temperature Range (°C)	-35 to 85
Insulator	Polyamide (UL94V-0, Color: Beige)
Applicable PCB Thickness (mm)	1.6

2.54mm pitch bottom entry type connectors

MDF7 Series



Features

- 2.54mm pitch bottom entry type connector.
- The header variations and the construction of header pin through type make it possible to set the board-to-board size at infinite stages.
- The parts mounted surface on two PCBs do not face each other, and can be oriented in the same direction.
- Single-row product, double-row product, tin-plating, and gold-plating products are lined up.

Applications

Internal connections of telephones, Office machines and FA machines, PCB connections with IPM and IGBT

Specifications

Item	Requirements
No. of Positions	3-5-6-7-8-9-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-30-34-40-46
Current rating (A)	1-3
PCB Mount Type	Through hole
Contact Plating	Gold, tin, tin-lead
Terminal Pitch (mm)	2.54
Contact Pitch (mm)	2.54
Contact Layout	Single row, double row
Operating Temperature Range (°C)	-55-35 to 85-125
Insulator	Polyamide (UL94V-0, Color: Black), PBT (UL94V-0, Color: Black, gray)
Applicable PCB Thickness (mm)	1.6

2.54mm pitch connectors

HIF3H Series



Features

- Board to board, 2-piece type connector that can be combined with the HIF3 Series.
- Afford to connect the board to board horizontally or vertically.

Applications

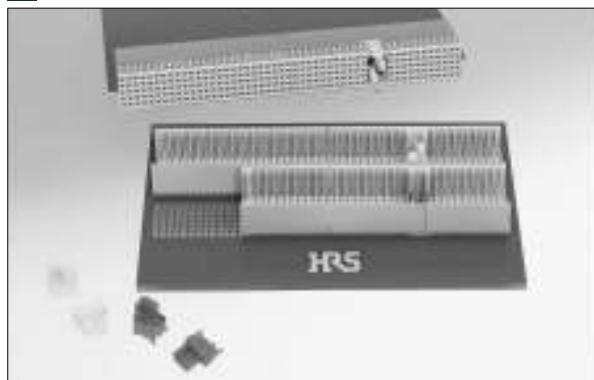
Computers, Terminal equipment, Electronic equipment, Office equipment

Specifications

Item	Requirements
No. of Positions	4-6-8-10-12-14-16-18-20-24-25-26-30-34-40-50-60-64-70-130
Current rating (A)	3
PCB Mount Type	Through hole, wrapping
Contact Plating	Gold
Terminal Pitch (mm)	2.54
Contact Pitch (mm)	2.54
Contact Layout	Single row, double row
Operating Temperature Range (°C)	-55 to 85
Insulator	PBT (UL94V-0, Color: Black)
Industry Standard	MIL
Accessories	Polarizing key (HIF3B-GK)

2mm hard metric connectors

PCN21 Series



Features

- The 2mm Hard Metric (HM) Connector complies with IEC 61076-4-101. As specified by IEC Standards, 3 types are available: Style A (110 contacts), Style B (125 contacts), Style C (55 contacts) and Style M (combined type).
- Products equivalent to Compact PCI standard P2/J2 (110 contacts), P3/J3 (95 contacts) and AB Type (125 contacts) are available.
- Connectors of this series, headers and receptacles, are designed for press fit connection.
- The receptacles feature two-point contact design for high reliability.
- Gold plating and tin plating are available on PCB leads.

Applications

Switchboards, Transmission systems, Cellular base stations, Industrial computer boards, Measurement instruments, Control equipment

Specifications

Item	Requirements
No. of Positions	55-95-110-125-176-200
Current rating (A)	1.5
PCB Mount Type	Press fit
Contact Plating	Gold
Contact Pitch (mm)	2
Contact Layout	5 row, 8 row
Operating Temperature Range (°C)	-55 to 85
Insulator	PBT (UL94V-0, Color: Black)

Circular Connectors

Rectangular Connectors

Coaxial Connectors

Memory Card

Modular Connectors

Card-Edge Connectors

Board-to-Board Connectors

Board-to-Wire Connectors

FPC/FFC Connectors

Optical Connectors and Devices

Microwave Components

High current, high density, power connectors

MCN51 Series



Features

- Each pin handles a maximum of 25A.
- HIROSE's unique press-fit connection reduces damage to the PCB when mounting.
- Suitable to power supply connectors for back brain systems.
- UL recognized, CSA certified UL File No. E52653, CSA File No. LR95109
- Standard models with 8, 16 and 30 contacts are available. Custom made models different in the number of contacts are available by order.

Applications

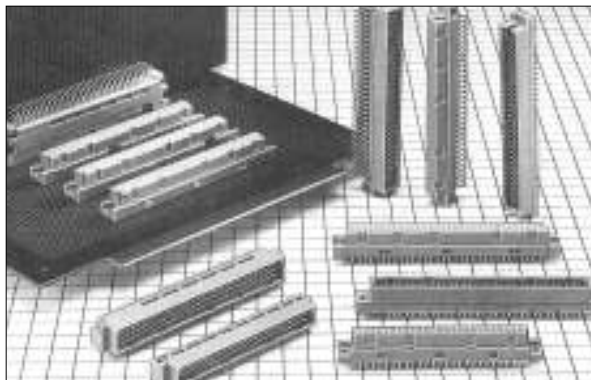
LAN equipment, Exchangers, Transmission equipment, Servers, All power supply equipment

Specifications

Item	Requirements
No. of Positions	8-16-30
Current rating (A)	25
PCB Mount Type	Press fit, through hole
Contact Plating	Gold
Terminal Pitch (mm)	5
Contact Pitch (mm)	5
Contact Layout	Double row, 3 row
Operating Temperature Range (°C)	-55 to 125
Insulator	PBT (UL94V-0, Color: Black)

Connectors compliant to IEC603-2/DIN41612 standards (Standard type)

PCN10 Series



Features

- Compliant with IEC603-2/DIN41612 standards.
- Double sided two-point contact system ensures high contact reliability.
- The PCN10H series contains 25, 30, 35, 40 and 45mm stacking height.
- The PCN10MC series utilizes a sequence structure for circuit protection function.

Applications

Control equipment, Exchanger, Measurement equipment

Specifications

Item	Requirements
No. of Positions	16-20-24-32-44-48-50-60-64-90-96-100-128-144
Current rating (A)	1-2-3
PCB Mount Type	Through hole, wrapping
Contact Plating	Gold
Terminal Pitch (mm)	2.54
Contact Pitch (mm)	2.54
Contact Layout	Double row, 3 row, 4 row
Stack Height (mm)	16.8-17.9-25-30-35-40-45
Operating Temperature Range (°C)	-30 to 85
Insulator	PBT (UL94V-0, Color: Gray)
Industry Standard	IEC, DIN
Accessories	Polarizing key (PCN10-GK(A))

Connectors compliant to IEC603-2/DIN41612 standards (Double sided, two-point contact type) PCN12 Series



Features

- Conforming to IEC603-2/DIN41612 standards.
- Double sided, two-point contact system ensures high contact reliability.
- Products with flux swell prevention are available.
- The easy lock pin type to fix the board temporarily is available.
- IDC connector for ribbon cable is available.

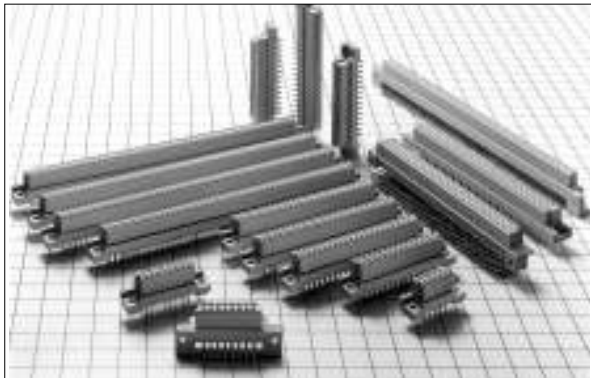
Applications

Control equipment, Exchanger, Measurement equipment

Specifications

Item	Requirements
No. of Positions	10-16-20-24-28-32-44-50-64-90-96-100
Current rating (A)	2
PCB Mount Type	Through hole
Contact Plating	Gold
Terminal Pitch (mm)	2.54
Contact Pitch (mm)	2.54
Contact Layout	Double row, 3 row
Operating Temperature Range (°C)	-30 to 85
Insulator	PBT (UL94V-0, Color: Gray)
Industry Standard	IEC,DIN

Connectors compliant to IEC603-2/DIN41612 standards (Single sided, two-point contact type) PCN13 Series



Features

- Conforming to IEC603-2/DIN41612 standards.
- Single sided, two-point contact system in pursuit of cost performance.
- Products with flux swell prevention are available.
- The easy lock pin type to fix the board temporarily is available.
- IDC connector for ribbon cable is available.

Applications

Control equipment, Exchanger, Measurement equipment

Specifications

Item	Requirements
No. of Positions	10-16-20-30-32-44-48-50-64-90-96-100
Current rating (A)	2
PCB Mount Type	Through hole
Contact Plating	Gold
Terminal Pitch (mm)	2.54
Contact Pitch (mm)	2.54
Contact Layout	Double row, 3 row
Stack Height (mm)	16.8-17.9
Operating Temperature Range (°C)	-30 to 85
Insulator	PBT (UL94V-0, Color: Gray)
Industry Standard	IEC,DIN

Circular Connectors

Rectangular Connectors

Coaxial Connectors

Memory Card

Modular Connectors

Card Edge Connectors

Board-to-Board Connectors

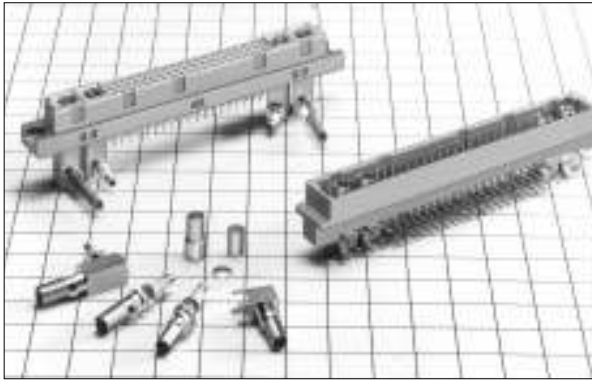
Board-to-Wire Connectors

FFC/FFC Connectors

Optical Connectors and Devices

Microwave Components

Connectors compliant to IEC603-2/DIN41612 standards (Coaxial and high current contact type)
PCN10F Series



Features

- Compliant with DIN41612 M type and the coaxial connector complies with DIN47297.
- The 2, 4, 6, and 8 coaxial and high current contact insertion holes are available.
- Double sided, two-point contact system ensures high contact reliability.
- The receptacle is provided with solder type and solderless connection type.
- The contact type is also provided with straight, right angle dip and wrapping types.

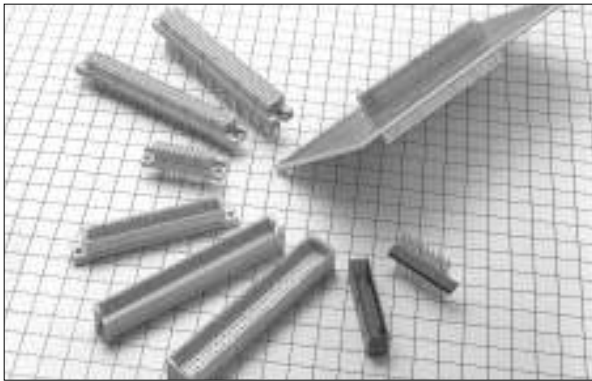
Applications

Measurement equipment, Control equipment, Exchanger

Specifications

Item	Requirements
No. of Positions	24-42-60-78
Current rating (A)	2
PCB Mount Type	Through hole, wrapping
Contact Plating	Gold
Terminal Pitch (mm)	2.54
Contact Pitch (mm)	2.54
Contact Layout	3 row
Operating Temperature Range (°C)	-30 to 85
Insulator	PBT (UL94V-0, Color: Gray)
Industry Standard	IEC,DIN

Connectors compliant to IEC603-2/DIN41612 standards (Press fit type)
PCN11 Series



Features

- Conforming to IEC603-2/DIN41612 standards.
- Double-sided, two-point contact system ensures high contact performance.
- The applicable PCB thickness is 2.4mm min.
- Dia. 0.8, 0.9 and 1.0mm through holes are available.
- Compatibility with PCN10, PCN12, and PCN13 series makes it possible to utilize various application patterns.

Applications

PBX, Control equipment

Specifications

Item	Requirements
No. of Positions	10-14-16-20-26-30-32-34-36-40-42-44-50-52-60-64-90-96-100-128
Current rating (A)	1-2
PCB Mount Type	Press fit
Contact Plating	Gold
Terminal Pitch (mm)	2.54
Contact Pitch (mm)	2.54
Contact Layout	Double row, 3 row, 4 row
Operating Temperature Range (°C)	-55--30 to 85
Applicable PCB Thickness (mm)	2.4
Insulator	PBT (UL94V-0, Color: Gray)
Industry Standard	IEC,DIN

Circular Connectors
 Rectangular Connectors
 Coaxial Connectors
 Memory Card
 Modular Connectors
 Card Edge Connectors
 Board-to-Board Connectors
 Board-to-Wire Connectors
 FPC/FFC Connectors
 Optical Connectors and Devices
 Microwave Components