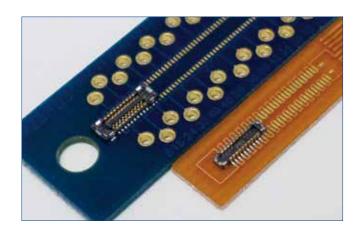
0.35mm Pitch, 0.6 and 0.8mm Height, Board to Board or Board to FPC Connectors

BM23FR Series



■Features

1. Space-saving design

Compact design ideal for mobile devices (See Fig.1)
•Pitch: 0.35mm, Width: 1.98mm, Stacking height: 0.6/0.8mm

2. Robust [Breaking Strength: 90N]

Metal guides prevent housing damage due to incorrect mating. (See Fig.2)

3. Highly reliable contact design

2-point contact design for signal contact ensures high reliability. (See Fig.3)

4. Good mating operation

Wide self alignment range with metal guides offers enhanced mating operation.

(0.4mm in pitch direction, 0.35mm in width direction) Furthermore, a clear tactile click generated by the unique locking contact design insures complete mating.

5. Supports USB 3.1 Gen.2 (10Gbps) transmission

Signal contacts support USB3.1 Gen.2 transmission speed.

■Environmental

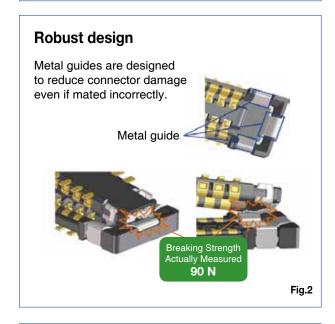
· Halogen-free*

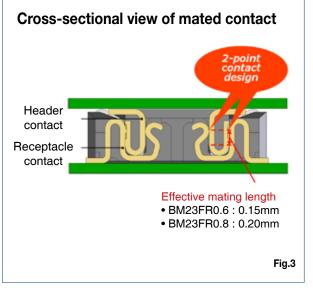
As defined by IEC 61249-2-21

Br: 900ppm max., Cl: 900ppm max.

Br+Cl: 1,500ppm max.

Space-saving Dimension Example : 24 Pos. Receptacle Header Narrow width design allows for use in small spaces. Fig.1





■Product Specifications

Datings	Rated current	0.3A	Operating temperature range	-55°C to 85°C (Note1)	Storage temperature range	-10°C to 60°C (Note2)
Ratings	Rated voltage	30V AC/DC	Operating humidity range	20% to 80%	Storage humidity range	40% to 70% (Note2)

Items	Specifications	Conditions
1. Contact resistance	100mΩ max.	Measured at 20mV AC, 1kHz, and 1mA
2. Insulation resistance	50MΩ min.	Measured at 100V DC
3. Withstanding voltage	No flashover or insulation breakdown	100V AC for 1 minute
4. Durability	Contact resistance: 100mΩ max.	10 mating cycles
5. Vibration	No electrical discontinuity for more than 1µs.	Frequency: 10 to 55Hz, single amplitude: 0.75mm in 3 axis directions for 5 minutes, 10 cycles
6. Shock resistance	No electrical discontinuity of 1µs or more.	Acceleration: 490m/s², duration of pulse: 11ms at 3 times for 3 directions
7. Humidity	Contact resistance : $100m\Omega$ max. Insulation resistance : $25m\Omega$ min.	96 hours at temperature of 40±2°C and a humidity range from 90 to 95%
8. Temperature cycle	Contact resistance: $100 \text{m}\Omega$ max. Insulation resistance: $50 \text{M}\Omega$ min.	-55°C for 30 minutes → 85°C for 30 minutes, 5 cycles
9. Soldering heat resistance	No dissolution or melting of the resin that will affect the performance.	Reflow: with recommended temperature profile; Hand soldering at soldering iron temperature of 350°C for 3 seconds max.

Note 1: Includes temperature rise caused by current flow.

Note 2: Storage refers to long-term-storage of unused items before they are mounted on the PCB.

Operating temperature/humidity range applies to the state of temporary storage such as non-powered after mounting on the PCB, and during transportation, etc.

■Materials / Finish

Product	Part	Material	Finish	UL Regulation
	Insulator	LCP	Black	UL94V-0
Receptacle Header	Contact	Copper alloy	Gold plating	
	Metal Fitting	Copper alloy	Gold plating	

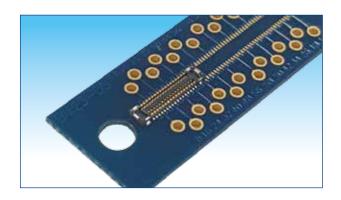
■Product Number Structure

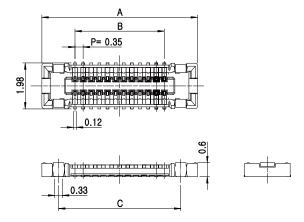
Refer to the chart below when determining the product specifications from the product number. Please select from the product numbers listed in this catalog when placing orders

● Receptacle / Header

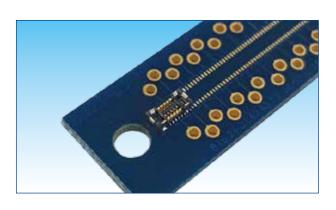
1 Series Name: BM	6 Connector Type DS: Receptacle DP: Header			
2 Series No. : 23	Ocontact Pitch: 0.35mm			
Shape Symbols FR: With locking metal fitting	Terminal type V : Straight SMT			
4 Stacking Height: 0.6mm, 0.8mm	Sold plated specification and packaging status (51): Gold plate thickness 0.05µm Embossed tape packaging (10,000pcs/reel)			
6 Number of Contacts	(895) : Gold plate thickness 0.05µm Embossed tape packaging (1,000pcs/reel)			

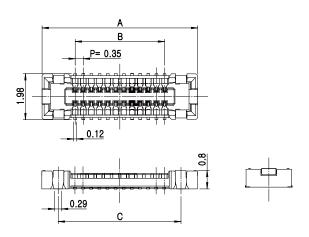
■H=0.6mm Receptacle

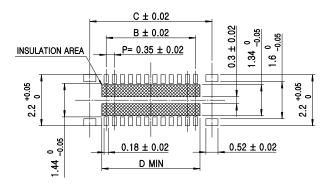




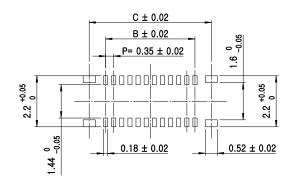
■H=0.8mm Receptacle



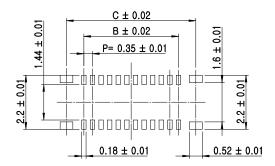




♠ Recommended PCB layout [H=0.8 mm]



Recommended metal mask dimensions (mask thickness: 100μm) [0.6mm and 0.8mm common]



Unit: mm

10.15

11.56

13.00

Part No.	HRS No.	No. of contacts A B		В	С	D
BM23FR0.6-6DS-0.35V(***)	480-0287-0 **	6	3.55 0.70		2.11	1.08
BM23FR0.6-8DS-0.35V(***)	480-0360-0 **	8	3.90	1.05	2.46	1.43
BM23FR0.6-10DS-0.35V(***)	480-0258-0 **	10	4.25	1.40	2.81	1.78
BM23FR0.6-12DS-0.35V(***)	480-0371-0 **	12	4.60	1.75	3.16	2.13
BM23FR0.6-16DS-0.35V(***)	480-0295-0 **	16	5.30	2.45	3.86	2.83
BM23FR0.6-20DS-0.35V(***)	480-0272-0 **	20	6.00	3.15	4.56	3.53
BM23FR0.6-24DS-0.35V(***)	480-0260-0 **	24	6.70 3.85		5.26	4.23
BM23FR0.6-30DS-0.35V(***)	480-0327-0 **	30	7.75 4.90		6.31	5.28
BM23FR0.6-34DS-0.35V(***)	480-0274-0 **	34	8.45	8.45 5.60		5.98
BM23FR0.6-40DS-0.35V(***)	480-0390-0 **	40	9.50	6.65	8.06	7.03
BM23FR0.6-50DS-0.35V(***)	480-0382-0 **	50	11.25	8.40	9.81	8.78
Part No.	HRS No.	No. of contacts	А	ı	3	С
BM23FR0.8-10DS-0.35V(***)	480-0298-0 **	10	4.25	1.	40	2.81
BM23FR0.8-18DS-0.35V(***)	480-0469-0 **	18	5.65		80	4.21

60

Note 1 : Please place orders in full reel quantities.

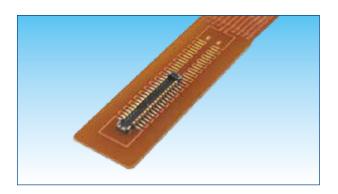
Note 2: This connector has no polarity.

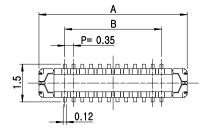
BM23FR0.8-60DS-0.35V(***)

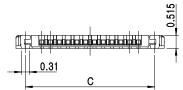
Note 3 : The specification number (895) in the Part No. changes to (95) in the HRS No.

480-0300-0 **

■H=0.6mm Header

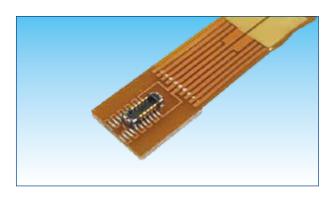


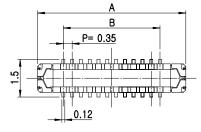


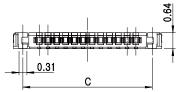




■H=0.8mm Header

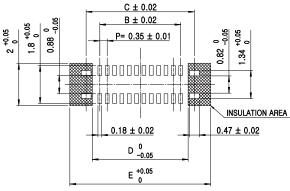




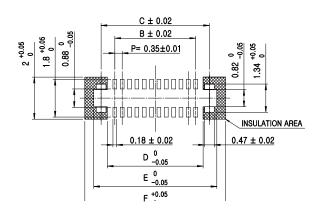




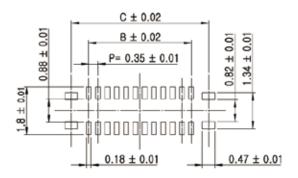
▶ Recommended PCB layout [H=0.6mm]



▶ Recommended PCB layout [H=0.8mm]



Recommended metal mask dimensions (mask thickness : 100μm) [0.6mm and 0.8mm common]



Unit: mm

Part No.	HRS No.	No. of contacts	A B		(D	Е
BM23FR0.6-6DP-0.35V(***)	480-0286-0 **	6	2.75	0.70	2.	00	1.41	3.55
BM23FR0.6-8DP-0.35V(***)	480-0361-0 **	8	3.10	1.05	2.	35	1.76	3.90
BM23FR0.6-10DP-0.35V(***)	480-0257-0 **	10	3.45	1.40	2.	70	2.11	4.25
BM23FR0.6-12DP-0.35V(***)	480-0364-0 **	12	3.80	1.75	3.	05	2.46	4.60
BM23FR0.6-16DP-0.35V(***)	480-0290-0 **	16	4.50	2.45	3.	75	3.16	5.30
BM23FR0.6-20DP-0.35V(***)	480-0273-0 **	20	5.20	3.15	4.	45	3.86	6.00
BM23FR0.6-24DP-0.35V(***)	480-0259-0 **	24	5.90	3.85	5.	15	4.56	6.70
BM23FR0.6-30DP-0.35V(***)	480-0328-0 **	30	6.95	4.90	6.5	20	5.61	7.75
BM23FR0.6-34DP-0.35V(***)	480-0275-0 **	34	7.65	5.60	6.9	90	6.31	8.45
BM23FR0.6-40DP-0.35V(***)	480-0391-0 **	40	8.70	6.65	7.5	95	7.36	9.50
BM23FR0.6-50DP-0.35V(***)	480-0383-0 **	50	10.45	8.40	9.	70	9.11	11.25
Part No.	HRS No.	No. of contacts	Α	В	С	D	Е	F
BM23FR0.8-10DP-0.35V(***)	480-0297-0 **	10	3.45	1.40	2.70	2.11	3.41	4.25
BM23FR0.8-18DP-0.35V(***)	480-0468-0 **	18	4.85	2.80	4.10	3.51	4.81	5.65
BM23FR0.8-60DP-0.35V(***)	480-0299-0 **	60	12.20	10.15	11.45	10.86	6 12.16	13.00

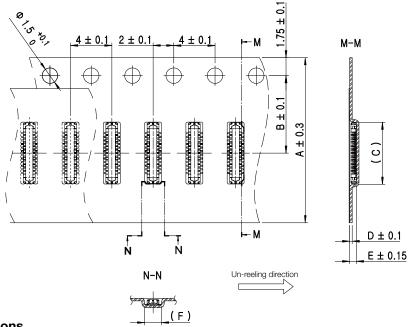
Note 1 : Please place orders in full reel quantities.

Note 2: This connector has no polarity.

Note 3: The specification number(895) in the Part No. changes to(95) in the HRS No.

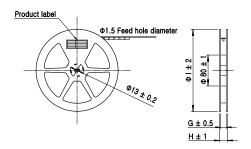
♦ Embossed Tape Dimensions (IEC 602286-3, with JIC C 0806)

Receptacle

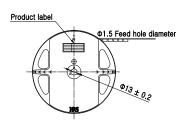


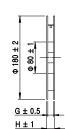
Reel Dimensions

▶10,000pcs/reel



▶1,000pcs/reel





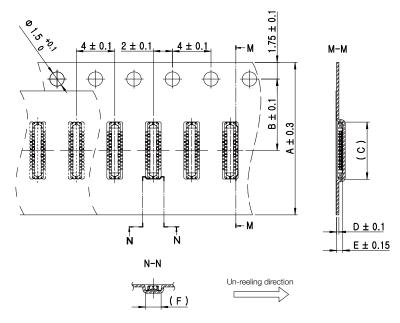
Unit: mm

Part No.	HRS No.	No. of contacts	Α	В	С	D	E	F	G	Н	ı
BM23FR0.6-6DS-0.35V(***)	480-0287-0 **	6	12	5.5	3.66	0.25	0.8	2.07	13.5	17.5	330
BM23FR0.6-8DS-0.35V(***)	480-0360-0 **	8	12	5.5	4.01	0.25	0.8	2.07	13.5	17.5	330
BM23FR0.6-10DS-0.35V(***)	480-0371-0 **	10	16	7.5	4.36	0.25	0.8	2.07	17.5	21.5	380
BM23FR0.6-12DS-0.35V(***)	480-0295-0 **	12	16	7.5	4.71	0.25	0.8	2.07	17.5	21.5	330
BM23FR0.6-16DS-0.35V(***)	480-0272-0 **	16	16	7.5	5.41	0.25	0.8	2.07	17.5	21.5	330
BM23FR0.6-20DS-0.35V(***)	480-0260-0 **	20	16	7.5	6.11	0.25	0.8	2.07	17.5	21.5	380
BM23FR0.6-24DS-0.35V(***)	480-0327-0 **	24	16	7.5	6.81	0.25	0.8	2.07	17.5	21.5	380
BM23FR0.6-30DS-0.35V(***)	480-0274-0 **	30	24	11.5	7.86	0.25	0.8	2.07	25.5	29.5	330
BM23FR0.6-34DS-0.35V(***)	480-0390-0 **	34	24	11.5	8.56	0.25	0.8	2.07	25.5	29.5	380
BM23FR0.6-40DS-0.35V(***)	480-0382-0 **	40	24	11.5	9.61	0.25	0.8	2.07	25.5	29.5	330
BM23FR0.6-50DS-0.35V(***)	480-0371-0 **	50	24	11.5	11.36	0.25	0.8	2.07	25.5	29.5	330
Part No.	HRS No.	No. of contacts	Α	В	С	D	Е	F	G	Н	ı
BM23FR0.8-10DS-0.35V(***)	480-0298-0 **	10	16	7.5	4.36	0.3	1.0	2.07	17.5	21.5	330
BM23FR0.8-18DS-0.35V(***)	480-0469-0 **	18	16	7.5	5.76	0.3	1.0	2.07	17.5	21.5	330
BM23FR0.8-60DS-0.35V(***)	480-0300-0 **	60	24	11.5	13.11	0.3	1.0	2.07	25.5	29.5	330

Note 1: The specification number(895) in the Part No. changes to(95) in the HRS No.

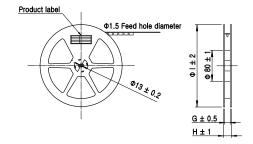
♦ Embossed Tape Dimensions (IEC 602286-3, with JIC C 0806)

Header

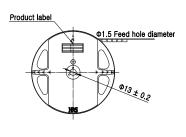


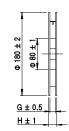
Reel Dimensions

▶10,000pcs/reel



▶1,000pcs/reel



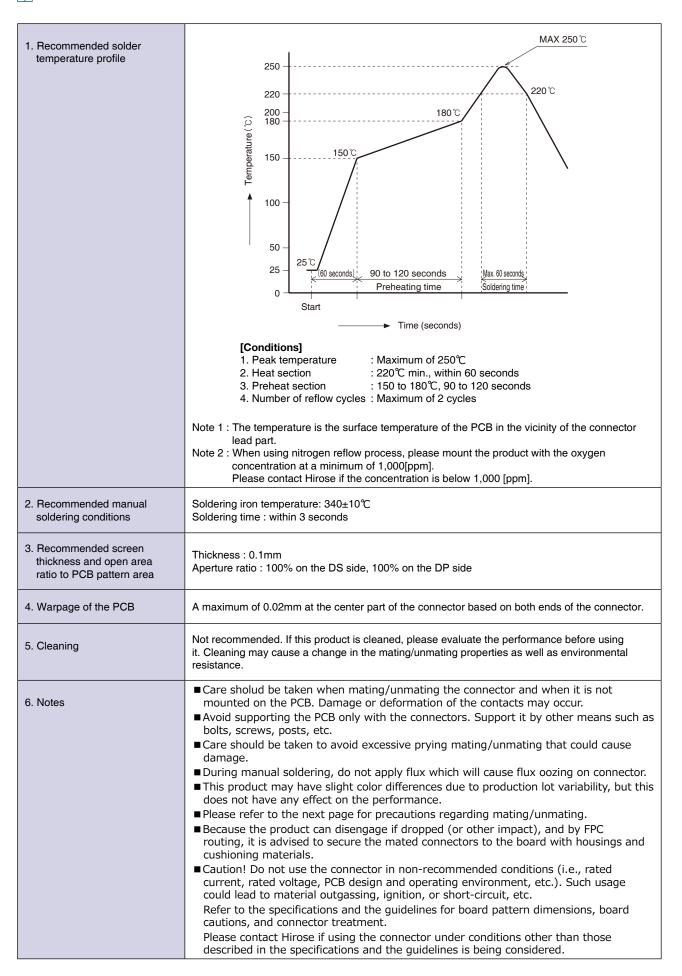


Unit: mm

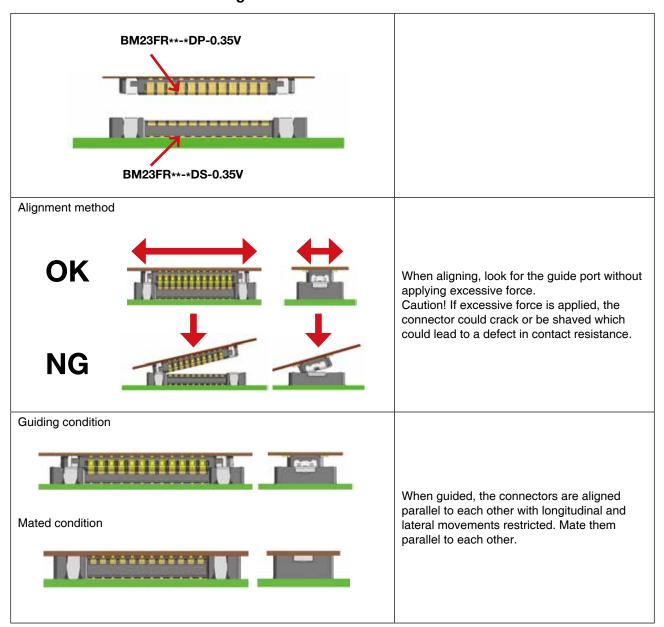
Part No.	HRS No.	No. of contacts	Α	В	С	D	E	F	G	Н	I
BM23FR0.6-6DP-0.35V(***)	480-0286-0 **	6	12	5.5	2.85	0.25	0.65	1.58	13.5	17.5	330
BM23FR0.6-8DP-0.35V(***)	480-0361-0 **	8	12	5.5	3.20	0.25	0.65	1.58	13.5	17.5	330
BM23FR0.6-10DP-0.35V(***)	480-0257-0 **	10	12	5.5	3.55	0.25	0.65	1.64	13.5	17.5	380
BM23FR0.6-12DP-0.35V(***)	480-0364-0 **	12	12	5.5	3.90	0.25	0.65	1.64	13.5	17.5	330
BM23FR0.6-16DP-0.35V(***)	480-0290-0 **	16	16	7.5	4.60	0.25	0.65	1.64	17.5	21.5	330
BM23FR0.6-20DP-0.35V(***)	480-0273-0 **	20	16	7.5	5.30	0.25	0.65	1.64	17.5	21.5	380
BM23FR0.6-24DP-0.35V(***)	480-0259-0 **	24	16	7.5	6.00	0.25	0.65	1.64	17.5	21.5	380
BM23FR0.6-30DP-0.35V(***)	480-0328-0 **	30	16	7.5	7.05	0.25	0.65	1.64	17.5	21.5	330
BM23FR0.6-34DP-0.35V(***)	480-0275-0 **	34	16	7.5	7.75	0.25	0.65	1.64	17.5	21.5	380
BM23FR0.6-40DP-0.35V(***)	480-0391-0 **	40	24	11.5	8.80	0.25	0.65	1.64	25.5	29.5	330
BM23FR0.6-50DP-0.35V(***)	480-0383-0 **	50	24	11.5	10.55	0.25	0.65	1.64	25.5	29.5	330
Part No.	HRS No.	No. of contacts	Α	В	С	D	Е	F	G	Н	I
BM23FR0.8-10DP-0.35V(***)	480-0297-0 **	10	12	5.5	3.55	0.3	0.78	1.64	13.5	17.5	330
BM23FR0.8-18DP-0.35V(***)	480-0468-0 **	18	16	7.5	4.95	0.3	0.78	1.64	17.5	21.5	330
BM23FR0.8-60DP-0.35V(***)	480-0299-0 **	60	24	11.5	12.30	0.3	0.78	1.64	25.5	29.5	330

Note 1: The specification number (895) in the Part No. changes to (95) in the HRS No.

Precautions



Handle with care when mating a connector



● Handle with care when un-mating connectors

ОК		Un-mate connectors parallel to each other.
ОК	Pitch direction	If the connector cannot be un-mated parallel, it can be removed diagonally from the pitch direction, as shown in the left figure. However, the connector can be broken if the FPC is not rigid. Please confirm rigidity of the FPC at the time of trial production.
NG	Corner direction	Do not pull from the corner. If it is pulled from the corner as shown in the left figure, the contact and connector could be damaged.
NG	HOMEN CONTRACTOR	Please provide a reinforcing plate for the FPC. If the rigidity of the FPC is not sufficient, the connector may break as shown in the left figure. Please check the action of the FPC to be used repeatedly. A reinforcing plate of 0.3mm or thicker made of glass epoxy material, or 0.2mm or thicker stainless steel is recommended

USA:

HIROSE ELECTRIC (U.S.A.), INC. HEADQUARTERS CHICAGO OFFICE

2300 Warrenville Road, Suite 150, Downers Grove, IL 60515 Phone: +1-630-282-6700 http://www.hirose.com/us/

USA:

HIROSE ELECTRIC (U.S.A.), INC. BOSTON OFFICE

300 Brickstone Square Suite 201, Andover, MA 01810

Phone: +1-978-662-5255

GERMANY:

HIROSE ELECTRIC EUROPE B.V. NUREMBERG OFFICE

Neumeyerstrasse 22-26, 90411 Nurnberg Phone: +49-911 32 68 89 63 Fax: +49-911 32 68 89 69 http://www.hirose.com/eu/

UNITED KINGDOM:

HIROSE ELECTRIC EUROPE BV (UK BRANCH)

4 Newton Court, Kelvin Drive, Knowlhill, Milton Keynes, MK5 8NH Phone: +44-1908 202050 Fax: +44-1908 202058 http://www.hirose.com/eu/

CHINA.

HIROSE ELECTRIC (CHINA) CO., LTD. SHENZHEN BRANCH

Room 09-13, 19/F, Office Tower Shun Hing Square, Di Wang Commercial Centre, 5002 Shen Nan Dong Road, Shenzhen City, Guangdong Province, 518008

Phone: +86-755-8207-0851 Fax: +86-755-8207-0873 http://www.hirose.com/cn/

KORFA:

HIROSE KOREA CO.,LTD.

143, Gongdan 1-daero, Siheung-si, Gyeonggi-do, 15084, Korea Phone: +82-31-496-7000 Fax: +82-31-496-7100 http://www.hirose.co.kr/

HIROSE ELECTRIC SINGAPORE PTE. LTD. BANGALORE LIAISON OFFICE

Unit No-403, 4th Floor, No-84, Barton Centre, Mahatma Gandhi (MG) Road, Bangalore 560 001, Karnataka, India

Phone: +91-80-4120 1907 Fax: +91-80-4120 9908 http://www.hirose.com/sg/

USA:

HIROSE ELECTRIC (U.S.A.), INC. SAN JOSE OFFICE

2841 Junction Ave. Suite 200 San Jose, CA. 95134 Phone: +1-408-253-9640 Fax: +1-408-253-9641 http://www.hirose.com/us/

THE NETHERLANDS: HIROSE ELECTRIC EUROPE B.V.

Hogehillweg #8 1101 CC Amsterdam Z-0

Phone: +31-20-6557460 Fax: +31-20-6557469 http://www.hirose.com/eu/

GERMANY:

HIROSE ELECTRIC EUROPE B.V. HANOVER OFFICE

Bayernstr. 3, Haus C 30855 Langenhagen, Germany Phone: +49-511 97 82 61 30

Fax: +49-511 97 82 61 35 http://www.hirose.com/eu/

CHINA:

HIROSE ELECTRIC (CHINA) CO., LTD. (SHANGHAI, HEADQUARTERS)

18, Enterprise Center Tower 2, 209# Gong He Road, Jing'an District, Shanghai, CHINA 200070

Phone: +86-21-6391-3355 Fax: +86-21-6391-3335 http://www.hirose.com/cn/

HONG KONG.

HIROSE ELECTRIC HONGKONG TRADING CO., LTD.

Room 1001, West Wing, Tsim Sha Tsui Centre, 66 Mody Road, Tsim Sha Tsui East, Kowloon, Hong Kong

Phone: +852-2803-5338 Fax: +852-2591-6560 http://www.hirose.com/hk/

SINGAPORE:

HIROSE ELECTRIC SINGAPORE PTE. LTD.

03, Anson Road, #20-01, Springleaf Tower,

Singapore 079909 Phone: +65-6324-6113 Fax: +65-6324-6123 http://www.hirose.com/sg/

MALAYSIA:

PENANG REPRESENTATIVE OFFICE

73-3-1, Ideal@The One, Jalan Mahsuri, Bayan Unit 4703, 47th FL., 1 Empire Tower, South Sathorn Lepas Penang, 11950, Malaysia Phone: +604-648-5536

http://www.hirose.com/sg/

USA:

HIROSE ELECTRIC (U.S.A.), INC. DETROIT OFFICE (AUTOMOTIVE)

17197 N. Laurel Park Drive, Suite 253,

Livonia, MI 48152 Phone: +1-734-542-9963 Fax: +1-734-542-9964 http://www.hirose.com/us/

GERMANY:

HIROSE ELECTRIC EUROPE B.V. GERMAN BRANCH

Schoenbergstr. 20, 73760 ostfildern Phone: +49-711-456002-1

Fax: +49-711-456002-299 http://www.hirose.com/eu/

FRANCE:

HIROSE ELECTRIC EUROPE B.V. PARIS OFFICE

130 Avenue Joseph Kessel, Bat E, 78960 Voisins le Bretonneux, France Phone: +33-1-85764886

Fax: +33-1-85764823 http://www.hirose.com/eu/

CHINA:

HIROSE ELECTRIC (CHINA) CO.,LTD. BEIJING BRANCH

A1001, Ocean International Center, Building 56# East 4th Ring Middle Road, ChaoYang District, Beijing, 100025

Phone: +86-10-5165-9332 Fax: +86-10-5908-1381 http://www.hirose.com/cn/

TAIWAN.

HIROSE ELECTRIC TAIWAN CO., LTD.

103 8F, No.87, Zhengzhou Rd., Taipei

Phone: +886-2-2555-7377 Fax: +886-2-2555-7355 http://www.hirose.com/tw/

INDIA:

HIROSE ELECTRIC SINGAPORE PTE. LTD. DELHI LIAISON OFFICE

Office NO.552, Regus-Green Boulevard, Level5, Tower C, Sec62, Plot B-9A, Block B, Noida, 201301, Uttar Pradesh, India

Phone: +91-12-660-8018 Fax: +91-120-4804949 http://www.hirose.com/sg/

BANGKOK OFFICE (REPRESENTATIVE OFFICE)

Road, Yannawa, Sathorn, Bangkok 10120 Thailand

Phone: +66-2-686-1255 Fax: +66-2-686-3433 http://www.hirose.com/sg/



HIROSE ELECTRIC CO.,LTD.

2-6-3, Nakagawa Chuoh, Tsuzuki-Ku, Yokohama-Shi 224-8540, JAPAN TEL: +81-45-620-3526 Fax: +81-45-591-3726

http://www.hirose.com

http://www.hirose-connectors.com

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Board to Board & Mezzanine Connectors category:

Click to view products by Hirose manufacturer:

Other Similar products are found below:

589158040000018 MDF7C-18P-2.54DSA(55) FCN-268F036-G/BD FCN-268M012-G/0D FCN-268M024-G/1D FCN-723J004/1 MIS-048-01-F-D-DP-K 832-10-034-10-001000 FX4C-80S-1.27DSA 93696-330 224393 FCN-235D050-G/C 210-93-314-41-105000 2-22603-0 MDF7-40DP-2.54DSA(55) 5031084030 MIT-114-03-F-D-K 55323-1519 45970-4130 YFT-20-05-H-03-SB-K 503308-3040 026-6203-PDB 027-6203-PDB 069159702701000 101A10019X 105061100000861+ 55650-0588-C 75140-7012 87471-650 YTW-30-07-H-Q-410-140 YTT-112-01-H-Q 063209 FCN-268F024-G0D 10124054-515LF 68685-603 8-1616154-3 MIS-019-01-F-D 589159005002045 YTQ-12103HQ 541371078 IL-WX-10PB-HF-B-E1000E YFT-50-05-H-10-SB-K FCN-268M024-G/3D MDF7-16DP-2.54DSA(55) FCN-214J100-G/0 FCN-230C068-E/S AXE812124 74220-001 354184 P50-028-DDS-TG