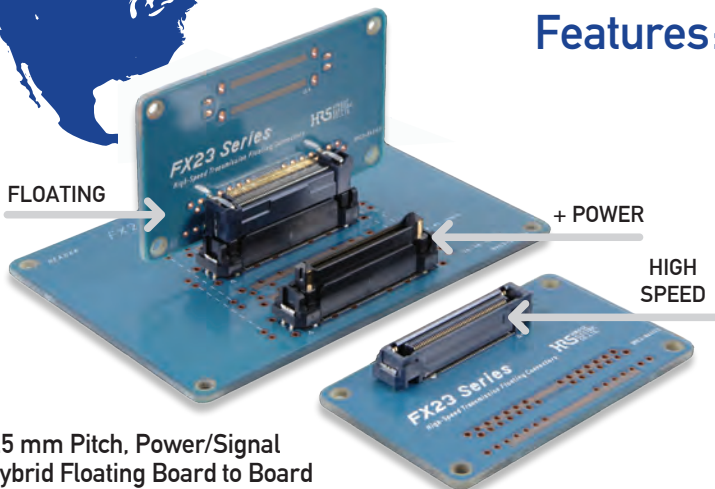


FX23/FX23L Series

Board-to-Board Connector

Features:

- ▶ ± 0.6 mm max. floating in XY directions allows for precise alignment when using multiple board-to-board connectors on one assembly
- ▶ High speed transmission up to 8 Gbps reduces bitrate errors
- ▶ 2 power pins on each side of the connector housing (3 Amps/pin) eliminates the need to route power through multiple signal contacts
- ▶ Signal terminal rated up to 0.5 Amp/pin
- ▶ Stacking heights for parallel connection: 15 to 30mm, for right angle: 15.9 to 20.9mm allows for design flexibility
- ▶ Accepts conformal coating at SMT leads to protect contacts in harsh environments
- ▶ Low-profile parallel connection (Stacking Height: 8mm, 10mm, 12mm) for use in thin assemblies
- ▶ Excellent mating alignment with large guide posts prevents contact damage

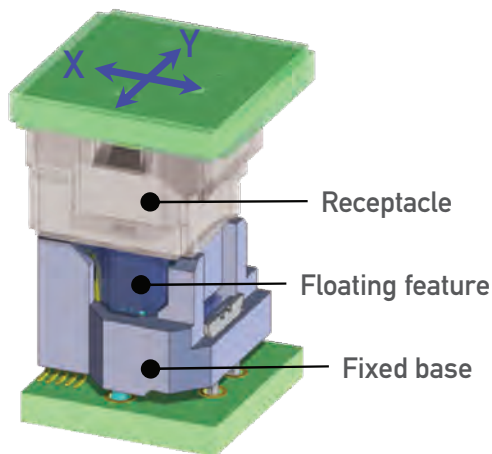


0.5 mm Pitch, Power/Signal Hybrid Floating Board to Board Connectors for High Speed Transmission

Floating Design

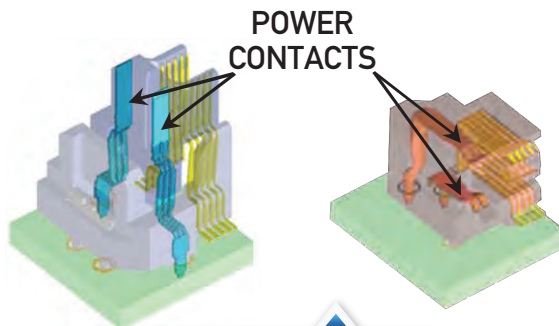
- ▶ Facilitates Multiple Mounting

XY directions: ± 0.6 mm



Space-Saving

- ▶ Power/Signal Hybrid Contacts



**CURRENT CAPACITY:
3 AMPS/PIN**

If 12 Amps are carried by signal contacts,

$$12A/0.5A = 24 \text{ pos.}$$

(Rated current of signal contact)

24 signal contacts

are required for current-carrying.

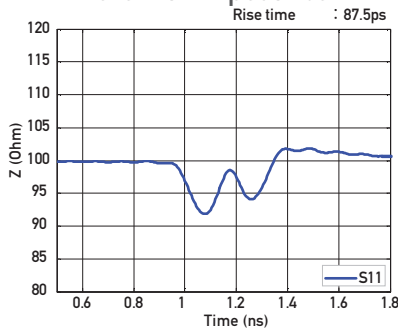
Characteristic Impedance:

100 Ω \pm 10 %

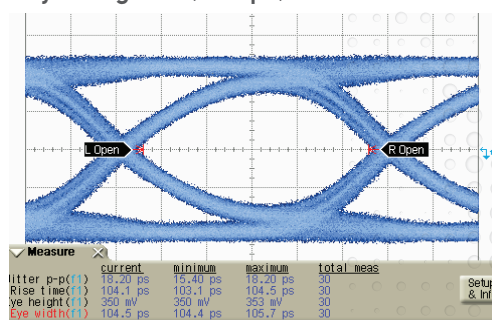
- ▶ Stacking Height
15mm Type
(100 ps, 10/90 %)



Differential Impedance



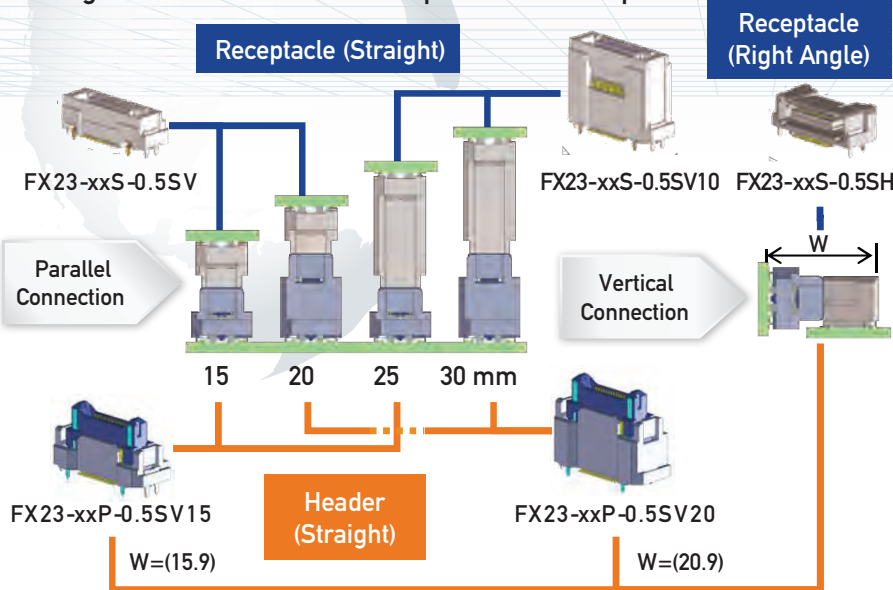
Eye Diagram (8 Gbps)



Varieties

Number of Pos.

Signal: 20, 40, 60, 80, 100, 120 pos. + Power: 4 pos.



Part Number System

Straight Header

FX23 - 60 P - 0.5 SV 15
 ① ② ③ ④ ⑤ ⑥

Straight Receptacle

FX23 - 60 S - 0.5 SV 10
 ① ② ③ ④ ⑤ ⑥

Right Angle Receptacle

FX23 - 60 S - 0.5 SH
 ① ② ③ ④ ⑤

- ① Series name
- ② Number of contacts
- ③ Connector type:
P: Header type
S: Receptacle type
- ④ Contact pitch
- ⑤ Product type:
SV: Vertical
SH: Right angle type
- ⑥ Product height designation:
Mating height [mm]=
Numerical value on the header side +
Numerical value on the receptacle side

Specifications

MATERIAL AND FINISH

Item	Material	Finish
Housing	Polyamide/LCP	Black/ UL94V-0
Contact	Copper alloy	Contact area: Gold plating over Nickel under plating Solder area: Gold plating over Nickel under plating
Power Contact	Copper alloy	Contact area: Gold plating over Nickel under plating Solder area: Pure Tin Plating over Nickel under plating
Metal Post	Brass	Pure Tin Plating over Nickel under plating

PERFORMANCE CHARACTERISTICS

Operating Temperature Range	-55°C to +85°C (includes temperature rise caused by current flow)
Rated Current	Signal Contact: 0.5 Amp Power Contact: 3 Amps
Rated Voltage	50 V AC
Insulation Resistance	100 M Ω Min. (100 V DC)
Withstanding Voltage	150V AC for 1 minute
Contact Resistance	Signal Contact: 70 m Ω max. Power Contact: 30 m Ω max.
Mating Cycles	100 times



Number of pos.: 20, 40, 60, 80, 100, 120 pos. + 4 power contacts (includes products under development)
RoHS compliant

For additional information please go to <https://www.hirose.com/product/en/products/FX23/>

Specifications herein are subject to change without notice. Contact Hirose for latest specifications, drawings, or availabilities.