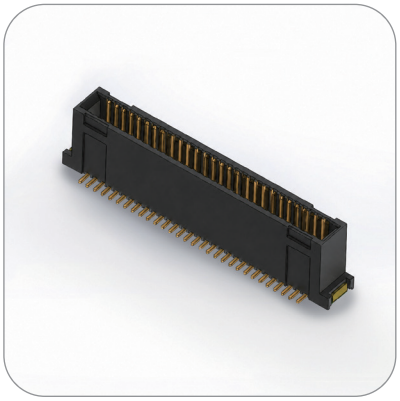
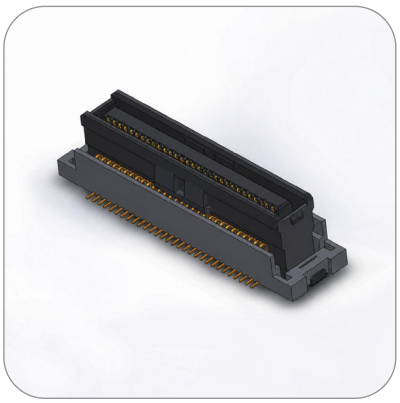
CBF1 series

X/Y/Z Axis Compensation, Stress Relief, Multiple Mating

The CBF1 series is a floating connector specifically designed to address board-to-board mating errors.
In industrial automation and automotive electronics, when multiple connectors are mounted on the same PCB, assembly tolerances often lead to uneven pin stress or even damage. The CBF1 series was developed to address these issues of "blind mating" and "mechanical deviations."





Material & Electrical Data

Material:

- **Insulation:** PA9T UL94V-0
- **CAP:** LCP UL94V-0
- **Contact:** Phosphor bronze
- **TAB:** Brass

Basic Electrical Ratings:

- **Maximum rated voltage:** 50V (AC/DC)
- **Maximum rated current:** 0.5A
- **Operating temperature range:** -40°C to +105°C

Electrical Performances:

- **Contact Resistance:** Initial value: below 100mΩ. After testing: below 120mΩ.
- **Dielectric Withstanding Voltage:** AC 250V, applied for 1 minute, no insulation failure or other abnormalities.
- **Insulation Resistance:** Initial value: above 500MΩ. After moisture test: above 100MΩ.

Mechanical Performance:

- **Insertion/Extraction Force:** Insertion force: less than 2.45N per pole.
- **Extraction force:** greater than 0.05N per pole.
- **Insertion/Extraction Durability:** Contact resistance remains within specifications after 30 insertions and extractions.
- **Vibration Test:** Amplitude 1.5mm, frequency 10~55~10Hz, transient interruption must be less than 1μs.
- **Shock Test:** Acceleration 490m/s² (50G), duration 11ms, transient interruption must be less than 1μs.
- **Floating Range:** ±0.5mm movement compensation in X/Y/Z directions.

System Specifications

Pitch:
0.8mm, a high-density connec-tionsolution.

Transmission Rate:
Supports high-speed signal transmission; some models are compatible with PCIe Gen3 or SATA 3.0 protocols.

Durability:
Typically boasts a high mating cycles, suitable for devices requiring frequent maintenance.

High Temperature Resistance:
Utilizes high-performance engineering plastics such as PA9T,compliant with SMT reflow soldering processes.

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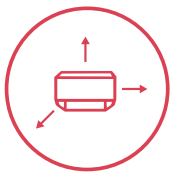
Core Technical Feature: Floating Mechanism

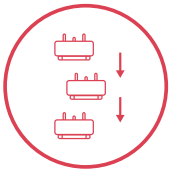
- **Three-dimensional displacement compensation:**
It provides a certain amount of movement space in the X, Y, and Z axes (typically 0.5 mm or higher, depending on the specification).

- **Stress absorption:**
When displacement occurs due to housing assembly or machine vibration, the connector's internal position automatically fine-tunes to prevent solder joints from cracking due to stress concentration.

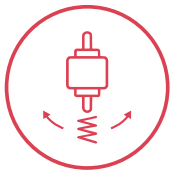
- **High-reliability contact:**
Employing a dual-contact design, it maintains a stable electrical connection even during movement.



X/Y/Z Axis Compensation



Multiple Mating



Stress Relief

High-Speed Signal Transmission

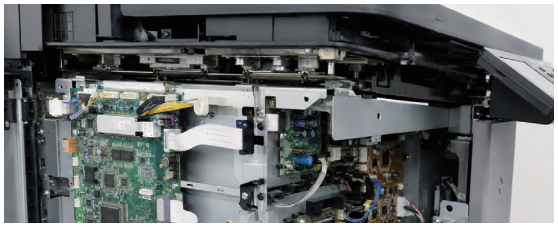
Main Applications

- **Automotive Electronics:**
In-vehicle navigation systems, audio-visual head units, ADAS sensor modules.

- **Industrial Control:**
PLC control modules, industrial computers (IPCs), robot control arms.

- **Networking Equipment:**
Server blade modules, daughter card connections within switches.

- **Consumer Electronics:**
Mainframe computers, internal board-to-board connections in photocopiers.



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