

## FEATURES AND SPECIFICATIONS

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# 1.20 by 2.00mm (.047 by .079") Pitch HD Mezz™ Connectors

**45802 HD Mezz™ Receptacle**  
**45830 HD Mezz™ Plug**



Left to right: HD Mezz Receptacle (Series 45802) and HD Mezz Plug (Series 45830)

The High Density Mezzanine (HD Mezz) board-to-board connector is designed for computer, networking, telecommunications, storage and general market applications with high pin-count devices on mezzanine or module printed circuit boards (PCBs). This design provides a flexible tooling approach that allows for multiple stack heights and circuit-size extensions.

HD Mezz provides many benefits. It allows customers to simplify PCB routing without sacrificing performance, avoid the expense of large complex

multi-layer boards and utilize space more efficiently within a given card slot area. Option cards may be added or upgraded to increase flexibility in design, production and testing.

The HD Mezz design has superior electrical and mechanical features that are cost competitive. The Molex patented solder-charge technology results in better process yields and a lower applied cost versus equivalent BGA connector products.

### Features and Benefits

- Molex's patented solder attach method is more cost effective and reliable than Ball Grid Array (BGA) connector attach methods
- Data rates up to 12.5 Gbps for excellent signal clarity with ample bandwidth for customer requirements in high-speed designs
- Stack heights ranging from 16.00 to 38.00mm (.630 to 1.496") and circuit sizes of 91 to 403 circuits provides ease in design based on engineering constraints in system envelopes
- Highest contact density on the market with 14 differential pairs per  $\text{cm}^2$  is extremely useful for space constrained designs with limited PCB real estate
- Reliable mating interface with 2.00mm (.079") wipe and two points of contact with sufficient conductive wipe for clean signal transmission and enhanced durability

## SPECIFICATIONS

### Reference Information

Product Specification: PS-45802-001

Packaging: Tray

UL File No.: TBD

CSA File No.: TBD

Designed in: Millimeters

### Electrical

Voltage: 250V AC per contact

Current: 2.0A per contact

Contact Resistance: 25 milliohms nominal

Dielectric Withstanding Voltage: 500V DC

Insulation Resistance:

Across Wafers – 5000 Megohms min.

Within Wafers – 1000 Megohms min.

### Mechanical

Mating Force: 51g nominal per contact

Unmating Force: 25g nominal per contact

Normal Force: 51g nominal per contact

Durability: 100 cycles

### Physical

Housing: Glass-filled LCP, UL 94V-0

Contact: Copper (Cu) alloy

Plating: Contact Area – 0.75 $\mu\text{m}$  Gold (Au) min.

Solder Tail Area – 2.50 $\mu\text{m}$  Tin (Sn) min.\*

Underplating – 1.25 $\mu\text{m}$  Nickel (Ni) overall

Operating Temperature: -55 to +105°C

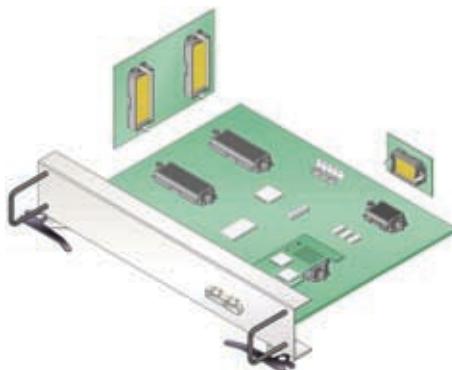
## APPLICATIONS

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## 1.20 by 2.00mm (.047 by .079") Pitch HD Mezz™ Connectors

- High and mid-range computers
  - Servers
- Medical
  - Scanning equipment
- Military
- Networking and telecommunications
  - Network routers and switches
  - Mobile base stations



Mezzanine card for a customer application with one and two HD Mezz assemblies per card

**45802 HD Mezz™ Receptacle**  
**45830 HD Mezz™ Plug**

## ORDERING INFORMATION

Order No. (Lead-free)	Order No. (Tin-Lead)	Component	Circuits†	Height
45802-0311	45802-0011	Receptacle	143	8.00mm (.314")
45802-0215	45802-0015		195	
45802-0223	45802-0123		299	
45802-1211	45802-1011		143	18.00mm (.708")
45802-1223	45802-1123		299	
45802-1225	45802-1025		325	
45830-0215	45830-0015	Plug	195	8.00mm (.314")
45830-0223	45830-0023		299	
45830-2211	45830-2011		143	10.00mm (.393")
45830-2223	45830-2023		299	
45830-2225	45830-2025		325	
45830-1211	45830-1111		143	18.00mm (.708")

†Please contact Molex Customer Service for additional circuit sizes and stack heights

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