

## FEATURES AND SPECIFICATIONS



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## EXTreme Power-Mass™ High-Current Connector Board-to-Board Applications

**75555, 75556, 75561, 46081,  
75568 Right-Angle Plug Assembly**  
**75541, 75542, 75545, 46079,  
75548 Vertical Receptacle Assembly**  
**45840 Right-Angle Receptacle**

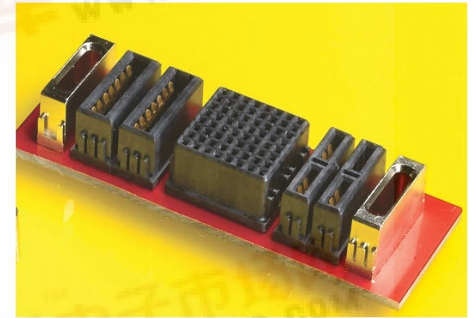
*High-current, custom configurable, board-to-board connector system delivers up to 350.0A per inch*

Intensifying our approach to provide high-current density and a customer-configurable design, EXTreme Power-Mass offers a nearly unlimited range of power and signal module-design options, providing customer-specific interconnect solutions for AC and DC power requirements. EXTreme Power-Mass is a high-current, board-to-board, modular connector system, providing 350.0A per inch.

EXTreme Power-Mass is designed to support power supplies and systems requiring very high-current transfer in challenging thermal-constrained spaces. EXTreme Power-Mass complements Molex's robust EXTreme power-connector family offering. For more information on Molex power connectors, visit: [www.molex.com/product/power.html](http://www.molex.com/product/power.html).

### Features and Benefits

- Multiple power (150.0A, 80.0A, 40.0A) and signal (24 to 64 circuits) modules available to provide maximum flexibility for customer design requirements
- 350.0A per inch current density is one of the highest capacity board-to-board power connectors on the market
- Less than 1 milliohm resistance (plane-to-plane) at end-of-life provides minimum heat generation with maximum current transfer
- Press-fit and solder-board termination for easy and reliable PCB mounting options
- Die-cast or plastic guides provide rugged blind-mating capabilities
- Modules assembled to metal stiffener to assure true position and flexible module placement
- Sequential power-blade and signal-pin lengths facilitates post-mate and pre-mate options



Right-Angle Plug Assembly (Series 75555)



Vertical Socket Assembly (Series 75541)



Right-Angle Receptacle (Series 45840)

## APPLICATIONS

### Markets and Applications

Typically used for power supply to system board power delivery in:

- Telecommunications
- Networking switches and routers
- High and mid-range computing
- Servers
- Data storage
- Power supplies
- Cellular communications
- Base stations



Router

## SPECIFICATIONS

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### Reference Information

Packaging: Tray

UL File No.: E29179

CSA File No.: LR19980

TUV File No.: Pending

Designed In: Millimeters

### Electrical

Voltage:

Signal Module: 250V

150.OA Module: 600V

Multi-Path:

80.OA Module: 450V

40.OA Module: 600V

Current (@ 30° C Temperature rise):

Signal Module: 3.0A per circuit (24 to 64 circuits)

150.OA Module: 150.OA

Multi-Path: 40.OA per circuit (4 circuits)

80.OA Module: 40.OA per circuit (2 circuits)

40.OA Module: 40.OA

Contact Resistance (milliohms per blade):

|                 | Initial | Delta | End of Life |
|-----------------|---------|-------|-------------|
| Signal Module – | 10.0    | 10.0  | 20.0        |
| Multi-Path –    | 0.55    | 0.75  | 1.30        |
| 150.OA Module – | 0.16    | 0.25  | 0.41        |
| 80.OA Module –  | 0.55    | 0.75  | 1.30        |
| 40.OA Module –  | 0.55    | 0.75  | 1.30        |

Dielectric Withstanding Voltage: No breakdown

Insulation Resistance: 5000 Megohms min.

### Mechanical

Mating Force:

Signal Module: 120g (.264 lb) per pin

150.OA Module: 2600g (5.732 lb)

Multi-Path: 2920g (6.437 lb)

80.OA Module: 1460g (3.218 lb)

40.OA Module: 730g (1.609 lb)

Un-mating Force :

Signal Module: 65g (.143 lb)

150.OA Module: 1720g (3.791 lb)

Multi-Path: 1600g (3.527 lb)

80.OA Module: 800g (1.763 lb)

40.OA Module: 400g (.881 lb)

Contact Retention: 225g (.496 lb)

Durability: 50 cycles

### Physical

Housing: LCP

Contact: Copper (Cu) Alloy

Plating:

Contact Area – 30µ" Gold (Au) min.

Solder Tail Area – 150µ" Tin (Sn) min.

Underplating – 50µ" Nickel (Ni) min.

Operating Temperature: -40 to +105°C

Flammability Rating: 94V-0

## ORDERING INFORMATION

### Connector Assembly

| Order No.  | Component  | Orientation | Mounting Style | Comments                         |
|------------|------------|-------------|----------------|----------------------------------|
| 75555-2001 | Plug       | Right Angle | Solder Tail    | For sales drawing reference only |
| 75555-XXXX |            |             |                |                                  |
| 75541-2001 | Receptacle | Vertical    | Press-Fit      |                                  |
| 75541-XXXX |            |             |                |                                  |
| 45840-2001 |            | Right Angle | Solder Tail    |                                  |
| 45840-XXXX |            |             |                |                                  |

Note: Connector assemblies are customer specific. Please contact Molex's inside sales department for details.


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### Right-Angle

| Order No.  | Current Rating | Circuit | Mount Type | Comment                         |
|------------|----------------|---------|------------|---------------------------------|
| 75556-5000 | 150.0          | 1       | Solder     | Long Blade                      |
| 75556-5100 |                |         |            | Short Blade                     |
| 75561-5000 | 80.0           | 2       |            | Two, 40.0A blades               |
| 75561-5100 | 40.0           | 1       |            | Single, 40.0A blade             |
| 46081-2000 | Signal         | 4       |            | Multi Path (Four, 40.0A blades) |
| 75568-5000 |                | 64      |            | -                               |
| 75568-5056 |                | 56      |            | -                               |
| 75568-5048 |                | 48      |            | -                               |
| 75568-5040 |                | 40      |            | -                               |
| 75568-5032 |                | 32      |            | -                               |
| 75568-5024 |                | 24      | -          |                                 |

### Vertical Receptacles

| Order No.  | Current Rating | Circuit | Mount Type | Comment                         |
|------------|----------------|---------|------------|---------------------------------|
| 75542-5000 | 150.0A         | 1       | Press Fit  | -                               |
| 75545-5000 | 80.0A          | 2       |            | Two, 40.0A blades               |
| 75545-5100 | 40.0A          | 1       |            | Single, 40.0A blade             |
| 46079-1000 | Signal         | 4       |            | Multi Path (Four, 40.0A blades) |
| 75548-6000 |                | 64      |            | -                               |
| 75548-6056 |                | 56      |            | -                               |
| 75548-6048 |                | 48      |            | -                               |
| 75548-6040 |                | 40      |            | -                               |
| 75548-6032 |                | 32      |            | -                               |
| 75548-6024 |                | 24      |            | -                               |

### Right-Angle Receptacles

| Order No.  | Current Rating | Circuit | Mounting Style | Comments |
|------------|----------------|---------|----------------|----------|
| 46225-5024 | Signal         | 24      | Solder         | -        |
| 45841-5000 | 150.0A         | 1       |                | -        |

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