

## FEATURES AND SPECIFICATIONS



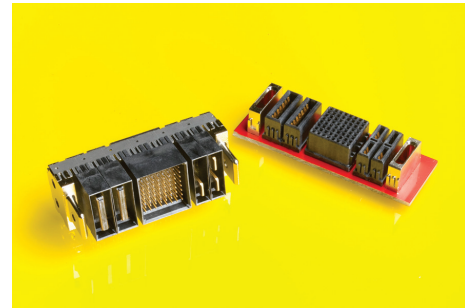
# EXTreme PowerMass™ High-Current Assembly Board-to-Board

The **EXTreme PowerMass™ Connector** is the ultimate high-current power interconnect system. Designed as a modular, stiffener based system, EXTreme PowerMass™ is like no other power connector in the industry. Multiple capacity power modules and wide signal count capability allows EXTreme PowerMass™ to put big power where you need it without wasting board space. Robust 150.0, 80.0 and 40.0A, power modules cater to mixed current levels yielding optimal sizing of the connector system. EXTreme PowerMass™ offers up to 380.0 A per inch of PCB real estate while signal modules range from 24 to 64 circuits and hefty, die-cast guidance modules round out the design options. Since EXTreme PowerMass™ can be assembled on a metal stiffener backbone, modules can be placed in any position and just about any centerline spacing giving you complete freedom to pack your design as tightly as possible, or open the spacing between any or all of the modules to enhance system airflow. If your application calls for only one or two modules, EXTreme PowerMass™ modules can be mounted individually without the use of the stiffener.

### Features and Benefits

- Up to 380.0A per linear inch at only 25.00mm tall
- Individual modules available with board-mount pegs and sequential mating
- Flexible modular design can accommodate connectors of various lengths
- Rugged stiffener based assembly allows variable pitch module-to-module for maximum airflow considerations
- Durable die-cast aligner guides
- Right-angle receptacles available for 150.0A, 24-circuit signal and aligner guides for co-planer applications

**75541 Vertical Receptacle**  
**75555 Right Angle Plug**  
**45840 Right Receptacle**



## SPECIFICATIONS

### Reference Information

Packaging: Tray  
UL File No.: E29179  
CSA File No.: LR19980  
Designed In: Millimeters

### Electrical

Voltage:  
Signal Module: 250V  
150.0A Module: 600V  
Multi-Path:  
80.0A Module: 450V  
40.0A Module: 600V  
Current (at 30°C Temperature rise):  
Signal Module: 3.0A per circuit (24 to 64 circuits)  
150.0A Module: 150.0A  
Multi-Path: 40.0A per circuit (4 circuits)  
80.0A Module: 40.0A per circuit (2 circuits)  
40.0A Module: 40.0A

### Contact Resistance (milliohms per blade):

	Initial	End of Life
Signal Module –	10.0	20.0
Multi-Path –	0.55	1.30
150.0A Module –	0.16	0.41
80.0A Module –	0.55	1.30
40.0A Module –	0.55	1.30

Dielectric Withstanding Voltage: No breakdown  
Insulation Resistance: 5000 Megohms min.

### Mechanical

Mating Force:  
Signal Module: 120g (.264 lb) per pin  
150.0A Module: 2600g (5.732 lb)  
Multi-Path: 2920g (6.437 lb)  
80.0A Module: 1460g (3.218 lb)  
40.0A Module: 730g (1.609 lb)  
Un-mating Force :  
Signal Module: 65g (.143 lb)  
150.0A Module: 1720g (3.791 lb)  
Multi-Path: 1600g (3.527 lb)  
80.0A Module: 800g (1.763 lb)  
40.0A Module: 400g (.881 lb)  
Contact Retention: 225g (.496 lb)  
Durability: 50 cycles

### Physical

Housing: LCP  
Contact: Copper (Cu) Alloy  
Plating:  
Contact Area — 30µ" Gold min.  
Solder Tail Area — 150µ" Tin min.  
Underplating — 50µ" Nickel min.  
Flammability Rating: UL 94V-0

### Documents

Sales Drawings: SD-75555-XXXX,  
SD-75541-XXXX, SD-45840-XXXX  
Product Specs: PS-75431-999  
Application Spec: AS-75541-100

## ORDERING INFORMATION

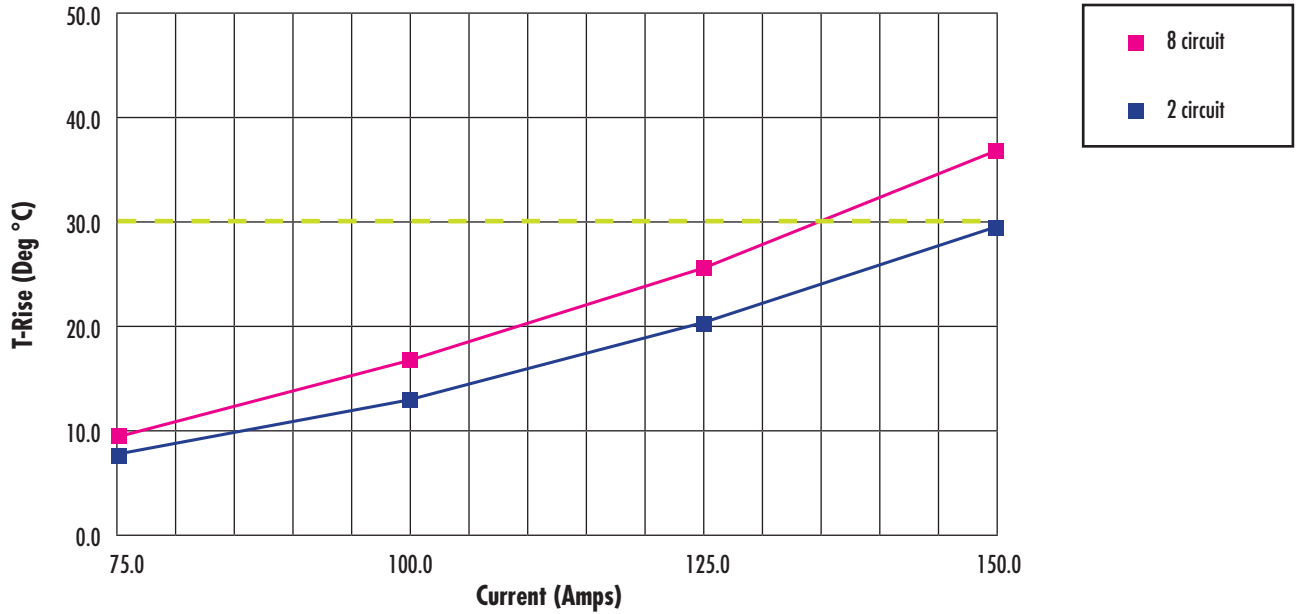
Series*	Description	Modules	PCB Tails
75555	Plug	Signal, 150.0, 80.0 and 40.0A Multi-Path and Die-Cast Aligners	Solder Tail
75541	Vertical Receptacle	Signal, 150.0, 80.0 and 40.0A Multi-Path and Die-Cast Aligners	Press-Fit
45840	Right Angle Receptacle	24-circuit Signal, 150.0A and Plastic Aligners	Solder
46081, 46079, 75542, 75545, 75548, 75556, 75561, 75568	Individual Modules	40.0A, 80.0A, 150.0A, Multi-Path, Signal	Solder Tail, Press-Fit

\*Complete part numbers can be found at [www.molex.com/link/ext-power.html](http://www.molex.com/link/ext-power.html)



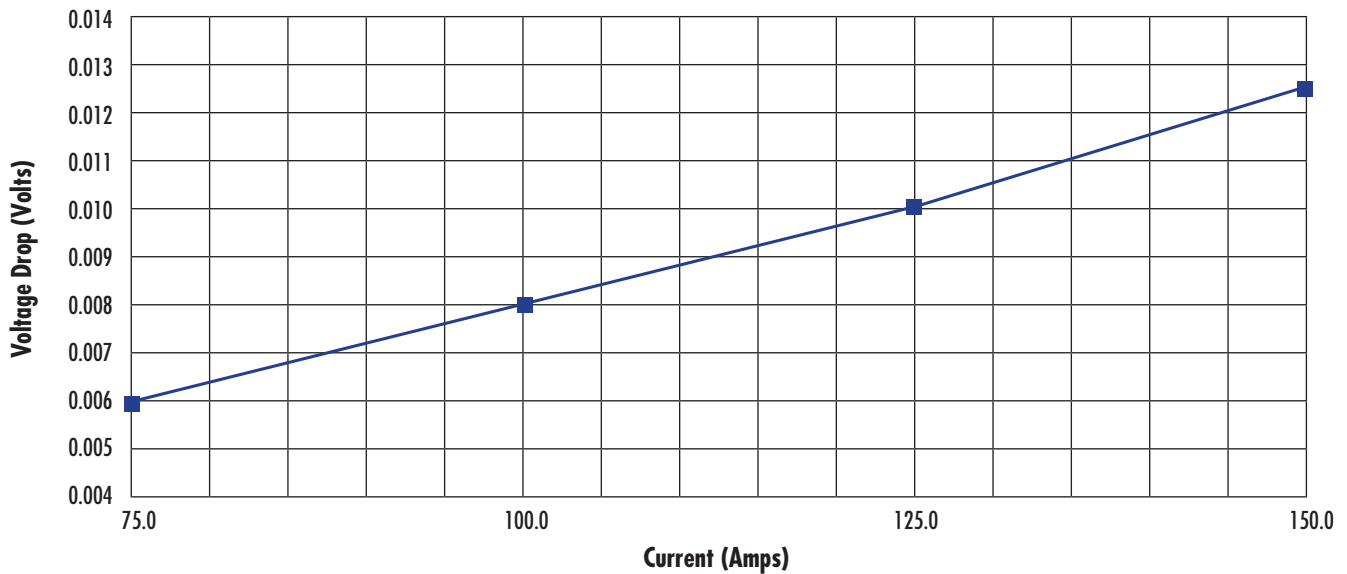
### EXTreme PowerMass™ - 150.0 Amp Module

Temperature Rise vs. Current



### EXTreme PowerMass™ - 150.0 Amp Module

Voltage Drop vs. Current



**EXTreme Power® Products**

The need for high-current power interconnect solutions in increasingly smaller space continues to rise rapidly. Solving this power equation on new architectures and system platforms has been a major focus for Molex product development teams. The new Molex EXTreme Power® family of products is the direct result of listening intently to our customers' electrical and mechanical design challenges. Since no two applications are the same, the Molex EXTreme Power® offering is comprised of several product families that cover a wide range of current densities, mechanical envelopes, mating terminations and configuration choices that give system designers the ability to maximize their power interconnect needs.

