



# 1.27mm (.050") Pitch SEARAY\* Slim 4-Row Connectors

**46556** Plug  
**46557** Receptacle



**SEARAY Slim offers a deceptively narrow profile while providing a robust solution capable of speeds in excess of 12.5Gbps.**

SEARAY Slim is a solution armed with the benefits of the standard SEARAY family but with a width similar to 2-row mezzanine products. The design meets system needs as a highly compact solution but with speed capabilities of 12.5 Gbps, a level of performance most other 2-row products cannot achieve today. As system-level speeds approach 5Gbps and beyond, SEARAY stands as an enticing mezzanine architecture that provides headroom for future-generation iterations as protocol speeds continue to increase.

SEARAY Slim pushes the envelope of the SEARAY product family, offering a 4-row solution that is a narrower version of the existing SEARAY housings. Because Slim features Molex's patented solder-charge technology and can pack tighter signal density into a 1.27mm (.050") pitch, the connector width is

equivalent to that of standard 2-row SMT products. With a flexible tooling strategy, SEARAY Slim can offer circuit sizes ranging from 40 to 200 circuits and stacking heights of 7 to 15mm (.236 to .591").

SEARAY Slim's slender profile provides design engineers with a solution complementary to system airflow and with a long body that provides ease in routing signals through minimal signal layers, as few as 2 layers if signals are routed to both sides of the connector or 4 layers if all signals route to one side of the mezzanine solution. In addition, unlike competitors products available today, SEARAY Slim offers guide posts for blind-mating capabilities.

For additional information about SEARAY Slim visit: [www.molex.com/link/SEARAYSlim.html](http://www.molex.com/link/SEARAYSlim.html).

### Features and Benefits

- Narrow body width comparable to 2-row SMT products provides minimal PCB footprint for high-density board designs and effective design for airflow considerations
- Data rates of up to 12.5 Gbps provide excellent signal clarity and large bandwidth for customer requirements in high-speed designs
- Flexible tooling design with multiple stack heights and circuit sizes provides ease in tooling a new circuit size or stack-height version
- Robust contact design prevents stubbing and damage in mating interface
- Molex's unique and patented, solder-charge technology are more cost effective and more reliable than Ball Grid Array (BGA) attach methods with less assembly processing required and a more reliable PCB adhesion

### SPECIFICATIONS

#### Reference Information

Product Specification: PS-45970-001  
Packaging: Tray  
UL File No: TBD  
CSA File No: TBD  
Designed in: Inches

#### Electrical

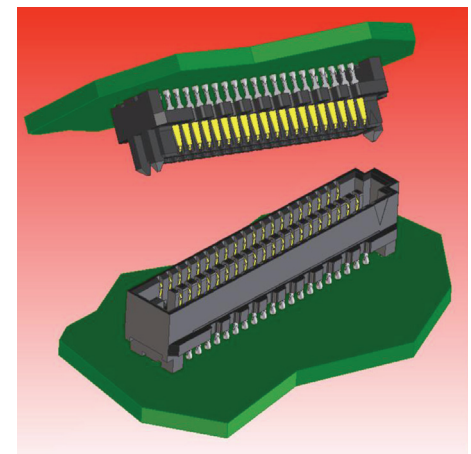
Voltage: 250V AC per  
Current: 1.0A per contact  
Contact Resistance: 25 milliohms nominal  
Dielectric Withstanding Voltage: 500V DC  
Insulation Resistance: 5000 Ohms min.  
Impedance: 100 ohm differential signal pairs

#### Mechanical

Mating Force: 50g max. per contact  
Un-mating Force: 30g max. per contact  
Normal Force: 82g max. per contact  
Durability: 100 cycles

#### Physical

Housing: Glass-filled LCP, UL 94V-0  
Contact: Copper (Cu) Alloy  
Plating:  
Contact Area – 0.75µm Gold (Au) min.  
Solder Tail Area – 3.80µm Tin (Sn) min.  
Underplating – 1.25µm Nickel (Ni) min. overall  
Operating Temperature: -55 to +125°C



\*SEARAY is a trademark of Samtec, Inc.

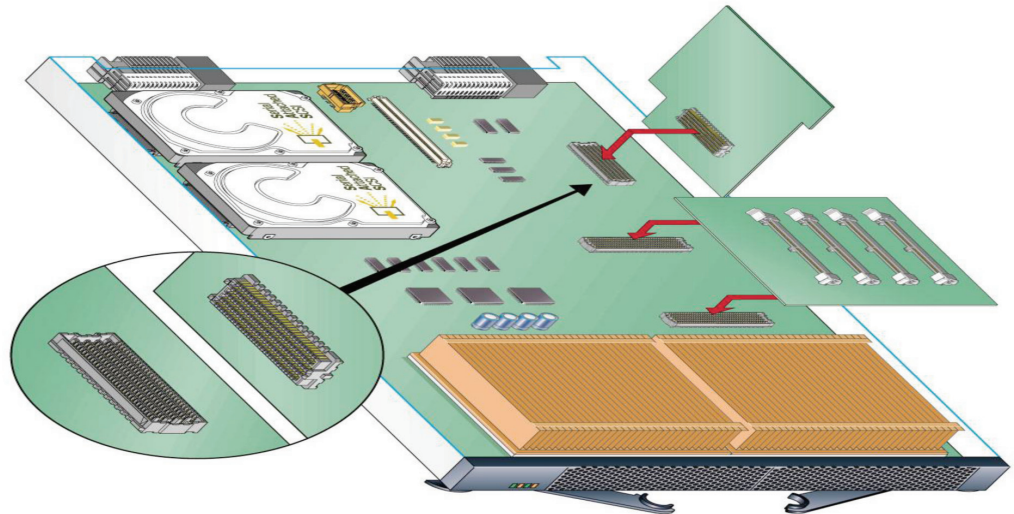


**1.27mm (.050") Pitch  
SEARAY\* Slim 4-Row  
Connectors**

**46556 Plug**

**46557 Receptacle**

- Mezzanine add-on cards
  - Memory expansion
  - I/O expansion
- Real estate proliferation
- Controller cards
  - Motherboard personality cards
  - Industrial controllers
  - ASIC port enablers



**ORDERING INFORMATION**

Order No.	Component	Circuits	Unmated Height	Plating	Plant No. for Samples
46556-2345	Plug	80	7.11mm (.280")	30µ Gold	3109
46557-2345	Receptacle	80	6.55mm (.258")	30µ Gold	3109
46556-4145	Plug	160	5.61mm (.221")	30µ Gold	3109
46557-4545	Receptacle	160	8.05mm (.317")	30µ Gold	3109

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[www.molex.com/link/SEARAYSlim.html](http://www.molex.com/link/SEARAYSlim.html)

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