

## FEATURES AND SPECIFICATIONS

[查询"45971-3181"供应商](#)



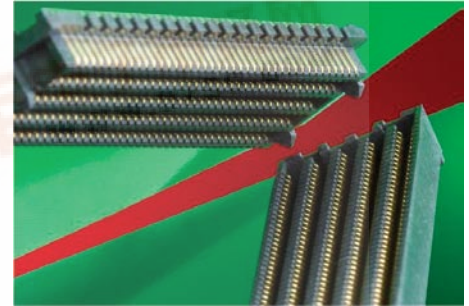
## 1.27 by 1.27mm (.050 by .050") Pitch SEARAY\* Connector

**The SEARAY connector accommodates low-profile applications with stack heights of 7.00 to 15.00mm (.276 to .591") for the large and growing, high-density, high-performance mezzanine connector market**

The SEARAY board-to-board connector is designed for applications with high pin-count devices or memory modules that are mounted on mezzanine or module PCBs. The unique, Molex-patented, solder-charge technology results in better process yields and a lower-applied cost versus equivalent Ball Grid Array (BGA) connector products. Solder-charge technology is a patented Molex process, which provides optimized PCB adhesion and immense mechanical retention force.

The SEARAY connector provides numerous benefits. It allows customers to simplify PCB routing without sacrificing performance. Customers will avoid the expense of large, complex, multi-layer boards and utilize space better within a given card slot area. Option cards may be added or upgraded to increase flexibility in design, production and testing. The SEARAY connector design has superior electrical and mechanical features that are cost competitive. For additional information, please visit: [www.molex.com/product/searay.html](http://www.molex.com/product/searay.html).

### 45970 Plug 45971 Receptacle



SEARAY mezzanine solutions pack many high-speed signals in very dense spaces with stack heights of 7.00 to 15.00mm (.276 to .591")

### Features and Benefits

- Molex's unique and patented, solder-attach method is more cost effective and reliable than BGA attach methods
- Data rates of up to 10Gbps have 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
- Popular footprint is compatible with other products in the market: 1.27 by 1.27mm (.050 by .050"); and allows ease in multiple sourcing with other common products
- Robust contact design prevents stubbing and damage in mating interface

## 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 contact

Current: 1.0A per contact

Contact Resistance: 25 milliohms nominal

Dielectric Withstanding Voltage: 500V DC

Insulation Resistance: 5000 Megohms min.

### 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 – 0.75 $\mu$ m Gold (Au) min.

Solder Tail Area – 3.80 $\mu$ m Tin (Sn) min.

Underplating – 1.25 $\mu$ m Nickel (Ni) min. overall

Operating Temperature: -55 to +105°C

\*SEARAY is a trademark of Samtec, Inc.



## APPLICATIONS

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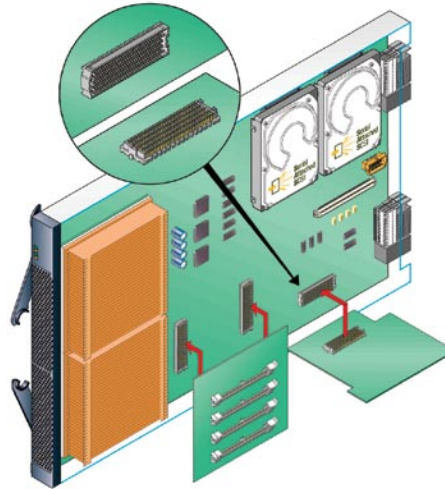


**1.27 by 1.27mm  
(.050 by .050") Pitch  
SEARAY\* Connector**

**45970 Plug**

**45971 Receptacle**

- High and Mid-Range Computers
  - Servers
- Medical
  - Scanning equipment
- Military
  - Radar or topographical equipment
- Networking and Telecommunications
  - Network routers and switches
  - Mobile base stations

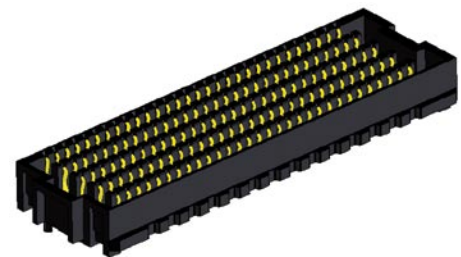


## ORDERING INFORMATION

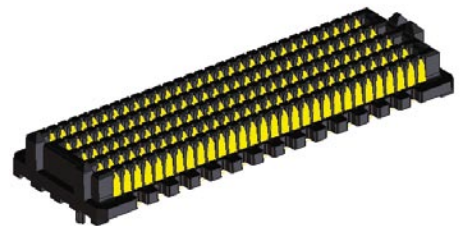
Plug Order No.	Circuits	Stack Height	Receptacle Order No.
45970-9161	114	7.00mm (.276")	45971-9161
45970-2311	200	10.00mm (.393")	45971-2311
45970-3181	240	7.00mm (.276")	45971-3181
45970-3213	300	8.00mm (.314")	45971-3113
45970-3111	300	7.00mm (.276")	45971-3113
45970-4311	400	11.00mm (.433)	45971-4411

### Notes

- 1) Refer to the product sales drawing for mated stack-height options
- 2) Please contact inside sales for other circuit sizes and stack heights
- 3) Please contact inside sales for parts with Tin/Lead solder charges



SEARAY Receptacle



SEARAY Plug

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Visit our website at [www.molex.com/product/searay.html](http://www.molex.com/product/searay.html)