



Part Number : [459704105](#)

Series Number : 45970

Product Category : Board-to-Board  
Connectors

Product Description : 1.27mm Pitch, SEARAY  
Plug, 400 Circuits, 2.00mm Unmated Height,  
10 Rows, with Pegs, Solder Charge Lead-Free,  
with Void, per VITA-57

Status : Active

## Documents & Resources

### Drawings

[Drawing 459704105\\_sd.pdf](#)

### 3D Models and Design Files

- [3D Model 459704105\\_stp.zip](#)
- [Electrical Model Document EE-45970-007-007.pdf](#)
- [Electrical Model Document EE-45970-010-010.pdf](#)
- [Electrical Model Document EE-45970-015-015.pdf](#)
- [Electrical Model Document EE-46556-0085-001.pdf](#)
- [S-Parameter Model SP-45970-007-001.zip](#)
- [S-Parameter Model SP-45970-010-010.zip](#)
- [S-Parameter Model SP-45970-015-015.zip](#)

### Specifications

- [Application Specification AS-45970-001-001.pdf](#)
- [Application Specification AS-45970-002-001.pdf](#)
- [Application Specification AS-45970-990-001.pdf](#)
- [Product Specification PS-45970-001-001.pdf](#)
- [Product Specification PS-45970-002-001.pdf](#)
- [Product Specification TS-45970-001-001.pdf](#)
- [Test Summary TS-45970-0007-001.pdf](#)
- [Test Summary TS-45970-002-001.pdf](#)

## Product Environment Compliance

### Compliance

|                    |                                                                                       |
|--------------------|---------------------------------------------------------------------------------------|
| GADSL/IMDS         | Not Relevant                                                                          |
| China RoHS         |  |
| EU ELV             | Not Relevant                                                                          |
| Low-Halogen Status | Low-Halogen per IEC 61249-2-21                                                        |
| REACH SVHC         | Not Contained per D(2024)4144-DC<br>(27 June 2024)                                    |

|         |                           |
|---------|---------------------------|
| EU RoHS | Compliant per EU 2015/863 |
|---------|---------------------------|

#### Multiple Part Product Compliance Statements

- Eu RoHS
- REACH SVHC
- Low-Halogen

#### Multiple Part Industry Compliance Documents

- IPC 1752A Class C
- IPC 1752A Class D
- Molex Product Compliance Declaration
- IEC-62474
- chemSHERPA (xml)

#### EU RoHS Certificate of Compliance

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### Part Details

#### General

|                |                                                                                                                                     |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Status         | Active                                                                                                                              |
| Category       | Board-to-Board Connectors                                                                                                           |
| Series         | 45970                                                                                                                               |
| Description    | 1.27mm Pitch, SEARAY Plug, 400 Circuits, 2.00mm Unmated Height, 10 Rows, with Pegs, Solder Charge Lead-Free, with Void, per VITA-57 |
| Application    | Board-to-Board, Signal                                                                                                              |
| Component Type | PCB Header                                                                                                                          |
| Product Family | SEARAY and SEARAY Slim Mezzanine Family                                                                                             |
| Product Name   | SEARAY                                                                                                                              |
| UPC            | 884982012882                                                                                                                        |

#### Agency

|     |         |
|-----|---------|
| CSA | LR19980 |
| UL  | E29179  |

#### Electrical

|                               |         |
|-------------------------------|---------|
| Current - Maximum per Contact | 2.7A    |
| Voltage - Maximum             | 240V AC |

## Physical

|                                |                                |
|--------------------------------|--------------------------------|
| Breakaway                      | No                             |
| Circuits (Loaded)              | 400                            |
| Circuits (maximum)             | 400                            |
| Color - Resin                  | Black                          |
| Durability (mating cycles max) | 100                            |
| First Mate / Last Break        | No                             |
| Flammability                   | 94V-0                          |
| Glow-Wire Capable              | No                             |
| Guide to Mating Part           | No                             |
| Keying to Mating Part          | Yes                            |
| Lock to Mating Part            | None                           |
| Material - Metal               | Copper Alloy                   |
| Material - Plating Mating      | Gold                           |
| Material - Plating Termination | Tin                            |
| Material - Resin               | High Temperature Thermoplastic |
| Net Weight                     | 3.445/g                        |
| Number of Rows                 | 10                             |
| Orientation                    | Vertical                       |
| Packaging Type                 | Embossed Tape on Reel          |
| PCB Locator                    | Yes                            |
| PCB Retention                  | Yes                            |
| PCB Thickness - Recommended    | 1.60mm                         |
| Pitch - Mating Interface       | 1.27mm                         |
| Pitch - Termination Interface  | 1.27mm                         |
| Plating min - Mating           | 0.762µm                        |
| Plating min - Termination      | 2.540µm                        |
| Polarized to Mating Part       | Yes                            |
| Polarized to PCB               | Yes                            |
| Robotic Placement              | Pick and Place Cap             |
| Shrouded                       | No                             |
| Stackable                      | No                             |
| Temperature Range - Operating  | -55° to +125°C                 |
| Termination Interface Style    | Surface Mount                  |

|                |        |
|----------------|--------|
| Unmated Height | 2.00mm |
|----------------|--------|

Solder Process Data

|                              |        |
|------------------------------|--------|
| Max-Duration                 | 3      |
| Lead-Free Process Capability | REFLOW |
| Max-Cycle                    | 1      |
| Max-Temp                     | 260    |

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Mates With / Use With

Mates with Part(s)

|                                  |              |
|----------------------------------|--------------|
| Description                      | Part Number  |
| 1.27mm Pitch, SEARAY Receptacles | <u>45971</u> |