

**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**

**Part Number:** [0465564345](#)  
**Status:** **Active**  
**Description:** 1.27mm (.050") by 1.27mm (.050") Pitch SEARAY\* Slim Plug, 160 Circuits, 3.50mm (.137") Unmated Height, 4 Rows, With Pegs, Solder Charge™ Lead-free

**Documents:**

[3D Model](#) [Product Specification PS-45970-001 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

CSA LR19980  
 UL E29179

**General**

Product Family PCB Headers  
 Series [46556](#)  
 Application Board-to-Board  
 Product Name SEARAY\*

**Physical**

Breakaway No  
 Circuits (Loaded) 160  
 Circuits (maximum) 160  
 Circuits Detail 160  
 Color - Resin Black  
 Durability (mating cycles max) 100  
 First Mate / Last Break No  
 Flammability 94V-0  
 Glow-Wire Compliant No  
 Guide to Mating Part Yes  
 Keying to Mating Part None  
 Lock to Mating Part None  
 Material - Metal Copper Alloy  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 Material - Resin High Temperature Thermoplastic  
 Number of Rows 4  
 Orientation Vertical  
 PCB Locator Yes  
 PCB Retention Yes  
 PCB Thickness Recommended (in) 0.062 In  
 PCB Thickness Recommended (mm) 1.60 mm  
 Packaging Type Embossed Tape on Reel  
 Pitch - Mating Interface (in) 0.050 In  
 Pitch - Mating Interface (mm) 1.27 mm  
 Pitch - Term. Interface (in) 0.050 In  
 Pitch - Term. Interface (mm) 1.27 mm  
 Plating min: Mating (µin) 30  
 Polarized to Mating Part Yes  
 Polarized to PCB Yes  
 Robotic Placement Pick and Place Cap  
 Shrouded No  
 Stackable No  
 Surface Mount Compatible (SMC) Yes  
 Temperature Range - Operating -55°C to +125°C  
 Termination Interface: Style Surface Mount



Series

image - Reference only

**EU RoHS**

**ELV and RoHS Compliant**

**REACH SVHC**

Not Reviewed

**Halogen-Free**

**Status**

**Not Reviewed**

**Need more information on product environmental compliance?**

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)  
 For a multiple part number RoHS Certificate of Compliance, [click here](#)

Please visit the [Contact Us](#) section for any non-product compliance questions.

**China RoHS**



**Search Parts in this Series**

[46556Series](#)

**Mates With**

[46557](#) SEARAY\* Slim Receptacles

**Electrical**

|                               |         |
|-------------------------------|---------|
| Current - Maximum per Contact | 1A      |
| Voltage - Maximum             | 240V AC |

**Solder Process Data**

|  |                           |
|--|---------------------------|
| Duration at Max. Process Temperature (seconds) | 20                        |
| Lead-free Process Capability                   | Reflow Capable (SMT only) |
| Max. Cycles at Max. Process Temperature        | 3                         |
| Process Temperature max. C                     | 260                       |

**Material Info****Reference - Drawing Numbers**

|                       |              |
|-----------------------|--------------|
| Product Specification | PS-45970-001 |
| Sales Drawing         | SD-46556-001 |

\*SEARAY is a trademark of Samtec, Inc.

This document was generated on 03/26/2010

**PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION**

6

5

4

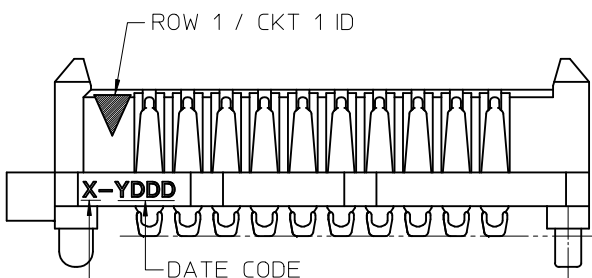
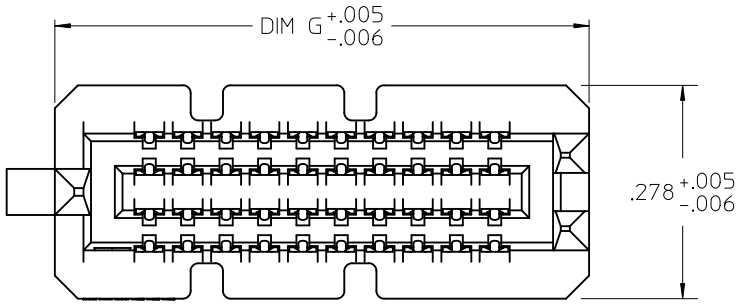
3

2

1

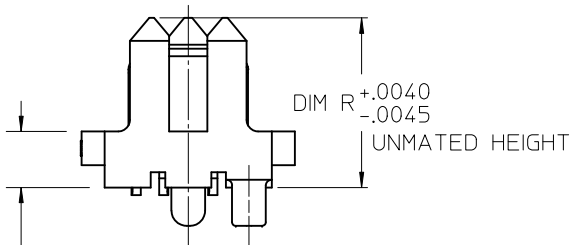
NOTES:

- 1. MATERIALS: HOUSING: LCP, UL94V-0, BLACK  
CONTACTS: COPPER ALLOY  
SOLDER CHARGE: SEE CHART
- 2. FINISH: ALL OPTIONS - SELECT GOLD IN CONTACT AREA: 30 MI MIN  
OPTIONS 2.0 & 2.5: SELECT GOLD FLASH IN TAIL, 7 MI MIN  
OPTIONS 3.0 THRU 7.0: SELECT TIN IN TAIL, 100 MI MIN  
ALL OPTIONS - OVER NICKEL
- 3. PRODUCT SPECIFICATION: PS-45970-001
- 4. PACKAGING SPECIFICATION: PK-45970-002
- 5. MATES WITH SEARAY RECPT ASSEMBLY 46557
- 6. APPLICATION SPECIFICATION: AS-45970-001
- 7. COSMETIC SPECIFICATION: PS-45499-002 CLASS B
- 8. PART STATUS: CONTACT MOLEX

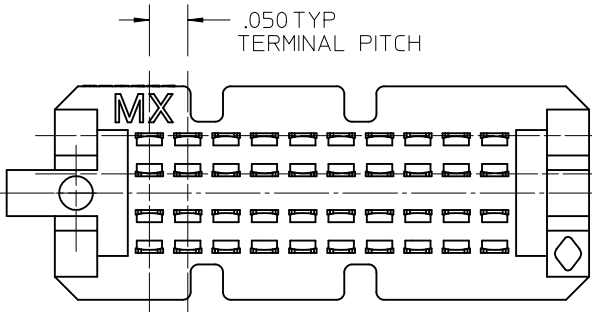


LEAD CODE:  
1 = TIN  
2 = TIN / LEAD

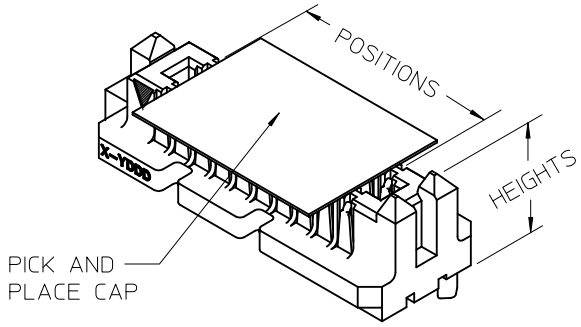
SEE TABLE  
ACROSS ALL  
SOLDER  
CHARGES



DIM P  
REF ONLY  
MATED STACK  
HEIGHT  
(MILLIMETERS)



.050 TYP  
TERMINAL PITCH



| POSITIONS | DIM G |      |
|-----------|-------|------|
| 10        | .696  | .006 |
| 15        | .946  | .006 |
| 20        | 1.196 | .006 |
| 25        | 1.446 | .006 |
| 30        | 1.696 | .006 |
| 35        | 1.946 | .006 |
| 40        | 2.196 | .006 |
| 45        | 2.446 | .009 |
| 50        | 2.696 | .009 |

|                           |
|---------------------------|
| UPDATED NOTE 2            |
| EC NO: UCP2010-2270       |
| DRWN: TREGORI 2010/03/05  |
| CHKD: JCOMERCI 2007/05/17 |
| APPR: JCOMERCI 2010/03/05 |
| REV                       |
| DESCRIPTION               |

|  |        |
|--|--------|
| GENERAL TOLERANCES (UNLESS SPECIFIED)                |        |
| mm   | INCH   |
| 4 PLACES ± ---                                       | ± ---  |
| 3 PLACES ± ---                                       | ± .005 |
| 2 PLACES ± ---                                       | ± ---  |
| 1 PLACE ± ---  | ± ---  |
| ANGULAR ± 1/2°                                       |        |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |        |

|                              |            |
|------------------------------|------------|
| DIMENSION STYLE<br>INCH ONLY |            |
| DRAWN BY                     | DATE       |
| TGREGORI                     | 2007/05/17 |
| CHECKED BY                   | DATE       |
| JCOMERCI                     | 2007/05/17 |
| APPROVED BY                  | DATE       |
| JCOMERCI                     | 2010/03/05 |
| MATERIAL NO.                 | SEE CHART  |
| SIZE                         | A          |

|   |                      |                        |
|---|----------------------|------------------------|
| SCALE<br>4:1  | DESIGN UNITS<br>INCH | THIRD ANGLE PROJECTION |
| TITLE<br>SEARAY SLIM<br>PLUG ASSEMBLY<br>.050 PITCH |                      |                        |
| MOLEX INCORPORATED                                  |                      |                        |
| DOCUMENT NO.<br>SD-46556-001                        | SHEET NO.<br>1 OF 4  |                        |

5

4


3

2




|                              | 6           | 5           | 4           | 3           | 2           | 1           |             |
|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| DIM P                        | 2.0 MM      | 3.0 MM      | 3.5 MM      | 2.5 MM      | 4.5 MM      | 5.0 MM      | 7.0 MM      |
| DIM R:<br>HOUSING<br>HEIGHT: | .221        | .260        | .280        | .241        | .319        | .339        | .418        |
| D POSITIONS                  | MATERIAL NO | MATERIAL NO | MATERIAL NO | MATERIAL NO | MATERIAL NO | MATERIAL NO | MATERIAL NO |
| 10                           | 46556-1145  | 46556-1245  | 46556-1345  | 46556-1445  | 46556-1545  | 46556-1645  | 46556-1745  |
| 20                           | 46556-2145  | 46556-2245  | 46556-2345  | 46556-2445  | 46556-2545  | 46556-2645  | 46556-2745  |
| 30                           | 46556-3145  | 46556-3245  | 46556-3345  | 46556-3445  | 46556-3545  | 46556-3645  | 46556-3745  |
| 40                           | 46556-4145  | 46556-4245  | 46556-4345  | 46556-4445  | 46556-4545  | 46556-4645  | 46556-4745  |
| 50                           | 46556-5145  | 46556-5245  | 46556-5345  | 46556-5445  | 46556-5545  | 46556-5645  | 46556-5745  |
| C 15                         | 46556-6145  | 46556-6245  | 46556-6345  | 46556-6445  | 46556-6545  | 46556-6645  | 46556-6745  |
| 25                           | 46556-7145  | 46556-7245  | 46556-7345  | 46556-7445  | 46556-7545  | 46556-7645  | 46556-7745  |
| 35                           | 46556-8145  | 46556-8245  | 46556-8345  | 46556-8445  | 46556-8545  | 46556-8645  | 46556-8745  |
| 45                           | 46556-9145  | 46556-9245  | 46556-9345  | 46556-9445  | 46556-9545  | 46556-9645  | 46556-974   |

NOTES:  
1. THIS SHEET CONTAINS THE FOLLOWING OPTIONS  
SOLDER CHARGE: TIN

|  |                    |                                       |                  |                                     |  |                     |  |  |  |  |  |
|--|--------------------|---------------------------------------|------------------|-------------------------------------|--|---------------------|--|--|--|--|--|
| SEE SHEET 1<br>EC NO: UCP2010-2270<br>DRWN: TGREGOR I 2010/03/05<br>CHKD: JCOMERC I 2007/05/17<br>APPR: JCOMERC I 2010/03/05 | DESCRIPTION<br>REV | GENERAL TOLERANCES (UNLESS SPECIFIED) |                  | DIMENSION STYLE<br><b>INCH ONLY</b> |  | SCALE<br><b>1:1</b> | DESIGN UNITS<br><b>INCH</b>                                  | THIRD ANGLE PROJECTION   |  |  |  |
|  |                    |                                       | mm               | INCH                                | DRAWN BY<br>TGREGOR I  | DATE<br>2007/05/17  | TITLE<br><b>SEARAY SLIM<br/>PLUG ASSEMBLY<br/>.050 PITCH</b> |  |  |  |  |
|  |                    | 4 PLACES                              | ± ---            | ± ---                               | CHECKED BY<br>JCOMERC I  | DATE<br>2007/05/17  |  |  |  |  |  |
|  |                    | 3 PLACES                              | ± ---            | ± .005                              | APPROVED BY<br>JCOMERC I   |                     | DATE<br>2010/03/05   |  <b>MOLEX INCORPORATED</b><br>DOCUMENT NO. SD-46556-001 |  |  |  |
|  |                    | 2 PLACES                              | ± ---            | ± ---                               | MATERIAL NO.   |                     | DATE   |  |  |  |  |
| 1 PLACE  | ± ---              | ± ---                                 | ANGULAR ±1/2°    |                                     | DATE   |                     | 3 OF 4   |  |  |  |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS   |                    |                                       | SIZE<br><b>A</b> |                                     | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                     |  |  |  |  |  |

|                              | 6           | 5           | 4           | 3           | 2           | 1           |             |
|------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| DIM P                        | 2.0 MM      | 3.0 MM      | 3.5 MM      | 2.5 MM      | 4.5 MM      | 5.0 MM      | 7.0 MM      |
| DIM R:<br>HOUSING<br>HEIGHT: | .221        | .260        | .280        | .241        | .319        | .339        | .418        |
| D POSITIONS                  | MATERIAL NO | MATERIAL NO | MATERIAL NO | MATERIAL NO | MATERIAL NO | MATERIAL NO | MATERIAL NO |
| 10                           | 46556-1147  | 46556-1247  | 46556-1347  | 46556-1447  | 46556-1547  | 46556-1647  | 46556-1747  |
| 20                           | 46556-2147  | 46556-2247  | 46556-2347  | 46556-2447  | 46556-2547  | 46556-2647  | 46556-2747  |
| 30                           | 46556-3147  | 46556-3247  | 46556-3347  | 46556-3447  | 46556-3547  | 46556-3647  | 46556-3747  |
| 40                           | 46556-4147  | 46556-4247  | 46556-4347  | 46556-4447  | 46556-4547  | 46556-4647  | 46556-4747  |
| 50                           | 46556-5147  | 46556-5247  | 46556-5347  | 46556-5447  | 46556-5547  | 46556-5647  | 46556-5747  |
| C 15                         | 46556-6147  | 46556-6247  | 46556-6347  | 46556-6447  | 46556-6547  | 46556-6647  | 46556-6747  |
| 25                           | 46556-7147  | 46556-7247  | 46556-7347  | 46556-7447  | 46556-7547  | 46556-7647  | 46556-7747  |
| 35                           | 46556-8147  | 46556-8247  | 46556-8347  | 46556-8447  | 46556-8547  | 46556-8647  | 46556-8747  |
| 45                           | 46556-9147  | 46556-9247  | 46556-9347  | 46556-9447  | 46556-9547  | 46556-9647  | 46556-9747  |

NOTES:  
1. THIS SHEET CONTAINS THE FOLLOWING OPTIONS  
SOLDER CHARGE: TIN / LEAD

|  |                    |                                       |               |                                     |  |                     |  |   |  |  |  |
|--|--------------------|---------------------------------------|---------------|-------------------------------------|--|---------------------|--|---|--|--|--|
| SEE SHEET 1<br>EC NO: UCP2010-2270<br>DRWN: TGREGOR I 2010/03/05<br>CHKD: JCOMERC I 2007/05/17<br>APPR: JCOMERC I 2010/03/05 | DESCRIPTION<br>REV | GENERAL TOLERANCES (UNLESS SPECIFIED) |               | DIMENSION STYLE<br><b>INCH ONLY</b> |  | SCALE<br><b>1:1</b> | DESIGN UNITS<br><b>INCH</b>                                  | THIRD ANGLE PROJECTION  |  |  |  |
|  |                    |                                       | mm            | INCH                                | DRAWN BY<br>TGREGOR I  | DATE<br>2007/05/17  | TITLE<br><b>SEARAY SLIM<br/>PLUG ASSEMBLY<br/>.050 PITCH</b> |   |  |  |  |
|  |                    | 4 PLACES                              | ± ---         | ± ---                               | CHECKED BY<br>JCOMERC I  | DATE<br>2007/05/17  |  |   |  |  |  |
|  |                    | 3 PLACES                              | ± ---         | ± .005                              | APPROVED BY<br>JCOMERC I   |                     | DATE<br>2010/03/05   |  <b>MOLEX INCORPORATED</b><br>DOCUMENT NO. <b>SD-46556-001</b> |  |  |  |
|  |                    | 2 PLACES                              | ± ---         | ± ---                               | MATERIAL NO.   |                     | SHEET NO.  |   |  |  |  |
| 1 PLACE  | ± ---              | ± ---                                 | ANGULAR ±1/2° |                                     | <b>SEE CHART</b><br>THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                     | <b>4 OF 4</b>  |   |  |  |  |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS   |                    |                                       |               |                                     |  |                     |  |   |  |  |  |