

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

**Part Number:** [0465564745](#)  
**Status:** **Active**  
**Description:** 1.27mm (.050") by 1.27mm (.050") Pitch SEARAY\* Slim Plug, 160 Circuits, 7.00mm (.275") Unmated Height, 4 Rows, With Pegs, Solder Charge™ Lead-free

**Documents:**

|                               |                                                          |
|-------------------------------|----------------------------------------------------------|
| <a href="#">3D Model</a>      | <a href="#">Product Specification PS-45970-001 (PDF)</a> |
| <a href="#">Drawing (PDF)</a> | <a href="#">RoHS Certificate of Compliance (PDF)</a>     |

**Agency Certification**

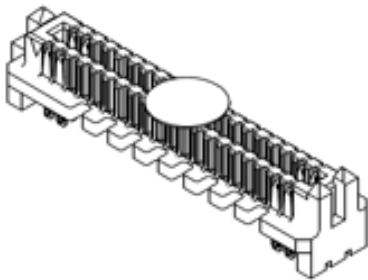
|     |         |
|-----|---------|
| CSA | LR19980 |
| UL  | E29179  |

**General**

|                |                       |
|----------------|-----------------------|
| Product Family | PCB Headers           |
| Series         | <a href="#">46556</a> |
| 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**

**China RoHS**



**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.

**Search Parts in this Series**

[46556Series](#)

**Mates With**

[46557](#) SEARAY\* Receptacle

**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**

|                           |                                          |
|---------------------------|------------------------------------------|
| Application Specification | AS-45970-001, AS-45970-002, AS-45970-990 |
| Packaging Specification   | PK-45970-002                             |
| Product Specification     | PS-45970-001                             |
| Sales Drawing             | SD-46556-001                             |
| Test Summary              | TS-45970-001                             |

\*SEARAY is a trademark of Samtec, Inc.

This document was generated on 06/01/2010

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6

5

4

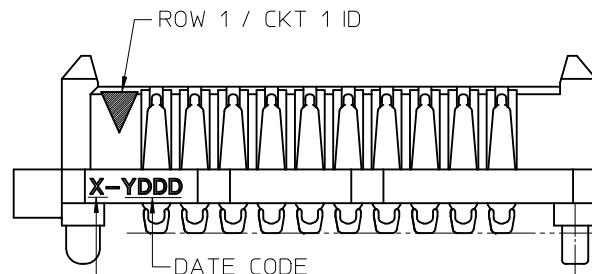
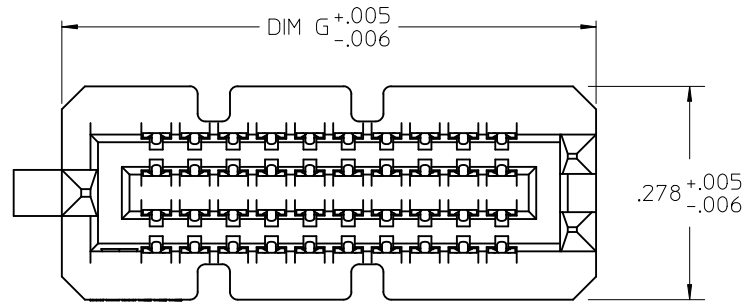
3

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

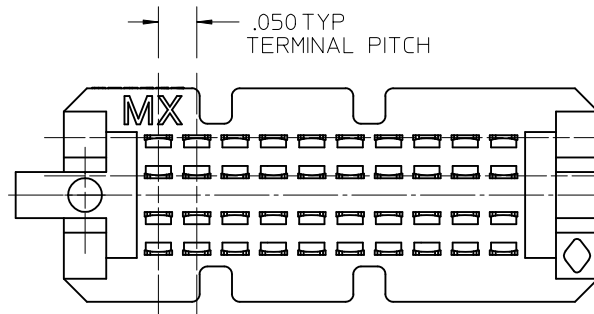


LEAD CODE:  
1 = TIN  
2 = TIN / LEAD

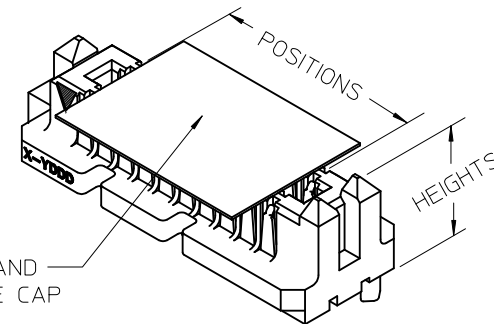
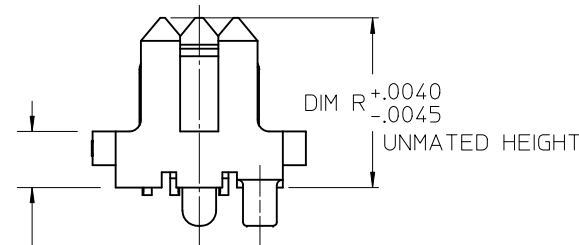
SEE TABLE

ACROSS ALL  
SOLDER  
CHARGES

DIM P  
REF ONLY  
MATED STACK  
HEIGHT  
(MILLIMETERS)



.050 TYP  
TERMINAL PITCH



PICK AND  
PLACE CAP

| 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: JCOMERC I 2007/05/17  
APPR: JCOMERC I 2010/03/05

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  
INCH ONLY

DRAWN BY TREGORI  
DATE 2007/05/17  
CHECKED BY JCOMERC I  
DATE 2007/05/17  
APPROVED BY JCOMERC I  
DATE 2010/03/05

MATERIAL NO.

SEE CHART

SIZE  
A

SCALE  
4:1

DESIGN UNITS  
INCH

THIRD ANGLE  
PROJECTION

SEARAY SLIM  
PLUG ASSEMBLY  
.050 PITCH

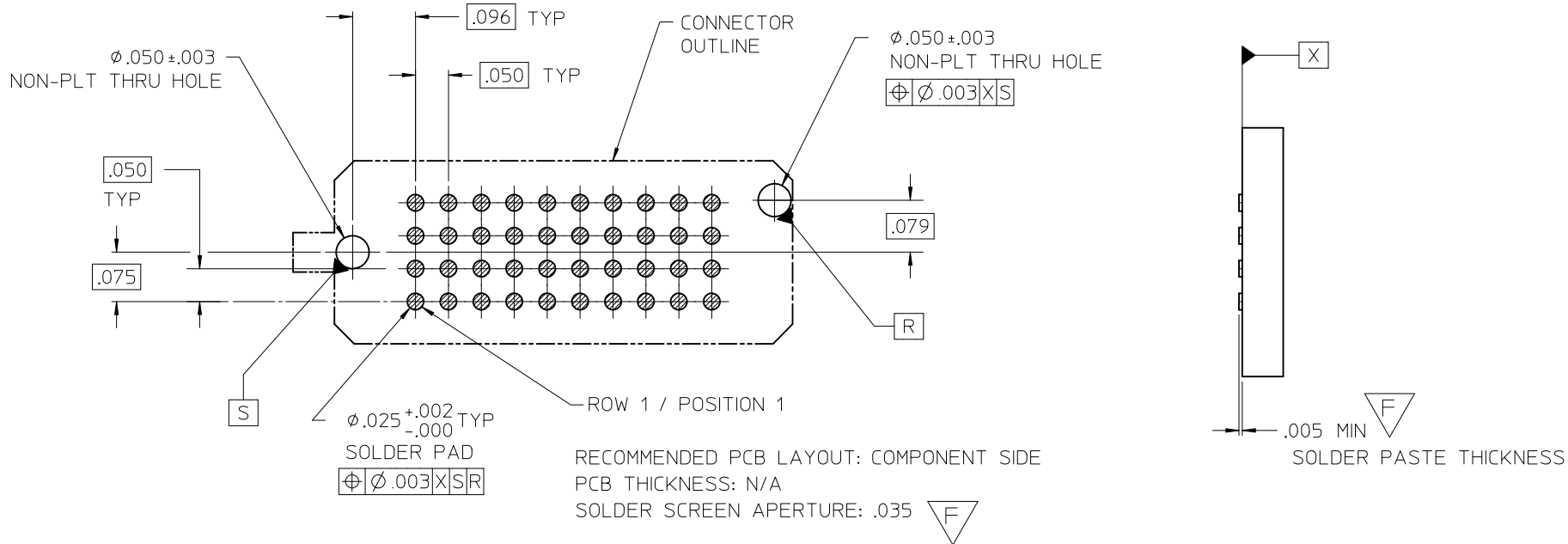
MOLEX INCORPORATED

DOCUMENT NO.

SD-46556-001

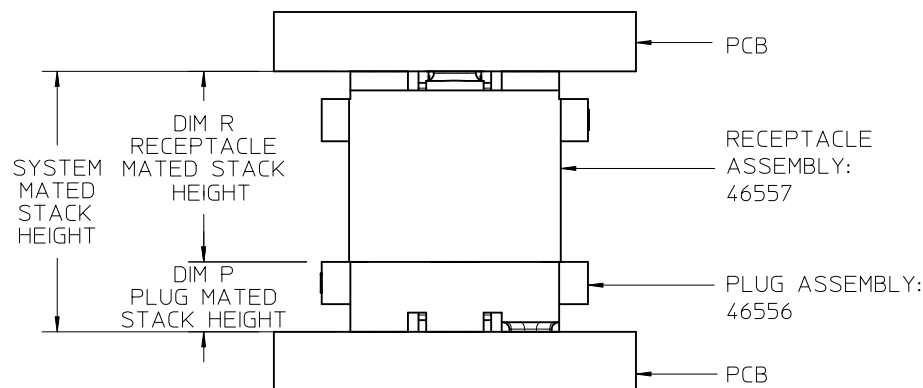
SHEET NO.

1 OF 4



|                            |     | DIM R<br>RECEPTACLE STACK HEIGHT |      |      |      |      |     |
|----------------------------|-----|----------------------------------|------|------|------|------|-----|
|                            |     | MM                               | 5.0  | 6.0  | 6.5  | 7.5  | 8.0 |
| DIM P<br>PLUG STACK HEIGHT | 2.0 | 7.0                              | 8.0  | 8.5  | 9.5  | 10.0 |     |
|                            | 3.0 | 8.0                              | 9.0  | 9.5  | 10.5 | 11.0 |     |
|                            | 3.5 | 8.5                              | 9.5  | 10.0 | 11.0 | 11.5 |     |
|                            | 2.5 | 7.5                              | 8.5  | 9.0  | 10.0 | 10.5 |     |
|                            | 4.5 | 9.5                              | 10.5 | 11.0 | 12.0 | 12.5 |     |
|                            | 5.0 | 10.0                             | 11.0 | 11.5 | 12.5 | 13.0 |     |
|                            | 7.0 | 12.0                             | 13.0 | 13.5 | 14.5 | 15.0 |     |

STACK HEIGHTS GIVEN IN MM FOR REF ONLY



| REV | DESCRIPTION                                                                                                            |
|-----|------------------------------------------------------------------------------------------------------------------------|
| 1   | SEE SHEET 1<br>EC NO: UCP2010-2270<br>DRWN: TREGORI 2010/03/05<br>CHKD: JCOMERC 2007/05/17<br>APPR: JCOMERC 2010/03/05 |

| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |         |
|------------------------------------------------------------|--------|---------|
|                                                            | mm     | INCH    |
| 4 PLACES                                                   | ± .005 | ± .0005 |
| 3 PLACES                                                   | ± .005 | ± .0005 |
| 2 PLACES                                                   | ± .005 | ± .0005 |
| 1 PLACE                                                    | ± .005 | ± .0005 |
| ANGULAR $\pm 1/2^\circ$                                    |        |         |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |         |

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

|                                                                                                          |                      |                                                                                                                 |
|----------------------------------------------------------------------------------------------------------|----------------------|-----------------------------------------------------------------------------------------------------------------|
| SCALE<br>4:1                                                                                             | DESIGN UNITS<br>INCH |  THIRD ANGLE<br>PROJECTION |
| TITLE<br><br>SEARAY SLIM<br>PLUG ASSEMBLY<br>.050 PITCH                                                  |                      |                                                                                                                 |
|  MOLEX INCORPORATED |                      |                                                                                                                 |
| DOCUMENT NO.<br>SD-46556-001                                                                             |                      | SHEET NO.<br>2 OF 4                                                                                             |
| AINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>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        |   |  |   |  |
| 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  |   |  |   |  |
| 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   |   |  |   |  |
| <div>NOTES:</div> <div>1. THIS SHEET CONTAINS THE FOLLOWING OPTIONS</div> <div>SOLDER CHARGE: TIN</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |             |             |             |             |             |             |             |   |  |   |  |
| <div><div><div>SEE SHEET 1</div><div>EC NO: UCP2010-2270</div><div>DRWN: TGREGORI</div><div>CHKD: JCOMERCI</div><div>APPR: JCOMERCI</div></div><div>DESCRIPTION</div><div>REV</div></div> <div><div>GENERAL TOLERANCES (UNLESS SPECIFIED)</div><div><div><div>mm</div><div>INCH</div></div><div>4 PLACES ± --- ± ---</div><div>3 PLACES ± --- ± .005</div><div>2 PLACES ± --- ± ---</div><div>1 PLACE ± --- ± ---</div></div><div>ANGULAR ±1/2°</div><div>DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS</div></div> <div><div>DIMENSION STYLE</div><div>INCH ONLY</div><div><div>DRAWN BY</div><div>DATE</div><div>TGREGORI</div><div>2007/05/17</div></div><div><div>CHECKED BY</div><div>DATE</div><div>JCOMERCI</div><div>2007/05/17</div></div><div><div>APPROVED BY</div><div>DATE</div><div>JCOMERCI</div><div>2010/03/05</div></div><div>MATERIAL NO.</div><div>SEE CHART</div><div>SIZE</div><div>A</div></div> <div><div>SCALE</div><div>1:1</div><div>DESIGN UNITS</div><div>INCH</div><div><div>THIRD ANGLE PROJECTION</div></div><div>TITLE</div><div>SEARAY SLIM PLUG ASSEMBLY .050 PITCH</div><div><div>MOLEX INCORPORATED</div></div><div>DOCUMENT NO.</div><div>SD-46556-001</div><div>SHEET NO.</div><div>3 OF 4</div></div> <div>THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</div> |             |             |             |             |             |             |             |   |  |   |  |
| tb_frame_A_P_AM_T<br>Rev. E 2006/04/15                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 5           |             | 4           |             | 3           |             | 2 |  | 1 |  |



## Данный компонент на территории Российской Федерации

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<http://moschip.ru/get-element>

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В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

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