

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

**Part Number:** [0479890132](#)  
**Status:** **Active**  
**Description:** 1.00mm (.039") by 1.00mm (.039") Pitch rPGA 989 Notebook PC CPU Socket, with Pick-and-Place Cover, Hard Tray Packaging, 989 Circuits, Lead free

**Documents:**

[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)  
[Product Specification PS-47989-001 \(PDF\)](#)

**General**

|                |                       |
|----------------|-----------------------|
| Product Family | Processor Sockets     |
| Series         | <a href="#">47989</a> |
| Comments       | Pick-and-Place Cap    |
| Component Type | Socket                |
| Product Name   | rPGA989               |

**Physical**

|                                |                                |
|--------------------------------|--------------------------------|
| Circuits (Loaded)              | 989                            |
| Color - Resin                  | Black, Natural                 |
| Durability (mating cycles max) | 30                             |
| Material - Metal               | Copper Alloy                   |
| Material - Plating Mating      | Gold                           |
| Material - Plating Termination | Copper, Silver, Tin            |
| Material - Resin               | High Temperature Thermoplastic |
| Packaging Type                 | Tray                           |
| Pitch - Mating Interface (in)  | 0.039 In                       |
| Pitch - Mating Interface (mm)  | 1.00 mm                        |
| Plating min: Mating (µin)      | 15                             |
| Plating min: Mating (µm)       | 0.38                           |
| Temperature Range - Operating  | -20°C to +90°C                 |
| Termination Interface: Style   | Solder or Weld                 |

**Electrical**

|                               |     |
|-------------------------------|-----|
| Current - Maximum per Contact | .5A |
| Voltage - Maximum             | 5V  |

**Solder Process Data**

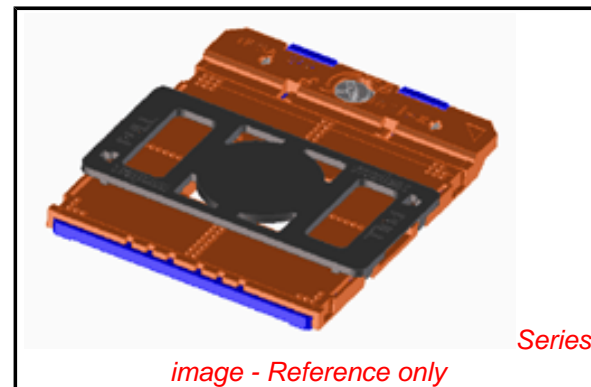
|  |                           |
|--|---------------------------|
| Duration at Max. Process Temperature (seconds) | 3                         |
| Lead-free Process Capability                   | Reflow Capable (SMT only) |
| Max. Cycles at Max. Process Temperature        | 1                         |
| Process Temperature max. C                     | 245                       |

**Material Info**

**Reference - Drawing Numbers**

|                         |              |
|-------------------------|--------------|
| Packaging Specification | PK-47989-002 |
| Product Specification   | PS-47989-001 |
| Sales Drawing           | SD-47989-001 |

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**EU RoHS**

**ELV and RoHS  
Compliant**  
**REACH SVHC  
Contains SVHC: No**  
**Halogen-Free  
Status**

**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](#)

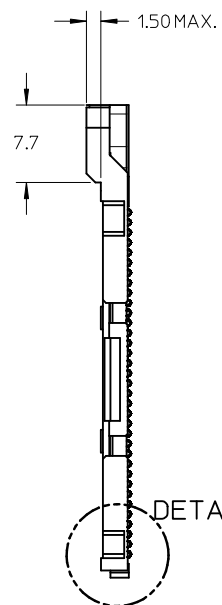
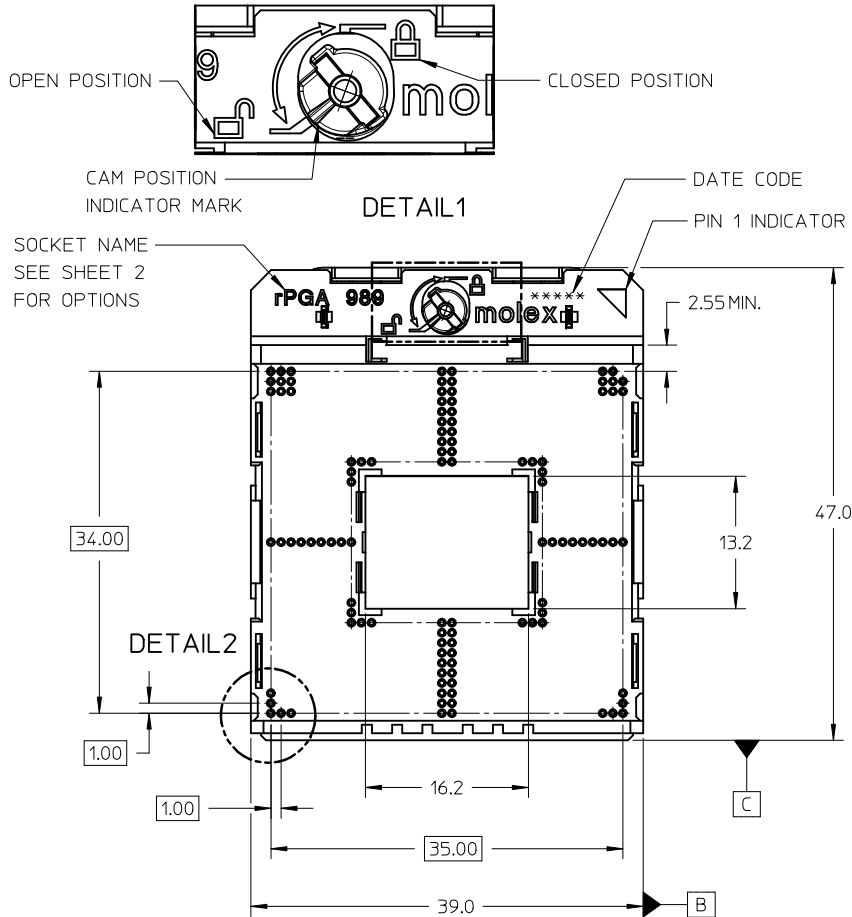
Please visit the [Contact Us](#) section for any non-product compliance questions.

**Search Parts in this Series**

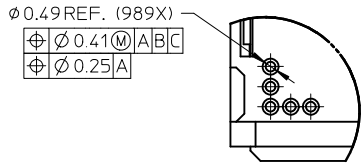
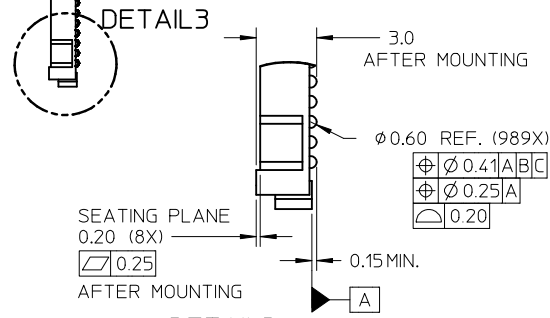
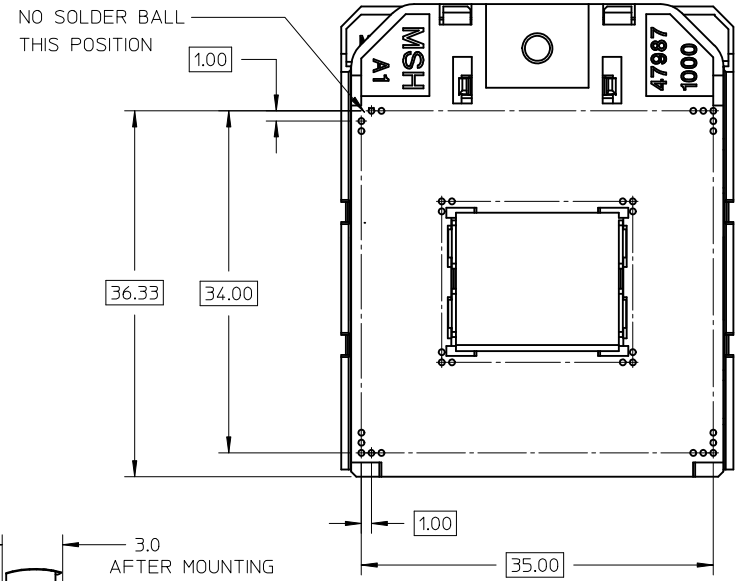
[47989Series](#)

**Mates With**

Intel\* Nehalem Processor



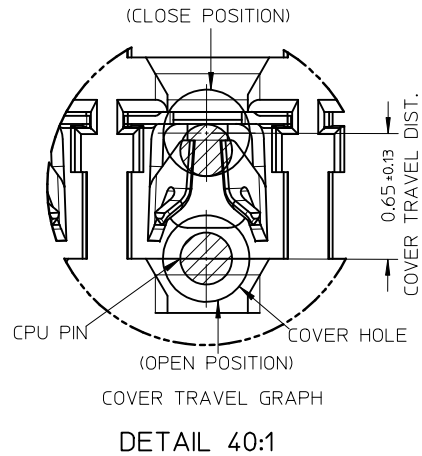
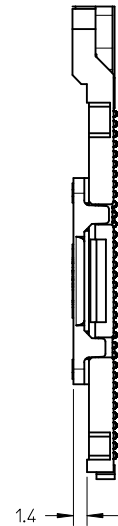
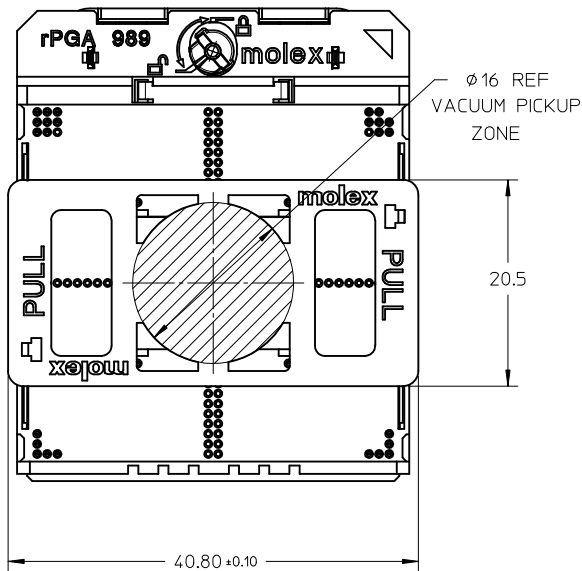
- NOTES:
- 1) THIS SOCKET COMPLIES WITH ALL SPECIFICATIONS AND PERFORMANCE REQUIREMENTS FOR INTEL rPGA98X SERIES CPU PROCESSORS.
  - 2) SOCKET SHOWN IN OPEN POSITION.
  - 3) SEE SHEET 2 FOR DETAILS PERTAINING TO KEYING, MATERIAL AND PACKAGING OPTIONS.
  - 4) THIS PRODUCT SERIES COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND ELV DIRECTIVE 2000/53/EC.



DETAIL 2

|   |  |  |                      |  |   |                               |                        |
|---|--|--|----------------------|--|---|-------------------------------|------------------------|
| <b>ENTER DESCRIPTION</b><br>EC NO: SH2010-0084<br>DRWN: JZHANG11<br>CHKD: W2009/09/25<br>APPR: WFDENG<br>2009/10/12 | <b>QUALITY SYMBOLS</b><br>$F_A=0$<br>$F_C=0$<br>$F_P=0$                    | <b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b> |                      | <b>DIMENSION STYLE</b><br>MM ONLY        | <b>SCALE</b><br>2:1   | <b>DESIGN UNITS</b><br>METRIC | THIRD ANGLE PROJECTION |
|   |  | mm   | INCH                 | DRAWN BY: QWFANG<br>DATE: 2008/04/25     | TITLE: RPGA989 SOCKET ASSEMBLY  |                               |                        |
| <b>REV</b><br>A   | <b>DESCRIPTION</b><br>DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | 4 PLACES ± --- ± ---                         | 3 PLACES ± --- ± --- | CHECKED BY: JKACHLIC<br>DATE: 2008/05/29 | MOLEX INCORPORATED<br>DOCUMENT NO. SD-47989-001<br>SHEET NO. 1 OF 3   |                               |                        |
|   |  | 2 PLACES ± 0.10 ± ---                        | 1 PLACE ± 0.20 ± --- | APPROVED BY: CL IANG<br>DATE: 2008/05/29 |   |                               |                        |
|   |  | ANGULAR ± 2 °                                |                      | MATERIAL NO. SEE TABLE                   | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                               |                        |

REMOVEABLE PICK & PLACE CAP



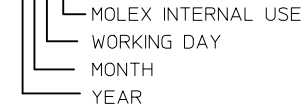
NOTES:

1) MATERIALS:

MOLDED COMPONENTS: LIQUID CRYSTAL POLYMER (LCP) UL 94V-0  
 BASE HOUSING COLOR: BLACK  
 COVER COLOR: NATURAL  
 MYLAR(POLYIMIDE; COLOR:ORANGE) OR PnP COVER(LCP; COLOR: BLACK)  
 FOR PICK & PLACE.

CONTACTS: HIGH STRENGTH COPPER ALLOY  
 PLATING: 0.38um GOLD IN CONTACT AREA, 1.3um NICKEL OVERALL  
 CAM COMPONENTS: STAINLESS STEEL  
 SOLDER BALL: LEAD-FREE BALL SnAg3.0Cu0.5

2) DATE CODE \*\*\*\*\*

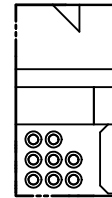
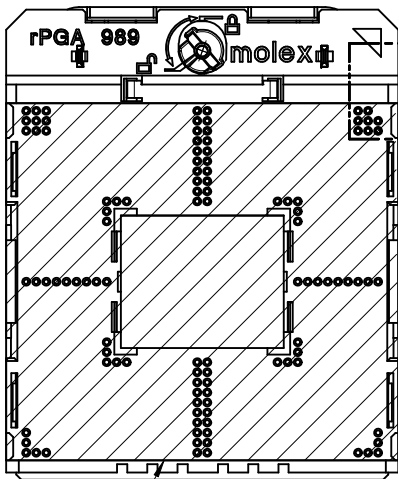


3) PRODUCT SPECIFICATION 47989-001 APPLIES

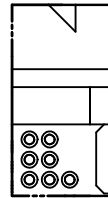
4) PACKAGING SPECIFICATION: PK-47989-001 (TAPE & REEL)  
 PK-47989-002 (HARD TRAY)

SOCKET KEYING OPTIONS

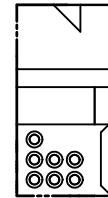
MYLAR PICK & PLACE OPTION



rPGA989  
47989-01\*\*



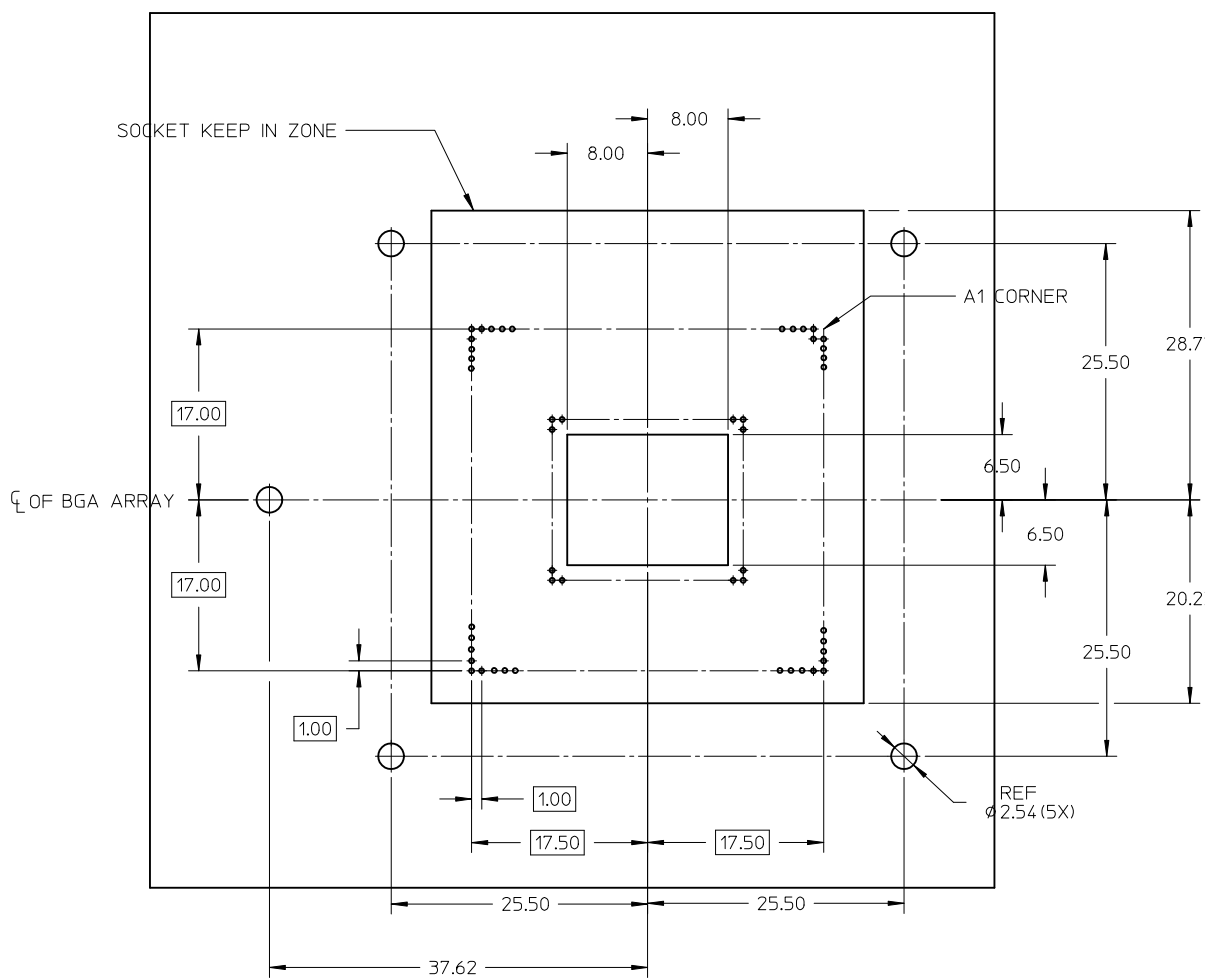
rPGA988A  
47989-02\*\*



rPGA988B  
47989-03\*\*

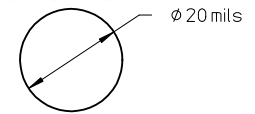
| PART NUMBER | PICK UP TYPE |     | PACKAGE TYPE |           |
|-------------|--------------|-----|--------------|-----------|
|             | MYLAR        | CAP | T&R          | HARD TRAY |
| 47989-0112  | ◆            |     |              | ◆         |
| 47989-0122  | ◆            |     | ◆            |           |
| 47989-0132  |              | ◆   |              | ◆         |
| 47989-0142  |              | ◆   | ◆            |           |
| 47989-0212  | ◆            |     |              | ◆         |
| 47989-0222  | ◆            |     | ◆            |           |
| 47989-0232  |              | ◆   |              | ◆         |
| 47989-0242  |              | ◆   | ◆            |           |
| 47989-0312  | ◆            |     |              | ◆         |
| 47989-0322  | ◆            |     | ◆            |           |
| 47989-0332  |              | ◆   |              | ◆         |
| 47989-0342  |              | ◆   | ◆            |           |

|  |  |   |  |                            |                    |                                  |                        |                        |  |
|--|--|---|--|----------------------------|--------------------|----------------------------------|------------------------|------------------------|--|
| ENTER DESCRIPTION<br>EC NO: SHZ010-0084<br>DRWN: JZHANG11<br>CHKD:<br>APPR: WFDENG<br>2009/09/25<br>2009/09/25<br>2009/10/12 | QUALITY SYMBOLS<br>$F_A=0$<br>$F_G=0$<br>$F_P=0$ | GENERAL TOLERANCES (UNLESS SPECIFIED)   |  | DIMENSION STYLE<br>MM ONLY |                    | SCALE<br>2:1                     | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION |  |
|  |  |   |  | DRAWN BY<br>QWFANG         | DATE<br>2008/04/25 | TITLE<br>RPGA989 SOCKET ASSEMBLY |                        |                        |  |
|  |  |   |  | CHECKED BY<br>JKACHLIC     | DATE<br>2008/05/29 | APPROVED BY<br>CL IANG           |                        |                        |  |
|  |  |   |  | MATERIAL NO.<br>SEE TABLE  |                    | DOCUMENT NO.<br>SD-47989-001     |                        | SHEET NO.<br>2 OF 3    |  |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS   |  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  |                            |                    |                                  |                        |                        |  |

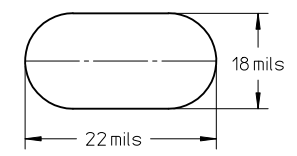


NOTES:  
shape pada of PCB are recommended

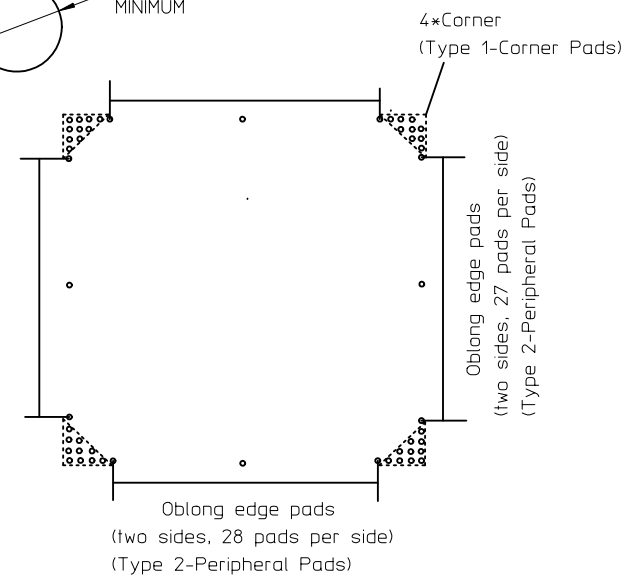
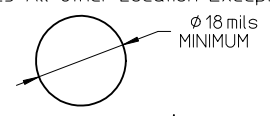
TYPE1-Corner Pads



TYPE2-Peripheral Pads(Oblong-shape pada are recommended)



TYPE3-All Other Location Except for those of Type1 and Type2 Locations)



MOTHERBOARD KEEP IN ZONE (KIZ)

|   |   |  |                      |                                   |                      |   |                                       |                           |                  |
|---|---|--|----------------------|-----------------------------------|----------------------|---|---------------------------------------|---------------------------|------------------|
| <b>ENTER DESCRIPTION</b><br>EC NO: SH2010-0084<br>DRWN: JZHANG11<br>CHKD: CHKD:<br>APPR: WFDENG<br>2009/09/25<br>2009/09/25<br>2009/10/12 | <b>QUALITY SYMBOLS</b><br>$F_A=0$<br>$F_C=0$<br>$F_P=0$ | <b>GENERAL TOLERANCES (UNLESS SPECIFIED)</b>         |                      | <b>DIMENSION STYLE</b><br>MM ONLY | <b>SCALE</b><br>2:1  | <b>DESIGN UNITS</b><br>METRIC             | THIRD ANGLE PROJECTION                |                           |                  |
|   |   | 4 PLACES ± --- ± ---                                 | 3 PLACES ± --- ± --- | 2 PLACES ± 0.10 ± ---             | 1 PLACE ± 0.20 ± --- | DRAWN BY: QWFANG<br>DATE: 2008/04/25      | TITLE: <b>RPGA989 SOCKET ASSEMBLY</b> |                           |                  |
|   |   | ANGULAR ± 2 °  |                      |                                   |                      | CHECKED BY: JKACH LIC<br>DATE: 2008/05/29 | MOLEX INCORPORATED                    |                           |                  |
|   |   | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |                      |                                   |                      | APPROVED BY: CL IANG<br>DATE: 2008/05/29  | MATERIAL NO. SEE TABLE                | DOCUMENT NO. SD-47989-001 | SHEET NO. 3 OF 3 |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION             |   |  |                      |                                   |                      |   |                                       |                           |                  |