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**Part Number:** [0459848472](#)  
**Status:** **Active**  
**Overview:** [extreme\\_lphpower](#)  
**Description:** 1.27mm (.050"), 12.00mm (.472") Pitch, EXTreme LPHPower™ Receptacle Header, Right Angle, 8 Power Contacts, 36 Signal Contacts, Select Gold (Au) Plating, for 2.36mm (.093") Thick PC Board, with Guide Posts, with Press-fit Plastic Pegs

**Documents:**  
[3D Model](#) [Product Specification PS-45984-001 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

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

**General**

|                |                                  |
|----------------|----------------------------------|
| Product Family | PCB Receptacles                  |
| Series         | <a href="#">45984</a>            |
| Application    | Board-to-Board                   |
| Overview       | <a href="#">extreme_lphpower</a> |
| Product Name   | EXTreme LPHPower™                |

**Physical**

|                                |                                               |
|--------------------------------|-----------------------------------------------|
| Circuits (Loaded)              | 44                                            |
| Circuits (maximum)             | 44                                            |
| Circuits Detail                | 8 Power, 36 Signal                            |
| Color - Resin                  | Black                                         |
| Durability (mating cycles max) | 250                                           |
| Flammability                   | 94V-0                                         |
| Glow-Wire Compliant            | No                                            |
| Guide to Mating Part           | Yes                                           |
| Keying to Mating Part          | Yes                                           |
| Lock to Mating Part            | No                                            |
| Material - Metal               | High Performance Alloy (HPA), Phosphor Bronze |
| Material - Plating Mating      | Gold                                          |
| Material - Plating Termination | Tin                                           |
| Material - Resin               | High Temperature Thermoplastic                |
| Number of Rows                 | 2                                             |
| Orientation                    | Right Angle                                   |
| PC Tail Length (in)            | 0.142 In                                      |
| PC Tail Length (mm)            | 3.60 mm                                       |
| PCB Locator                    | Yes                                           |
| PCB Retention                  | Yes                                           |
| PCB Thickness Recommended (in) | 0.093 In                                      |
| PCB Thickness Recommended (mm) | 2.36 mm                                       |
| Packaging Type                 | Tray                                          |
| Pitch - Mating Interface (in)  | 0.050 In, 0.472 In                            |
| Pitch - Mating Interface (mm)  | 1.27 mm, 12.00 mm                             |
| Plating min: Mating (µin)      | 30                                            |
| Plating min: Mating (µm)       | 0.75                                          |
| Plating min: Termination (µin) | 150, 75                                       |
| Plating min: Termination (µm)  | 1.875, 3.75                                   |
| Polarized to Mating Part       | Yes                                           |
| Polarized to PCB               | Yes                                           |
| Stackable                      | No                                            |
| Surface Mount Compatible (SMC) | Yes                                           |

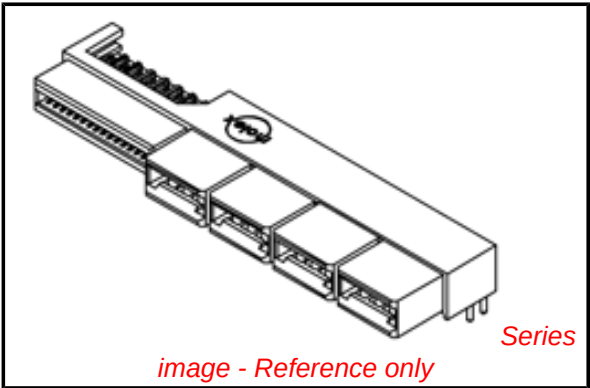


image - Reference only

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

**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**  
[45984Series](#)

**Mates With**  
[45985](#) EXTreme LPHPower™ Headers, 1.57mm (.062") Card Edge

|                               |                  |
|-------------------------------|------------------|
| Temperature Range - Operating | -40°C to +105°C  |
| Termination Interface: Style  | Through Hole     |
| <b>Electrical</b>             |                  |
| Current - Maximum per Contact | 23A              |
| Grounding to PCB              | No               |
| Voltage - Maximum             | 250V AC (RMS)/DC |

|                                                |                        |
|------------------------------------------------|------------------------|
| <b>Solder Process Data</b>                     |                        |
| Duration at Max. Process Temperature (seconds) | 20                     |
| Lead-free Process Capability                   | Wave Capable (TH only) |
| Max. Cycles at Max. Process Temperature        | 3                      |
| Process Temperature max. C                     | 260                    |

**Material Info**

|                                    |              |
|------------------------------------|--------------|
| <b>Reference - Drawing Numbers</b> |              |
| Packaging Specification            | PK-45984-001 |
| Product Specification              | PS-45984-001 |
| Sales Drawing                      | SD-45984-800 |

This document was generated on 05/21/2010

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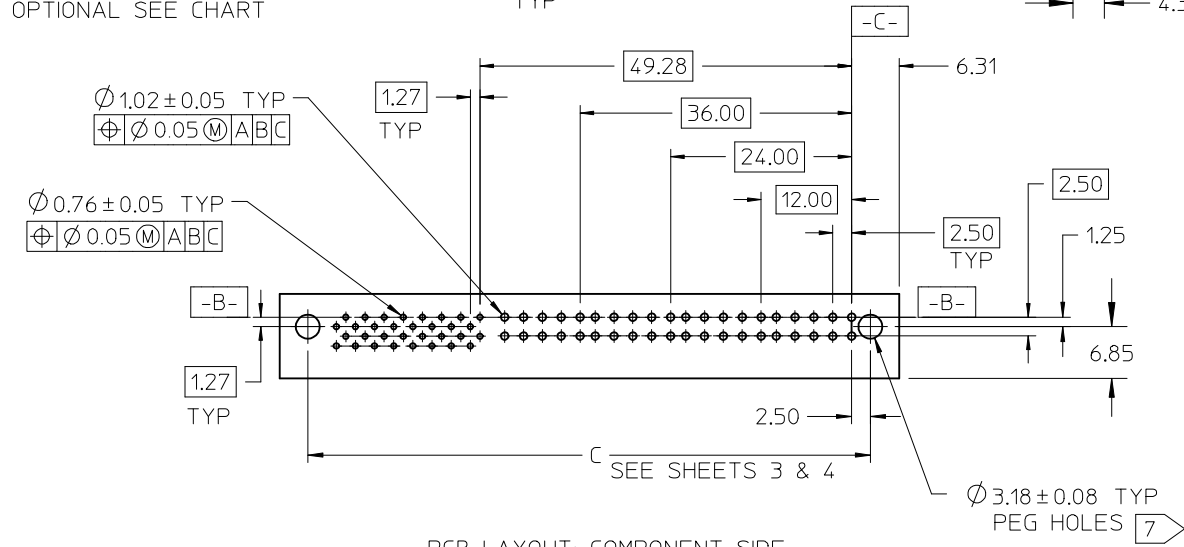
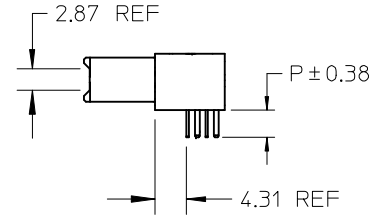
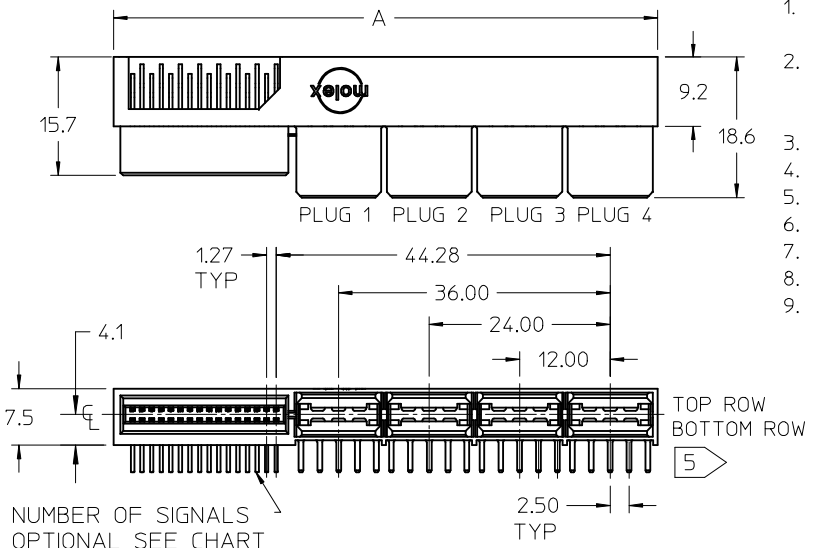
D

C

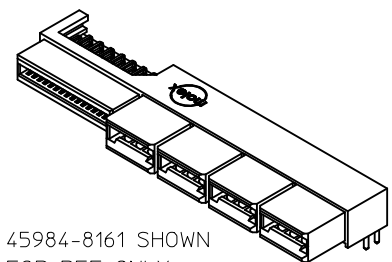
B

A

- NOTES:
1. MATERIAL HOUSING: LCP, 94V-0, COLOR-BLACK.  
CONTACT: COPPER ALLOY.
  2. FINISH: SELECT GOLD - .762  $\mu$ M/30 MI MIN. CONTACT AREA.  
SELECT TIN - 3.81  $\mu$ M/150 MI MIN. TAIL AREA.  
BOTH OVER NICKEL - 1.27  $\mu$ M/50 MI MIN.
  3. POWER TERMINALS LUBRICATED IN CONTACT AREA.
  4. PRODUCT SPECIFICATION: PS-45984-001.
  5. PACKAGING: TRAY PER PK-45984-001.
  6. SEE SHEET 5 FOR CKT IDENTIFICATION.
  7. PARTS ARE RoHS COMPLIANT.
  8. PEG HOLES ARE OPTIONAL SEE SHEET 3 AND 4.
  9. MATES TO 1.57/.062 CARD EDGE OR MOLEX P/N 45985-8\*\*\*.



PCB LAYOUT: COMPONENT SIDE  
PEG HOLES OPTIONAL



45984-8161 SHOWN  
FOR REF ONLY  
SEE CHART

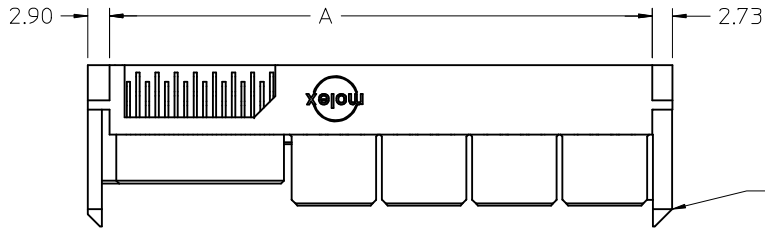
| NO OF SIGNAL | MATERIAL NUMBER | DIM A | DIM P | PCB THK |
|--------------|-----------------|-------|-------|---------|
| 12           | 45984-8111      | 59.5  | 4.50  | 3.18    |
| 16           | 45984-8121      | 62.0  |       |         |
| 20           | 45984-8131      | 64.6  |       |         |
| 24           | 45984-8141      | 67.1  |       |         |
| 28           | 45984-8151      | 69.6  |       |         |
| 32           | 45984-8161      | 72.2  | 3.60  | 2.36    |
| 36           | 45984-8171      | 74.7  |       |         |
| 40           | 45984-8181      | 77.3  |       |         |
| 12           | 45984-8112      | 59.5  |       |         |
| 16           | 45984-8122      | 62.0  |       |         |
| 20           | 45984-8132      | 64.6  |       |         |
| 24           | 45984-8142      | 67.1  |       |         |
| 28           | 45984-8152      | 69.6  |       |         |
| 32           | 45984-8162      | 72.2  | 2.90  | 1.57    |
| 36           | 45984-8172      | 74.7  |       |         |
| 40           | 45984-8182      | 77.3  |       |         |
| 12           | 45984-8113      | 59.5  |       |         |
| 16           | 45984-8123      | 62.0  |       |         |
| 20           | 45984-8133      | 64.6  |       |         |
| 24           | 45984-8143      | 67.1  |       |         |
| 28           | 45984-8153      | 69.6  |       |         |
| 32           | 45984-8163      | 72.2  |       |         |
| 36           | 45984-8173      | 74.7  |       |         |
| 40           | 45984-8183      | 77.3  |       |         |

| REVISED | EC NO:       | DRWN:      | CHKD:      | APPR:      | DESCRIPTION | REV |
|---------|--------------|------------|------------|------------|-------------|-----|
|         | UCP2009-0971 | MBANDURA   |            | APATEL     |             |     |
|         |              | 2008/11/13 | 2008/11/14 | 2008/11/17 |             |     |

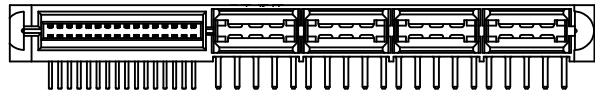
| GENERAL TOLERANCES (UNLESS SPECIFIED)                |        |       |
|------------------------------------------------------|--------|-------|
|                                                      | mm     | INCH  |
| 4 PLACES                                             | ± ---  | ± --- |
| 3 PLACES                                             | ± ---  | ± --- |
| 2 PLACES                                             | ± 0.25 | ± --- |
| 1 PLACE                                              | ± ---  | ± --- |
| ANGULAR ± 1/2°                                       |        |       |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |        |       |

| DIMENSION STYLE        |            |
|------------------------|------------|
| MM ONLY                |            |
| DRAWN BY               | DATE       |
| SAMIEC                 | 2005/05/13 |
| CHECKED BY             | DATE       |
| SAMIEC                 | 2005/05/13 |
| APPROVED BY            | DATE       |
| MARGULIS               | 2005/05/13 |
| MATERIAL NO. SEE CHART |            |
| SIZE                   | A          |

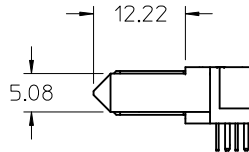
|                                                                                                                               |                     |                        |
|-------------------------------------------------------------------------------------------------------------------------------|---------------------|------------------------|
| SCALE 1:1                                                                                                                     | DESIGN UNITS METRIC | THIRD ANGLE PROJECTION |
| TITLE LPH RECEPTACLE ASSEMBLY RT ANGLE 8 CIRCUIT POWER CONNECTOR                                                              |                     |                        |
| MOLEX INCORPORATED                                                                                                            |                     |                        |
| DOCUMENT NO. SD-45984-800                                                                                                     |                     | SHEET NO. 1 OF 5       |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                     |                        |



OPTIONAL GUIDES  
SEE CHART

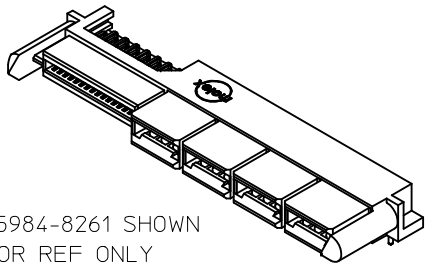


NO OF SIGNALS  
OPTIONAL  
SEE CHART



### GUIDE POST OPTIONS

| NO OF SIGNAL | MATERIAL NUMBER | DIM A | DIM P | PCB THK |
|--------------|-----------------|-------|-------|---------|
| 12           | 45984-8211      | 59.5  | 4.50  | 3.18    |
| 16           | 45984-8221      | 62.0  |       |         |
| 20           | 45984-8231      | 64.6  |       |         |
| 24           | 45984-8241      | 67.1  |       |         |
| 28           | 45984-8251      | 69.6  |       |         |
| 32           | 45984-8261      | 72.2  |       |         |
| 36           | 45984-8271      | 74.7  | 3.60  | 2.36    |
| 40           | 45984-8281      | 77.3  |       |         |
| 12           | 45984-8212      | 59.5  |       |         |
| 16           | 45984-8222      | 62.0  |       |         |
| 20           | 45984-8232      | 64.6  |       |         |
| 24           | 45984-8242      | 67.1  |       |         |
| 28           | 45984-8252      | 69.6  |       |         |
| 32           | 45984-8262      | 72.2  | 2.90  | 1.57    |
| 36           | 45984-8272      | 74.7  |       |         |
| 40           | 45984-8282      | 77.3  |       |         |
| 12           | 45984-8213      | 59.5  |       |         |
| 16           | 45984-8223      | 62.0  |       |         |
| 20           | 45984-8233      | 64.6  |       |         |
| 24           | 45984-8243      | 67.1  |       |         |
| 28           | 45984-8253      | 69.6  |       |         |
| 32           | 45984-8263      | 72.2  |       |         |
| 36           | 45984-8273      | 74.7  |       |         |
| 40           | 45984-8283      | 77.3  |       |         |



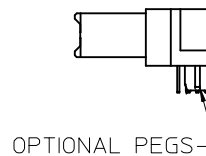
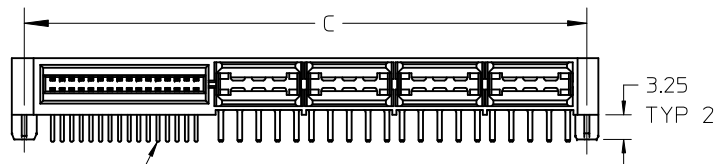
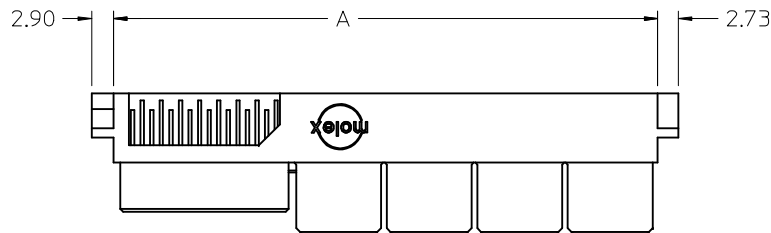
45984-8261 SHOWN  
FOR REF ONLY  
SEE CHART

|         |                     |               |            |       |            |             |            |
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| REVISED | EC NO: UCP2009-0971 | DRWN:MBANDURA | 2008/11/13 | CHKD: | 2008/11/14 | APPR:APATEL | 2008/11/17 |
| REV     |                     |               |            |       |            |             |            |

| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |       |
|------------------------------------------------------------|--------|-------|
|                                                            | mm     | INCH  |
| 4 PLACES                                                   | ± ---  | ± --- |
| 3 PLACES                                                   | ± ---  | ± --- |
| 2 PLACES                                                   | ± 0.25 | ± --- |
| 1 PLACE                                                    | ± ---  | ± --- |
| ANGULAR ±1/2°                                              |        |       |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       |

| DIMENSION STYLE<br>MM ONLY |            |
|----------------------------|------------|
| DRAWN BY                   | DATE       |
| SAMIEC                     | 2005/05/13 |
| CHECKED BY                 | DATE       |
| SAMIEC                     | 2005/05/13 |
| APPROVED BY                | DATE       |
| MARGULIS                   | 2005/05/13 |
| MATERIAL NO.<br>SEE CHART  |            |
| SIZE                       |            |
| A                          |            |

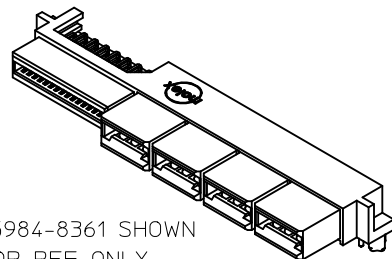
|                                                                                                                 |                        |                                                                                       |                           |
|-----------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------|---------------------------|
| SCALE<br>1:1                                                                                                    | DESIGN UNITS<br>METRIC |  | THIRD ANGLE<br>PROJECTION |
| TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 8 CIRCUIT<br>POWER CONNECTOR                                       |                        |                                                                                       |                           |
|  MOLEX INCORPORATED        |                        |                                                                                       |                           |
| DOCUMENT NO.<br>SD-45984-800                                                                                    |                        |                                                                                       | SHEET NO.<br>2 OF 5       |
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OPTIONAL PEGS

NO OF SIGNALS  
OPTIONAL  
SEE CHART

### MOUNTING PEG OPTIONS



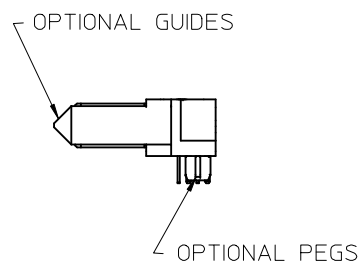
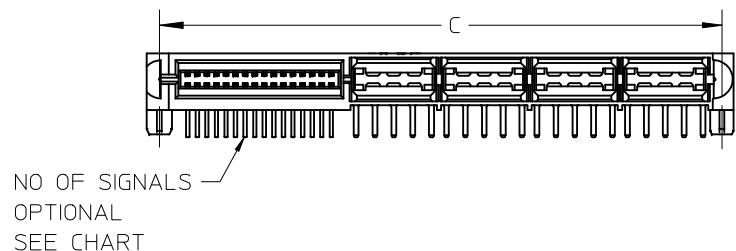
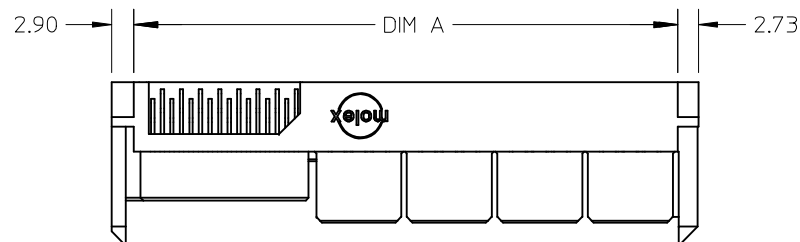
45984-8361 SHOWN  
FOR REF ONLY  
SEE CHART

|         |                     |               |            |       |            |             |            |             |
|---------|---------------------|---------------|------------|-------|------------|-------------|------------|-------------|
| REVISED | EC NO: UCP2009-0971 | DRWN:MBANDURA | 2008/11/13 | CHKD: | 2008/11/14 | APPR:APATEL | 2008/11/17 | DESCRIPTION |
| REV     |                     |               |            |       |            |             |            |             |

| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |       |
|------------------------------------------------------------|--------|-------|
|                                                            | mm     | INCH  |
| 4 PLACES                                                   | ± ---  | ± --- |
| 3 PLACES                                                   | ± ---  | ± --- |
| 2 PLACES                                                   | ± 0.25 | ± --- |
| 1 PLACE                                                    | ± ---  | ± --- |
| ANGULAR ±1/2°                                              |        |       |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       |

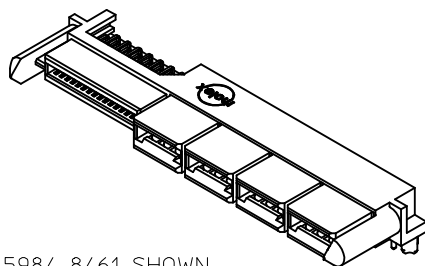
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|----------------------------|------------|
| DRAWN BY                   | DATE       |
| SAMIEC                     | 2005/05/13 |
| CHECKED BY                 | DATE       |
| SAMIEC                     | 2005/05/13 |
| APPROVED BY                | DATE       |
| MARGULIS                   | 2005/05/13 |
| MATERIAL NO.               |            |
| SEE CHART                  |            |
| SIZE                       |            |
| A                          |            |

|                                                                                                          |                        |                                                                                                                 |                     |
|----------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|---------------------|
| SCALE<br>1:1                                                                                             | DESIGN UNITS<br>METRIC |  THIRD ANGLE<br>PROJECTION |                     |
| TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 8 CIRCUIT<br>POWER CONNECTOR                                |                        |                                                                                                                 |                     |
|  MOLEX INCORPORATED |                        |                                                                                                                 |                     |
| DOCUMENT NO.<br>SD-45984-800                                                                             |                        |                                                                                                                 | SHEET NO.<br>3 OF 5 |
| AINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION           |                        |                                                                                                                 |                     |



## GUIDE POST & MOUNTING PEG OPTIONS

| NO OF<br>SIGNAL | MATERIAL<br>NUMBER | DIM A | DIM C | DIM P | PCB<br>THK |
|-----------------|--------------------|-------|-------|-------|------------|
| 12              | 45984-8411         | 59.5  | 61.90 | 4.50  | 3.18       |
| 16              | 45984-8421         | 62.0  | 64.44 |       |            |
| 20              | 45984-8431         | 64.6  | 66.98 |       |            |
| 24              | 45984-8441         | 67.1  | 69.52 |       |            |
| 28              | 45984-8451         | 69.6  | 72.06 |       |            |
| 32              | 45984-8461         | 72.2  | 74.60 |       |            |
| 36              | 45984-8471         | 74.7  | 77.14 |       |            |
| 40              | 45984-8481         | 77.3  | 79.68 |       |            |
| 12              | 45984-8412         | 59.5  | 61.90 | 3.60  | 2.36       |
| 16              | 45984-8422         | 62.0  | 64.44 |       |            |
| 20              | 45984-8432         | 64.6  | 66.98 |       |            |
| 24              | 45984-8442         | 67.1  | 69.52 |       |            |
| 28              | 45984-8452         | 69.6  | 72.06 |       |            |
| 32              | 45984-8462         | 72.2  | 74.60 |       |            |
| 36              | 45984-8472         | 74.7  | 77.14 |       |            |
| 40              | 45984-8482         | 77.3  | 79.68 |       |            |
| 12              | 45984-8413         | 59.5  | 61.90 | 2.90  | 1.57       |
| 16              | 45984-8423         | 62.0  | 64.44 |       |            |
| 20              | 45984-8433         | 64.6  | 66.98 |       |            |
| 24              | 45984-8443         | 67.1  | 69.52 |       |            |
| 28              | 45984-8453         | 69.6  | 72.06 |       |            |
| 32              | 45984-8463         | 72.2  | 74.60 |       |            |
| 36              | 45984-8473         | 74.7  | 77.14 |       |            |
| 40              | 45984-8483         | 77.3  | 79.68 |       |            |



45984-8461 SHOWN  
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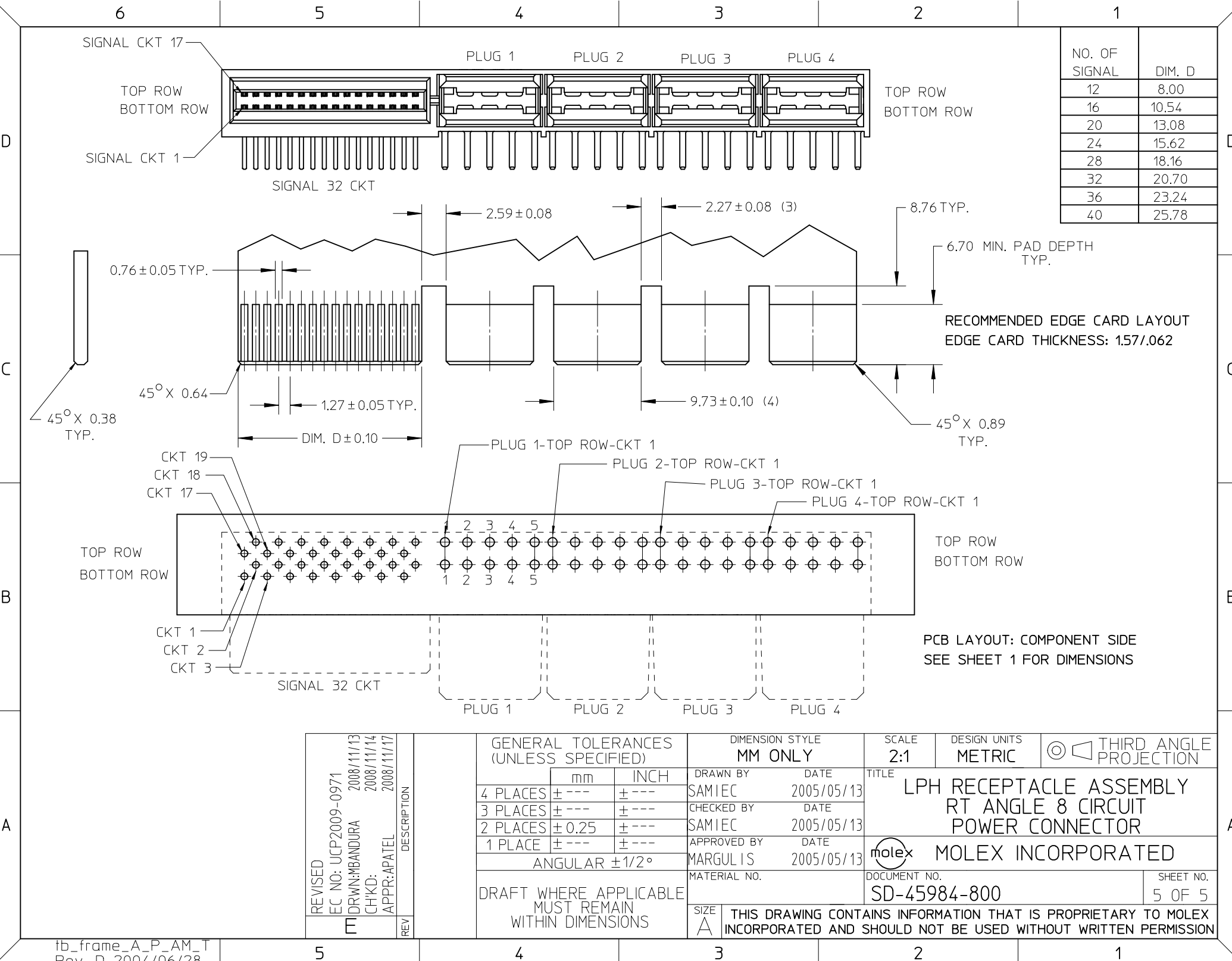
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|---------------------|-------------|
| REVISED             |             |
| EC NO: UCP2009-0971 |             |
| DRWN:MBANDURA       | 2008/11/13  |
| CHKD:               | 2008/11/14  |
| APPR:APATEL         | 2008/11/17  |
| REV                 | DESCRIPTION |

| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |       |
|------------------------------------------------------------|--------|-------|
|                                                            | mm     | INCH  |
| 4 PLACES                                                   | ± ---  | ± --- |
| 3 PLACES                                                   | ± ---  | ± --- |
| 2 PLACES                                                   | ± 0.25 | ± --- |
| 1 PLACE                                                    | ± ---  | ± --- |
| ANGULAR ±1/2°                                              |        |       |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       |

|                 |                                       |
|-----------------|---------------------------------------|
| DIMENSION STYLE |                                       |
| MM ONLY         |                                       |
| DRAWN BY        | DATE                                  |
| SAMIEC          | 2005/05/13                            |
| CHECKED BY      | DATE                                  |
| SAMIEC          | 2005/05/13                            |
| APPROVED BY     | DATE                                  |
| MARGULIS        | 2005/05/13                            |
| MATERIAL NO.    |                                       |
| SEE CHART       |                                       |
| SIZE<br>A       | THIS DRAWING CONT<br>INCORPORATED AND |

|                                                                                                          |                        |                                                                                                                 |
|----------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|
| SCALE<br>1:1                                                                                             | DESIGN UNITS<br>METRIC |  THIRD ANGLE<br>PROJECTION |
| TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 8 CIRCUIT<br>POWER CONNECTOR                                |                        |                                                                                                                 |
|  MOLEX INCORPORATED |                        |                                                                                                                 |
| DOCUMENT NO.<br>SD-45984-800                                                                             |                        | SHEET NO.<br>4 OF 5                                                                                             |

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|         |                     |            |               |            |       |            |             |            |             |
|---------|---------------------|------------|---------------|------------|-------|------------|-------------|------------|-------------|
| REVISED | EC NO: UCP2009-0971 | 2008/11/13 | DRWN:MBANDURA | 2008/11/14 | CHKD: | 2008/11/17 | APPR:APATEL | 2008/11/17 | DESCRIPTION |
| REV     |                     |            |               |            |       |            |             |            |             |

|                                                      |        |       |
|------------------------------------------------------|--------|-------|
| GENERAL TOLERANCES (UNLESS SPECIFIED)                |        |       |
|                                                      | mm     | INCH  |
| 4 PLACES                                             | ± ---  | ± --- |
| 3 PLACES                                             | ± ---  | ± --- |
| 2 PLACES                                             | ± 0.25 | ± --- |
| 1 PLACE                                              | ± ---  | ± --- |
| ANGULAR ±1/2°                                        |        |       |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |        |       |

|                 |                                                                                                                               |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------|
| DIMENSION STYLE |                                                                                                                               |
| MM ONLY         |                                                                                                                               |
| DRAWN BY        | DATE                                                                                                                          |
| SAMIEC          | 2005/05/13                                                                                                                    |
| CHECKED BY      | DATE                                                                                                                          |
| SAMIEC          | 2005/05/13                                                                                                                    |
| APPROVED BY     | DATE                                                                                                                          |
| MARGULIS        | 2005/05/13                                                                                                                    |
| MATERIAL NO.    |                                                                                                                               |
| SIZE            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |
| A               |                                                                                                                               |

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| THIRD ANGLE PROJECTION |
| MOLEX                  |