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**Part Number:** [0459841272](#)  
**Status:** **Active**  
**Overview:** [extreme\\_lphpower](#)  
**Description:** 1.27mm (.050"), 12.00mm (.472") Pitch, EXTreme LPHPower™ Receptacle Header, Right Angle, 10 Power Contacts, 36 Signal Contacts, Select Gold (Au) Plating, for 2.36mm (.093") Thick PC Board, with Guide Posts

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

**Agency Certification**

CSA LR 19980  
UL E29179

**General**

Product Family PCB Receptacles  
Series [45984](#)  
Application Board-to-Board  
Overview [extreme\\_lphpower](#)  
Product Name EXTreme LPHPower™

**Physical**

Circuits (Loaded) 46  
Circuits (maximum) 46  
Circuits Detail 10 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 No  
PCB Retention None  
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

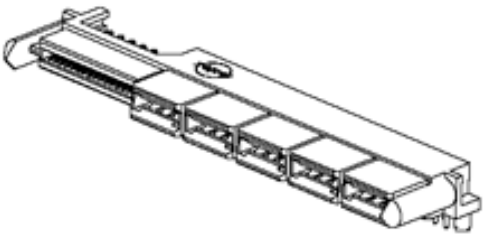


image - Reference only

Series

**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 | 20A              |
| 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                    |

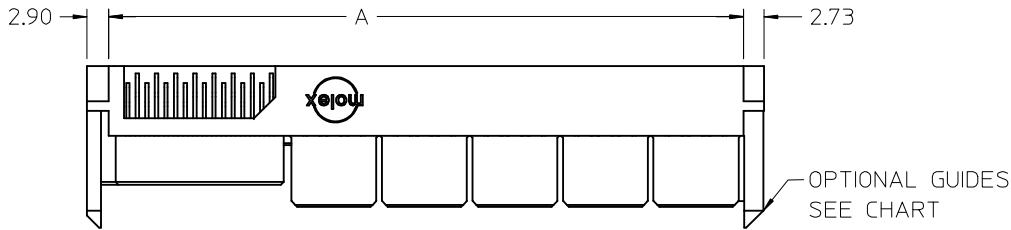
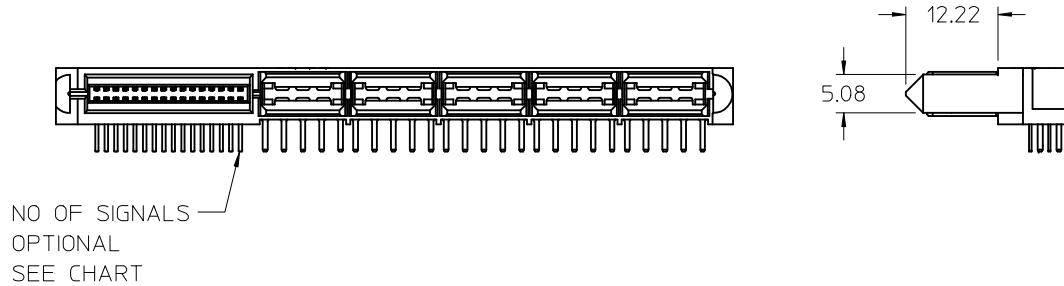
**Material Info**

|                                    |              |
|------------------------------------|--------------|
| <b>Reference - Drawing Numbers</b> |              |
| Packaging Specification            | PK-45984-001 |
| Product Specification              | PS-45984-001 |
| Sales Drawing                      | SD-45984-100 |

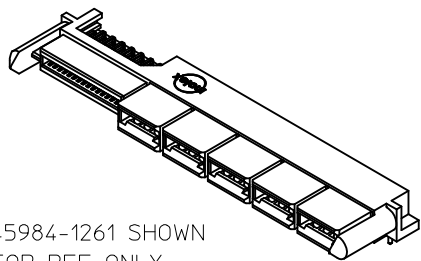
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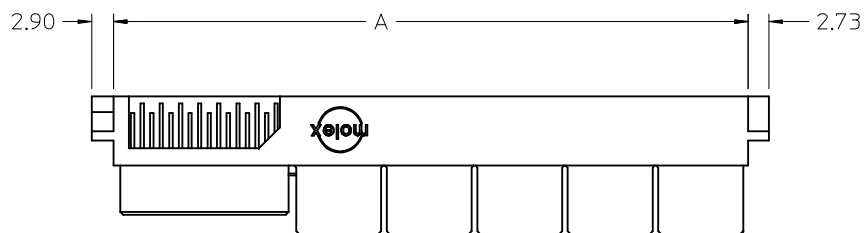
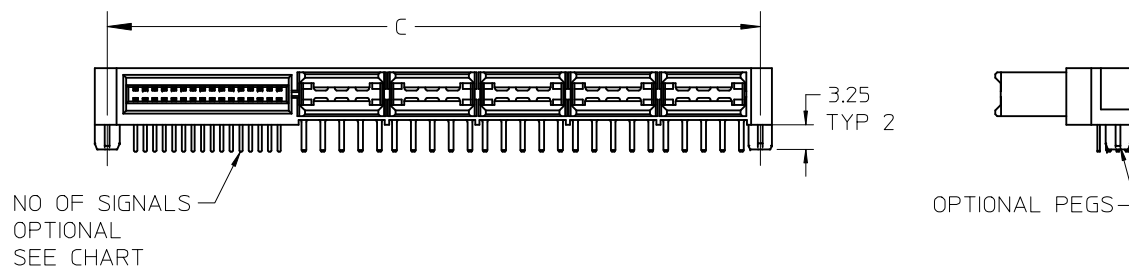


### GUIDE POST OPTIONS



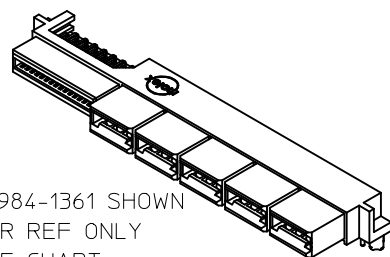
| NO OF SIGNAL | MATERIAL NUMBER | DIM A | DIM P | PCB THK |
|--------------|-----------------|-------|-------|---------|
| 12           | 45984-1211      | 71.5  | 4.50  | 3.18    |
| 16           | 45984-1221      | 74.0  |       |         |
| 20           | 45984-1231      | 76.6  |       |         |
| 24           | 45984-1241      | 79.1  |       |         |
| 28           | 45984-1251      | 81.6  |       |         |
| 32           | 45984-1261      | 84.2  |       |         |
| 36           | 45984-1271      | 86.7  | 3.60  | 2.36    |
| 40           | 45984-1281      | 89.3  |       |         |
| 12           | 45984-1212      | 71.5  |       |         |
| 16           | 45984-1222      | 74.0  |       |         |
| 20           | 45984-1232      | 76.6  |       |         |
| 24           | 45984-1242      | 79.1  |       |         |
| 28           | 45984-1252      | 81.6  |       |         |
| 32           | 45984-1262      | 84.2  | 2.90  | 1.57    |
| 36           | 45984-1272      | 86.7  |       |         |
| 40           | 45984-1282      | 89.3  |       |         |
| 12           | 45984-1213      | 71.5  |       |         |
| 16           | 45984-1223      | 74.0  |       |         |
| 20           | 45984-1233      | 76.6  |       |         |
| 24           | 45984-1243      | 79.1  |       |         |
| 28           | 45984-1253      | 81.6  |       |         |
| 32           | 45984-1263      | 84.2  |       |         |
| 36           | 45984-1273      | 86.7  |       |         |
| 40           | 45984-1283      | 89.3  |       |         |

|                                                                         |                                        |             |                                                            |        |       |                            |  |                                                                                                                                  |                                                                            |                           |  |  |
|-------------------------------------------------------------------------|----------------------------------------|-------------|------------------------------------------------------------|--------|-------|----------------------------|--|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|---------------------------|--|--|
| REVISED<br>EC NO: UCP2009-0971<br>DRWN:MBANDURA<br>CHKD:<br>APPR:APATEL | 2008/11/13<br>2008/11/14<br>2008/11/17 | DESCRIPTION | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |       | DIMENSION STYLE<br>MM ONLY |  | SCALE<br>1:1                                                                                                                     | DESIGN UNITS<br>METRIC                                                     | THIRD ANGLE<br>PROJECTION |  |  |
|                                                                         |                                        |             |                                                            | mm     | INCH  | DRAWN BY<br>SAMIEC         |  | DATE<br>2005/05/13                                                                                                               | TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 10 CIRCUIT<br>POWER CONNECTOR |                           |  |  |
|                                                                         |                                        |             | 4 PLACES                                                   | ± ---  | ± --- | CHECKED BY<br>SAMIEC       |  | DATE<br>2005/05/13                                                                                                               |                                                                            |                           |  |  |
|                                                                         |                                        |             | 3 PLACES                                                   | ± ---  | ± --- | APPROVED BY<br>MARGULIS    |  | DATE<br>2005/05/13                                                                                                               |                                                                            |                           |  |  |
|                                                                         |                                        |             | 2 PLACES                                                   | ± 0.25 | ± --- | MATERIAL NO.<br>SEE CHART  |  | DOCUMENT NO.<br>SD-45984-100                                                                                                     |                                                                            | SHEET NO.<br>2 OF 5       |  |  |
|                                                                         |                                        |             | 1 PLACE                                                    | ± ---  | ± --- |                            |  |                                                                                                                                  |                                                                            |                           |  |  |
|                                                                         |                                        |             | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       | SIZE<br>A                  |  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                                                            |                           |  |  |



## MOUNTING PEG OPTIONS

| NO OF<br>SIGNAL | MATERIAL<br>NUMBER | DIM A | DIM C | DIM P | PCB<br>THK |
|-----------------|--------------------|-------|-------|-------|------------|
| 12              | 45984-1311         | 71.5  | 73.90 | 4.50  | 3.18       |
| 16              | 45984-1321         | 74.0  | 76.44 |       |            |
| 20              | 45984-1331         | 76.6  | 78.98 |       |            |
| 24              | 45984-1341         | 79.1  | 81.52 |       |            |
| 28              | 45984-1351         | 81.6  | 84.06 |       |            |
| 32              | 45984-1361         | 84.2  | 86.60 |       |            |
| 36              | 45984-1371         | 86.7  | 89.14 |       |            |
| 40              | 45984-1381         | 89.3  | 91.68 |       |            |
| 12              | 45984-1312         | 71.5  | 73.90 | 3.60  | 2.36       |
| 16              | 45984-1322         | 74.0  | 76.44 |       |            |
| 20              | 45984-1332         | 76.6  | 78.98 |       |            |
| 24              | 45984-1342         | 79.1  | 81.52 |       |            |
| 28              | 45984-1352         | 81.6  | 84.06 |       |            |
| 32              | 45984-1362         | 84.2  | 86.60 |       |            |
| 36              | 45984-1372         | 86.7  | 89.14 |       |            |
| 40              | 45984-1382         | 89.3  | 91.68 |       |            |
| 12              | 45984-1313         | 71.5  | 73.90 | 2.90  | 1.57       |
| 16              | 45984-1323         | 74.0  | 76.44 |       |            |
| 20              | 45984-1333         | 76.6  | 78.98 |       |            |
| 24              | 45984-1343         | 79.1  | 81.52 |       |            |
| 28              | 45984-1353         | 81.6  | 84.06 |       |            |
| 32              | 45984-1363         | 84.2  | 86.60 |       |            |
| 36              | 45984-1373         | 86.7  | 89.14 |       |            |
| 40              | 45984-1383         | 89.3  | 91.68 |       |            |

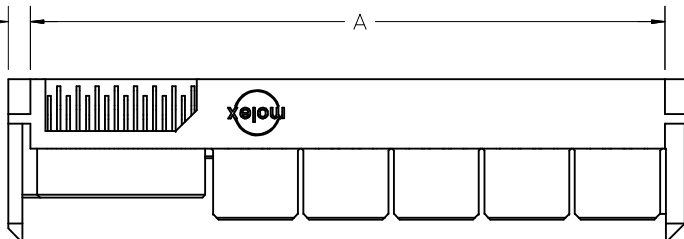
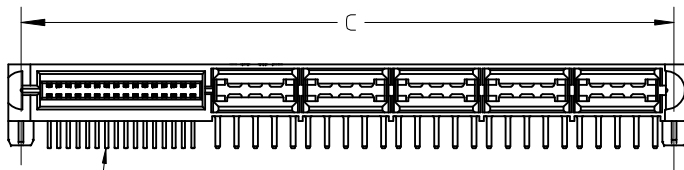


45984-1361 SHOWN  
FOR REF ONLY  
SEE CHART

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

|                                                            |        |       |                                                                                                                                  |  |                                                                                                      |                        |                                                                                                                 |
|------------------------------------------------------------|--------|-------|----------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|
| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |       | DIMENSION STYLE<br>MM ONLY                                                                                                       |  | SCALE<br>1:1                                                                                         | DESIGN UNITS<br>METRIC |  THIRD ANGLE<br>PROJECTION |
|                                                            | mm     | INCH  | DRAWN BY DATE<br>SAMIEC 2005/05/13                                                                                               |  | TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 10 CIRCUIT<br>POWER CONNECTOR<br><br>MOLEX INCORPORATED |                        |                                                                                                                 |
| 4 PLACES                                                   | ± ---  | ± --- | CHECKED BY DATE<br>SAMIEC 2005/05/13                                                                                             |  |                                                                                                      |                        |                                                                                                                 |
| 3 PLACES                                                   | ± ---  | ± --- | APPROVED BY DATE<br>MARGULIS 2005/05/13                                                                                          |  |                                                                                                      |                        |                                                                                                                 |
| 2 PLACES                                                   | ± 0.25 | ± --- | MATERIAL NO.<br>SEE CHART                                                                                                        |  |                                                                                                      |                        |                                                                                                                 |
| 1 PLACE                                                    | ± ---  | ± --- | SIZE<br>A                                                                                                                        |  |                                                                                                      |                        |                                                                                                                 |
| ANGULAR ±1/2°                                              |        |       |                                                                                                                                  |  | DOCUMENT NO.<br>SD-45984-100                                                                         |                        |                                                                                                                 |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       |                                                                                                                                  |  | SHEET NO.<br>3 OF 5                                                                                  |                        |                                                                                                                 |
|                                                            |        |       | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  |                                                                                                      |                        |                                                                                                                 |

2.90 A 2.73



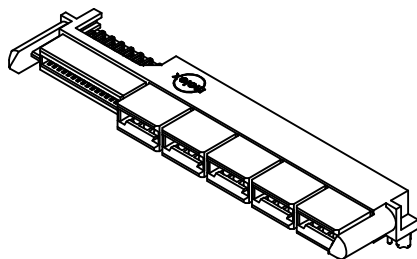
NO OF SIGNALS  
OPTIONAL  
SEE CHART

OPTIONAL GUIDES

OPTIONAL PEGS

## GUIDE POST & MOUNTING PEG OPTIONS

| NO OF SIGNAL | MATERIAL NUMBER | DIM A | DIM C | DIM P | PCB THK |
|--------------|-----------------|-------|-------|-------|---------|
| 12           | 45984-1411      | 71.5  | 73.90 | 4.50  | 3.18    |
| 16           | 45984-1421      | 74.0  | 76.44 |       |         |
| 20           | 45984-1431      | 76.6  | 78.98 |       |         |
| 24           | 45984-1441      | 79.1  | 81.52 |       |         |
| 28           | 45984-1451      | 81.6  | 84.06 |       |         |
| 32           | 45984-1461      | 84.2  | 86.60 |       |         |
| 36           | 45984-1471      | 86.7  | 89.14 | 3.60  | 2.36    |
| 40           | 45984-1481      | 89.3  | 91.68 |       |         |
| 12           | 45984-1412      | 71.5  | 73.90 |       |         |
| 16           | 45984-1422      | 74.0  | 76.44 |       |         |
| 20           | 45984-1432      | 76.6  | 78.98 |       |         |
| 24           | 45984-1442      | 79.1  | 81.52 |       |         |
| 28           | 45984-1452      | 81.6  | 84.06 |       |         |
| 32           | 45984-1462      | 84.2  | 86.60 | 2.90  | 1.57    |
| 36           | 45984-1472      | 86.7  | 89.14 |       |         |
| 40           | 45984-1482      | 89.3  | 91.68 |       |         |
| 12           | 45984-1413      | 71.5  | 73.90 |       |         |
| 16           | 45984-1423      | 74.0  | 76.44 |       |         |
| 20           | 45984-1433      | 76.6  | 78.98 |       |         |
| 24           | 45984-1443      | 79.1  | 81.52 |       |         |
| 28           | 45984-1453      | 81.6  | 84.06 |       |         |
| 32           | 45984-1463      | 84.2  | 86.60 |       |         |
| 36           | 45984-1473      | 86.7  | 89.14 |       |         |
| 40           | 45984-1483      | 89.3  | 91.68 |       |         |



45984-1461 SHOWN  
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| REVISED | EC NO: | UCP2009-0971 | 2008/11/13 | DRWN:MBANDURA | 2008/11/14 | CHKD: | 2008/11/14 | APPR:APATEL | 2008/11/17 | DESCRIPTION |
|---------|--------|--------------|------------|---------------|------------|-------|------------|-------------|------------|-------------|
| 1       |        |              |            |               |            |       |            |             |            |             |

GENERAL TOLERANCES  
(UNLESS SPECIFIED)

|          | mm     | INCH  |
|----------|--------|-------|
| 4 PLACES | ± ---  | ± --- |
| 3 PLACES | ± ---  | ± --- |
| 2 PLACES | ± 0.25 | ± --- |
| 1 PLACE  | ± ---  | ± --- |

ANGULAR  $\pm 1/2^\circ$

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

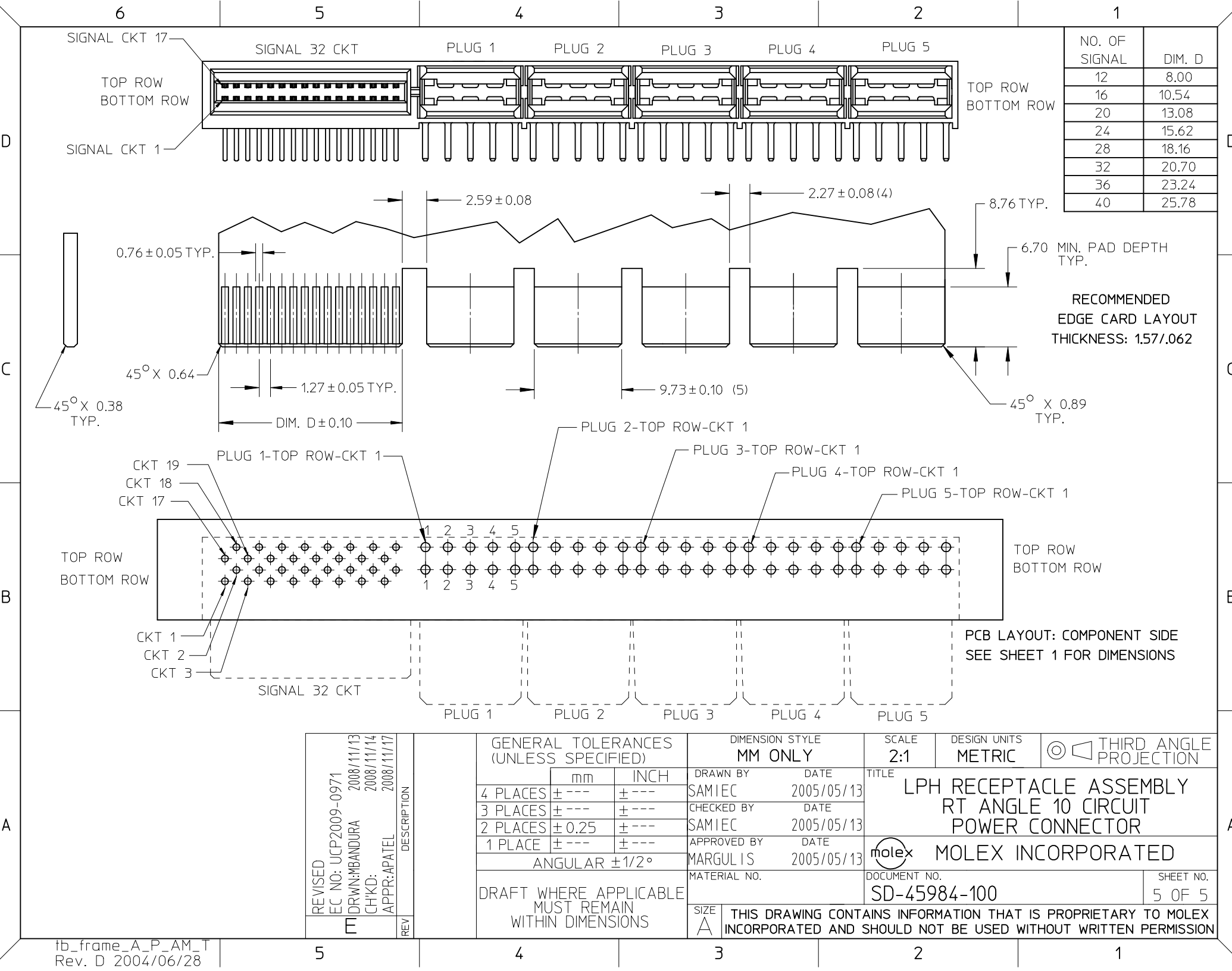
LPH RECEPTACLE ASSEMBLY  
RT ANGLE 10 CIRCUIT  
POWER CONNECTOR

MOLEX INCORPORATED

DOCUMENT NO.  
SD-45984-100

SHEET NO.  
4 OF 5

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| NO. OF SIGNAL | DIM. D |
|---------------|--------|
| 12            | 8.00   |
| 16            | 10.54  |
| 20            | 13.08  |
| 24            | 15.62  |
| 28            | 18.16  |
| 32            | 20.70  |
| 36            | 23.24  |
| 40            | 25.78  |

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

| GENERAL TOLERANCES (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.    |            |
| SIZE            |            |
| A               |            |

|                                                                                                                 |                        |                                                                                       |                           |
|-----------------------------------------------------------------------------------------------------------------|------------------------|---------------------------------------------------------------------------------------|---------------------------|
| SCALE<br>2:1                                                                                                    | DESIGN UNITS<br>METRIC |  | THIRD ANGLE<br>PROJECTION |
| TITLE<br>LPH RECEPTACLE ASSEMBLY<br>RT ANGLE 10 CIRCUIT<br>POWER CONNECTOR                                      |                        |                                                                                       |                           |
|  MOLEX INCORPORATED        |                        |                                                                                       |                           |
| DOCUMENT NO.<br>SD-45984-100                                                                                    |                        |                                                                                       | SHEET NO.<br>5 OF 5       |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                        |                                                                                       |                           |