

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number:

0459851453

Status:

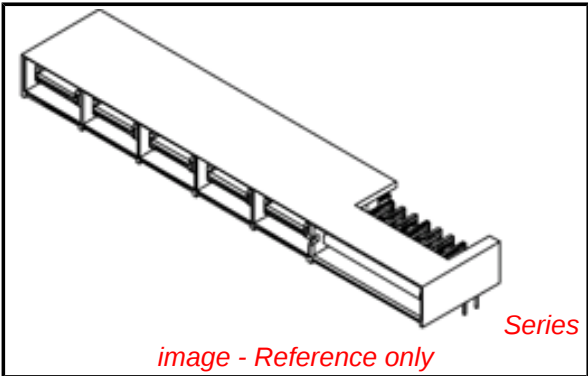
Active

Overview:

extreme\_lphpower

Description:

1.27mm (.050"), 12.00mm (.472") Pitch, EXTreme LPHPower™ Header, Right Angle, 10 Power Contacts, 28 Signal Contacts, Select Gold (Au) Plating, for 1.57mm (.062") Thick PC Board, with Guide Pockets, with Press-fit Plastic Pegs



Documents:

3D Model

Drawing (PDF)

Product Specification PS-45984-001 (PDF)

RoHS Certificate of Compliance (PDF)

|                                |                                     |
|--------------------------------|-------------------------------------|
| Agency Certification           |                                     |
| CSA                            | LR19980                             |
| TUV                            | 30683046                            |
| UL                             | E29179                              |
| General                        |                                     |
| Product Family                 | PCB Headers                         |
| Series                         | 45985                               |
| Application                    | Board-to-Board                      |
| Overview                       | extreme_lphpower                    |
| Product Name                   | EXTreme LPHPower™                   |
| Physical                       |                                     |
| Breakaway                      | No                                  |
| Circuits (Loaded)              | 38                                  |
| Circuits (maximum)             | 38                                  |
| Circuits Detail                | 10 Power, 28 Signal                 |
| Color - Resin                  | Black                               |
| Durability (mating cycles max) | 250                                 |
| First Mate / Last Break        | Yes                                 |
| Flammability                   | 94V-0                               |
| Glow-Wire Compliant            | No                                  |
| Guide to Mating Part           | Yes                                 |
| Keying to Mating Part          | None                                |
| Lock to Mating Part            | No                                  |
| Material - Metal               | Brass, High Performance Alloy (HPA) |
| Material - Plating Mating      | Gold                                |
| Material - Plating Termination | Tin                                 |
| Material - Resin               | High Temperature Thermoplastic      |
| Number of Rows                 | 2                                   |
| Orientation                    | Right Angle                         |
| PC Tail Length (in)            | 0.114 In                            |
| PC Tail Length (mm)            | 2.90 mm                             |
| PCB Locator                    | Yes                                 |
| PCB Retention                  | Yes                                 |
| PCB Thickness Recommended (in) | 0.062 In                            |
| PCB Thickness Recommended (mm) | 1.57 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, 50                             |
| Plating min: Termination (µm)  | 1.25, 3.75                          |
| Polarized to Mating Part       | Yes                                 |

EU RoHS

ELV and RoHS Compliant

REACH SVHC

Not Reviewed

Halogen-Free

Status

Not Reviewed

Need more information on product environmental compliance?

Email [productcompliance@molex.com](mailto:productcompliance@molex.com)

For a multiple part number RoHS Certificate of Compliance, [click here](#)

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

China RoHS

Search Parts in this Series

45985Series

Mates With

45984 EXTreme LPHPower™ PCB Receptacles

|                                |                 |
|--------------------------------|-----------------|
| Polarized to PCB               | Yes             |
| Shrouded                       | Fully           |
| Stackable                      | No              |
| Surface Mount Compatible (SMC) | Yes             |
| Temperature Range - Operating  | -40°C to +105°C |
| Termination Interface: Style   | Through Hole    |

**Electrical**

|                               |                  |
|-------------------------------|------------------|
| Current - Maximum per Contact | 20A              |
| Voltage - Maximum             | 250V AC (RMS)/DC |

**Solder Process Data**

|                                                |                        |
|------------------------------------------------|------------------------|
| 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                    |

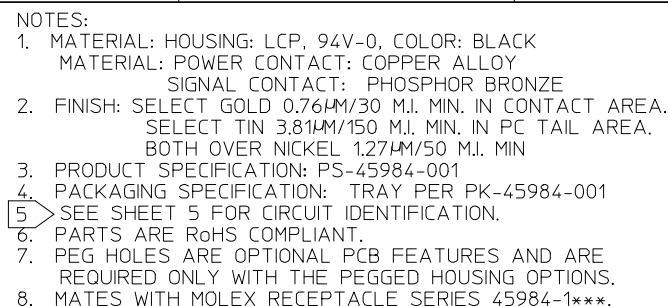
**Material Info**

**Reference - Drawing Numbers**

|                         |              |
|-------------------------|--------------|
| Packaging Specification | PK-45984-001 |
| Product Specification   | PS-45984-001 |
| Sales Drawing           | SD-45985-100 |

This document was generated on 05/25/2010

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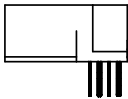
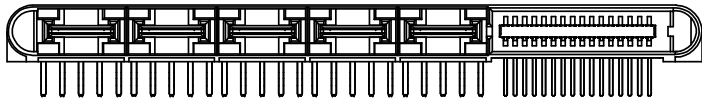
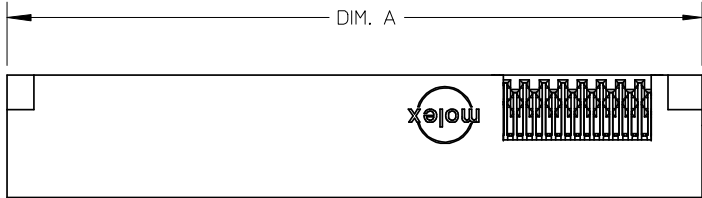
THICKNESS:

45985-1161

| 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                                   |
| SCHAFFER        | 2005/06/20                             |
| CHECKED BY      | DATE                                   |
| SAMIEC          | 2005/06/21                             |
| APPROVED BY     | DATE                                   |
| MARGULIS        | 2005/06/22                             |
| MATERIAL NO.    |                                        |
| SEE CHARTS      |                                        |
| SIZE            | THIS DRAWING CONT.<br>INCORPORATED AND |
| A               |                                        |

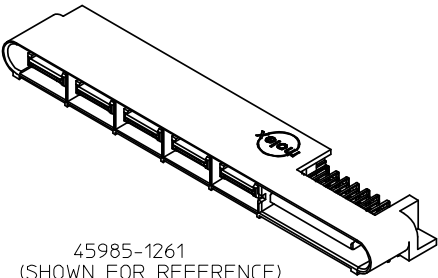
|                                                                                                          |                        |                                                                                                                 |
|----------------------------------------------------------------------------------------------------------|------------------------|-----------------------------------------------------------------------------------------------------------------|
| SCALE<br>1:1                                                                                             | DESIGN UNITS<br>METRIC |  THIRD ANGLE<br>PROJECTION |
| TITLE                                                                                                    |                        |                                                                                                                 |
| LPH PLUG ASSEMBLY<br>RT ANGLE 10 CIRCUIT<br>POWER CONNECTOR                                              |                        |                                                                                                                 |
|  MOLEX INCORPORATED |                        |                                                                                                                 |
| DOCUMENT NO.<br>SD-45985-100                                                                             |                        | SHEET NO.<br>1 OF 5                                                                                             |
| AINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION           |                        |                                                                                                                 |



GUIDE OPTIONS

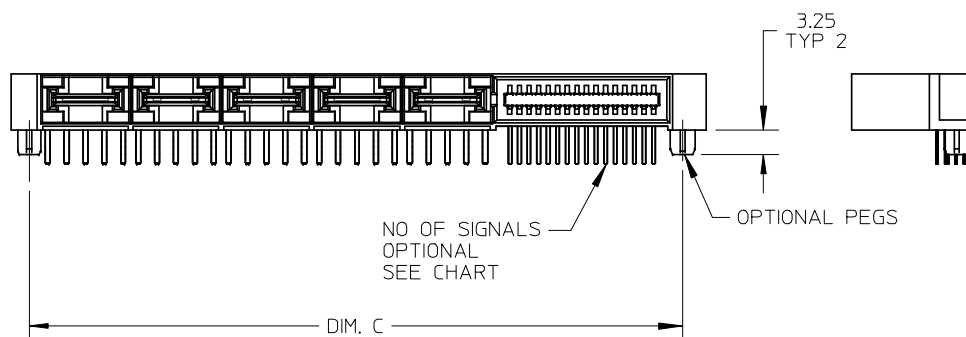
| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM P | PCB THK |
|--------------|-----------------|-----------|-------|---------|
| 12           | 45985-1211      | 79.66     | 4.50  | 3.18    |
| 16           | 45985-1221      | 82.20     |       |         |
| 20           | 45985-1231      | 84.74     |       |         |
| 24           | 45985-1241      | 87.28     |       |         |
| 28           | 45985-1251      | 89.82     |       |         |
| 32           | 45985-1261      | 92.36     |       |         |
| 36           | 45985-1271      | 94.90     |       |         |
| 40           | 45985-1281      | 97.44     |       |         |
| 12           | 45985-1212      | 79.66     | 3.90  | 2.36    |
| 16           | 45985-1222      | 82.20     |       |         |
| 20           | 45985-1232      | 84.74     |       |         |
| 24           | 45985-1242      | 87.28     |       |         |
| 28           | 45985-1252      | 89.82     |       |         |
| 32           | 45985-1262      | 92.36     |       |         |
| 36           | 45985-1272      | 94.90     |       |         |
| 40           | 45985-1282      | 97.44     |       |         |
| 12           | 45985-1213      | 79.66     | 2.90  | 1.57    |
| 16           | 45985-1223      | 82.20     |       |         |
| 20           | 45985-1233      | 84.74     |       |         |
| 24           | 45985-1243      | 87.28     |       |         |
| 28           | 45985-1253      | 89.82     |       |         |
| 32           | 45985-1263      | 92.36     |       |         |
| 36           | 45985-1273      | 94.90     |       |         |
| 40           | 45985-1283      | 97.44     |       |         |

NOTE:  
1. SEE SHEET 1 FOR DIMENSIONS NOT SHOWN.



45985-1261  
(SHOWN FOR REFERENCE)  
SEE CHART

|         |                     |            |               |            |       |            |             |             |                                                            |        |       |                            |                                                                                                                                  |                                                                      |                        |                           |  |  |  |
|---------|---------------------|------------|---------------|------------|-------|------------|-------------|-------------|------------------------------------------------------------|--------|-------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|------------------------|---------------------------|--|--|--|
| REVISED | EC NO: UCP2007-3140 | 2008/03/03 | DRWN:MBANDURA | 2008/03/04 | CHKD: | 2008/03/06 | APPR:APATEL | DESCRIPTION | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |       | DIMENSION STYLE<br>MM ONLY |                                                                                                                                  | SCALE<br>1:1                                                         | DESIGN UNITS<br>METRIC | THIRD ANGLE<br>PROJECTION |  |  |  |
| C       |                     |            |               |            |       |            |             |             |                                                            | mm     | INCH  | DRAWN BY<br>SCHAFER        | DATE<br>2005/06/20                                                                                                               | TITLE<br>LPH PLUG ASSEMBLY<br>RT ANGLE 10 CIRCUIT<br>POWER CONNECTOR |                        |                           |  |  |  |
|         |                     |            |               |            |       |            |             |             | 4 PLACES                                                   | ± ---  | ± --- | CHECKED BY<br>SAMIEC       | DATE<br>2005/06/21                                                                                                               |                                                                      |                        |                           |  |  |  |
|         |                     |            |               |            |       |            |             |             | 3 PLACES                                                   | ± ---  | ± --- | APPROVED BY<br>MARGULIS    | DATE<br>2005/06/22                                                                                                               |                                                                      |                        |                           |  |  |  |
|         |                     |            |               |            |       |            |             |             | 2 PLACES                                                   | ± 0.25 | ± --- |                            |                                                                                                                                  |                                                                      |                        |                           |  |  |  |
|         |                     |            |               |            |       |            |             |             | 1 PLACE                                                    | ± ---  | ± --- |                            |                                                                                                                                  |                                                                      |                        |                           |  |  |  |
|         |                     |            |               |            |       |            |             |             | ANGULAR ±1/2°                                              |        |       |                            |                                                                                                                                  | MOLEX INCORPORATED                                                   |                        |                           |  |  |  |
|         |                     |            |               |            |       |            |             |             | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       | MATERIAL NO.<br>SEE CHART  |                                                                                                                                  | DOCUMENT NO.<br>SD-45985-100                                         |                        | SHEET NO.<br>2 OF 5       |  |  |  |
|         |                     |            |               |            |       |            |             |             |                                                            |        |       | SIZE<br>A                  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                                                      |                        |                           |  |  |  |

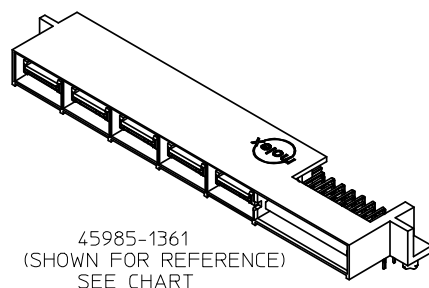


## MOUNTING PEG OPTIONS

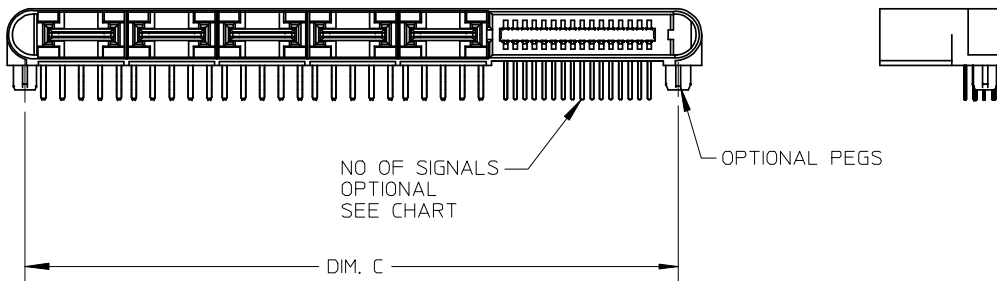
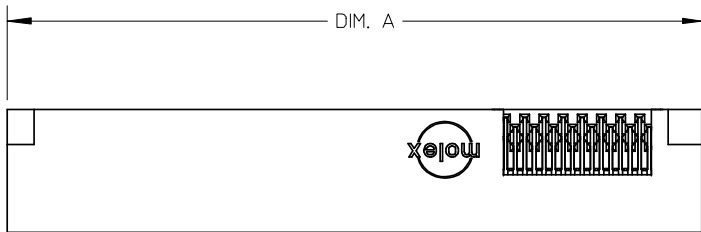
| NO OF<br>SIGNAL | MATERIAL<br>NUMBER | DIM A<br>REF | DIM C | DIM P | PCB<br>THK |
|-----------------|--------------------|--------------|-------|-------|------------|
| 12              | 45985-1311         | 79.66        | 73.98 | 4.50  | 3.18       |
| 16              | 45985-1321         | 82.20        | 76.52 |       |            |
| 20              | 45985-1331         | 84.74        | 79.06 |       |            |
| 24              | 45985-1341         | 87.28        | 81.60 |       |            |
| 28              | 45985-1351         | 89.82        | 84.14 |       |            |
| 32              | 45985-1361         | 92.36        | 86.68 |       |            |
| 36              | 45985-1371         | 94.90        | 89.22 |       |            |
| 40              | 45985-1381         | 97.44        | 91.76 |       |            |
| 12              | 45985-1312         | 79.66        | 73.98 | 3.90  | 2.36       |
| 16              | 45985-1322         | 82.20        | 76.52 |       |            |
| 20              | 45985-1332         | 84.74        | 79.06 |       |            |
| 24              | 45985-1342         | 87.28        | 81.60 |       |            |
| 28              | 45985-1352         | 89.82        | 84.14 |       |            |
| 32              | 45985-1362         | 92.36        | 86.68 |       |            |
| 36              | 45985-1372         | 94.90        | 89.22 |       |            |
| 40              | 45985-1382         | 97.44        | 91.76 |       |            |
| 12              | 45985-1313         | 79.66        | 73.98 | 2.90  | 1.57       |
| 16              | 45985-1323         | 82.20        | 76.52 |       |            |
| 20              | 45985-1333         | 84.74        | 79.06 |       |            |
| 24              | 45985-1343         | 87.28        | 81.60 |       |            |
| 28              | 45985-1353         | 89.82        | 84.14 |       |            |
| 32              | 45985-1363         | 92.36        | 86.68 |       |            |
| 36              | 45985-1373         | 94.90        | 89.22 |       |            |
| 40              | 45985-1383         | 97.44        | 91.76 |       |            |

NOTE:

1. SEE SHEET 1 FOR DIMENSIONS NOT SHOWN.



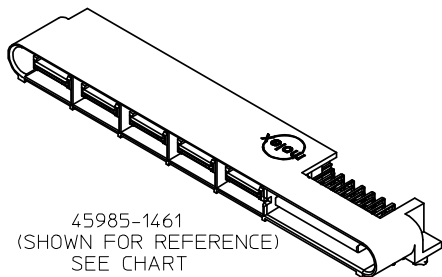
|                                                                          |             |                                                            |        |       |                            |                                                                                                                                  |                                                                          |                          |                           |  |
|--------------------------------------------------------------------------|-------------|------------------------------------------------------------|--------|-------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------|---------------------------|--|
| REVISED<br>EC NO: UCP2007-3140<br>DRWN:MBANDURA<br>CH'KD:<br>APPR:APATEL | 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                   | DATE                                                                                                                             | TITLE<br><br>LPH PLUG ASSEMBLY<br>RT ANGLE 10 CIRCUIT<br>POWER CONNECTOR | MOLEX MOLEX INCORPORATED | SHEET NO.<br>3 OF 5       |  |
|                                                                          |             | 4 PLACES                                                   | ± ---  | ± --- | SCHAFER                    | 2005/06/20                                                                                                                       |                                                                          |                          |                           |  |
|                                                                          |             | 3 PLACES                                                   | ± ---  | ± --- | CHECKED BY                 | DATE                                                                                                                             |                                                                          |                          |                           |  |
|                                                                          |             | 2 PLACES                                                   | ± 0.25 | ± --- | SAMIEC                     | 2005/06/21                                                                                                                       |                                                                          |                          |                           |  |
|                                                                          |             | 1 PLACE                                                    | ± ---  | ± --- | APPROVED BY                | DATE                                                                                                                             | DOCUMENT NO.<br>SD-45985-100                                             |                          |                           |  |
|                                                                          |             | ANGULAR ±1/2°                                              |        |       | MARGULIS                   | 2005/06/22                                                                                                                       |                                                                          |                          |                           |  |
| REV                                                                      | C           | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |       | MATERIAL NO.<br>SEE CHART  |                                                                                                                                  |                                                                          |                          |                           |  |
|                                                                          |             |                                                            |        |       | SIZE<br>A                  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                                                          |                          |                           |  |



## GUIDE & MOUNTING PEG OPTIONS

| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM C | DIM P | PCB THK |
|--------------|-----------------|-----------|-------|-------|---------|
| 12           | 45985-1411      | 79.66     | 73.98 | 4.50  | 3.18    |
| 16           | 45985-1421      | 82.20     | 76.52 |       |         |
| 20           | 45985-1431      | 84.74     | 79.06 |       |         |
| 24           | 45985-1441      | 87.28     | 81.60 |       |         |
| 28           | 45985-1451      | 89.82     | 84.14 |       |         |
| 32           | 45985-1461      | 92.36     | 86.68 |       |         |
| 36           | 45985-1471      | 94.90     | 89.22 |       |         |
| 40           | 45985-1481      | 97.44     | 91.76 |       |         |
| 12           | 45985-1412      | 79.66     | 73.98 | 3.90  | 2.36    |
| 16           | 45985-1422      | 82.20     | 76.52 |       |         |
| 20           | 45985-1432      | 84.74     | 79.06 |       |         |
| 24           | 45985-1442      | 87.28     | 81.60 |       |         |
| 28           | 45985-1452      | 89.82     | 84.14 |       |         |
| 32           | 45985-1462      | 92.36     | 86.68 |       |         |
| 36           | 45985-1472      | 94.90     | 89.22 |       |         |
| 40           | 45985-1482      | 97.44     | 91.76 |       |         |
| 12           | 45985-1413      | 79.66     | 73.98 | 2.90  | 1.57    |
| 16           | 45985-1423      | 82.20     | 76.52 |       |         |
| 20           | 45985-1433      | 84.74     | 79.06 |       |         |
| 24           | 45985-1443      | 87.28     | 81.60 |       |         |
| 28           | 45985-1453      | 89.82     | 84.14 |       |         |
| 32           | 45985-1463      | 92.36     | 86.68 |       |         |
| 36           | 45985-1473      | 94.90     | 89.22 |       |         |
| 40           | 45985-1483      | 97.44     | 91.76 |       |         |

NOTE:  
1. SEE SHEET 1 FOR ALL OTHER DIMENSIONS.



|                                                                         |                                                       |                                                            |        |       |                            |                                                                                                                                  |                                                                                                          |                                                                      |                                                                                                                 |  |                     |  |
|-------------------------------------------------------------------------|-------------------------------------------------------|------------------------------------------------------------|--------|-------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|--|---------------------|--|
| REVISED<br>EC NO: UCP2007-3140<br>DRWN:MBANDURA<br>CHKD:<br>APPR:APATEL | DESCRIPTION<br>2008/03/03<br>2008/03/04<br>2008/03/06 | 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>SCHAFER        |                                                                                                                                  | DATE<br>2005/06/20                                                                                       | TITLE<br>LPH PLUG ASSEMBLY<br>RT ANGLE 10 CIRCUIT<br>POWER CONNECTOR |                                                                                                                 |  |                     |  |
|                                                                         |                                                       | 4 PLACES                                                   | ± ---  | ± --- | CHECKED BY<br>SAMIEC       |                                                                                                                                  | DATE<br>2005/06/21                                                                                       |                                                                      |                                                                                                                 |  |                     |  |
|                                                                         |                                                       | 3 PLACES                                                   | ± ---  | ± --- | APPROVED BY<br>MARGULIS    |                                                                                                                                  | DATE<br>2005/06/22                                                                                       |                                                                      |                                                                                                                 |  |                     |  |
|                                                                         |                                                       | 2 PLACES                                                   | ± 0.25 | ± --- |                            |                                                                                                                                  |  MOLEX INCORPORATED |                                                                      |                                                                                                                 |  |                     |  |
|                                                                         |                                                       | 1 PLACE                                                    | ± ---  | ± --- |                            |                                                                                                                                  |                                                                                                          |                                                                      |                                                                                                                 |  |                     |  |
|                                                                         |                                                       | ANGULAR ±1/2°                                              |        |       | MATERIAL NO.<br>SEE CHART  |                                                                                                                                  | DOCUMENT NO.<br>SD-45985-100                                                                             |                                                                      |                                                                                                                 |  | SHEET NO.<br>4 OF 5 |  |
|                                                                         |                                                       | 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 |                                                                                                          |                                                                      |                                                                                                                 |  |                     |  |

6

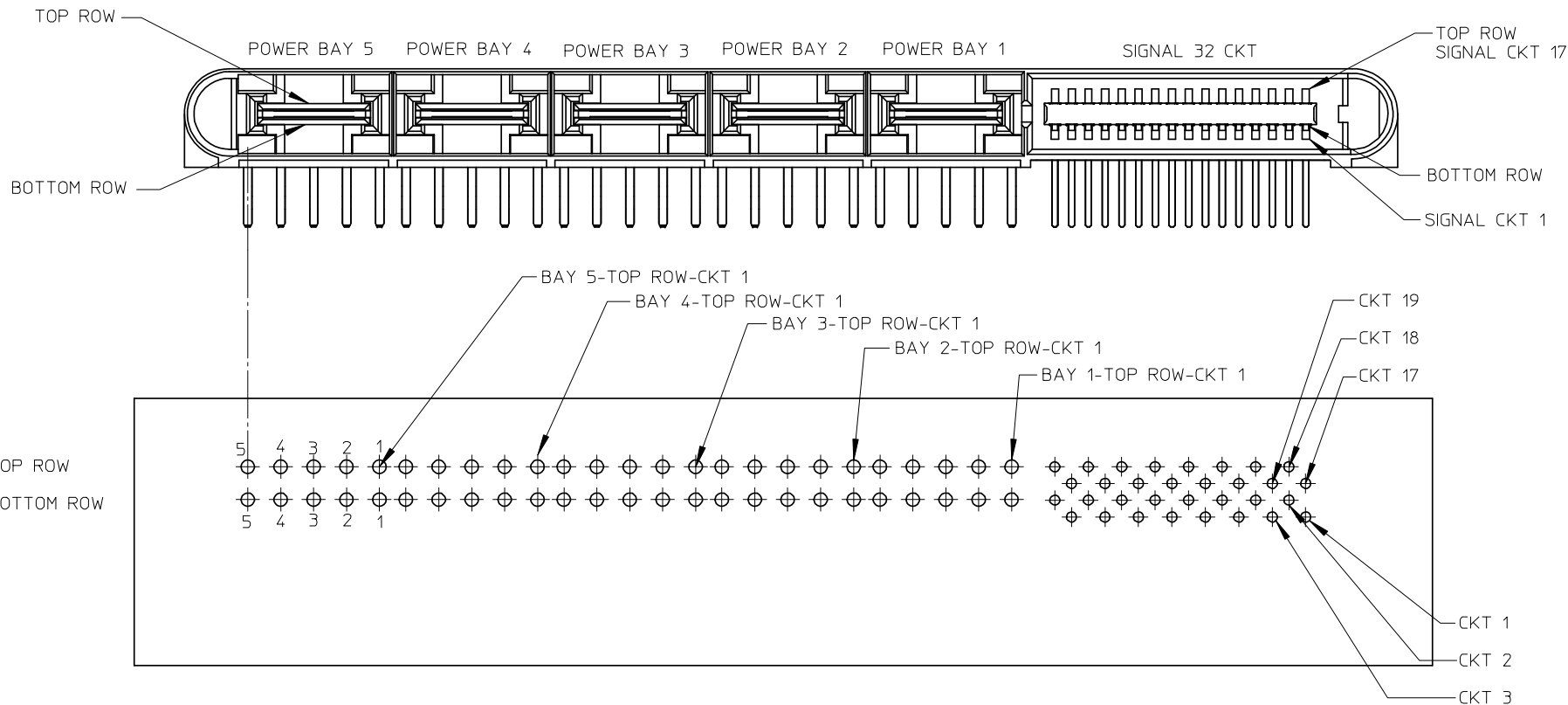
5

4

3

2

1



PCB LAYOUT: COMPONENT SIDE

|         |                     |            |
|---------|---------------------|------------|
| REVISED | EC NO: UCP2007-3140 | 2008/03/03 |
|         | DRWN:MBANDURA       | 2008/03/04 |
|         | CHKD:               |            |
|         | APPR:APATEL         | 2008/03/06 |
|         | DESCRIPTION         |            |
|         | REV                 |            |

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 DIMENSIONSDIMENSION STYLE  
MM ONLY

|             |            |
|-------------|------------|
| DRAWN BY    | DATE       |
| SCHAFFER    | 2005/06/20 |
| CHECKED BY  | DATE       |
| SAMIEC      | 2005/06/21 |
| APPROVED BY | DATE       |
| MARGULIS    | 2005/06/22 |

MATERIAL NO.

SEE CHART

SIZE  
ASCALE  
1:1DESIGN UNITS  
METRICTHIRD ANGLE  
PROJECTIONTITLE  
LPH PLUG ASSEMBLY  
RT ANGLE 10 CIRCUIT  
POWER CONNECTOR

MOLEX INCORPORATED

DOCUMENT NO.  
SD-45985-100SHEET NO.  
5 OF 5