This document was generated on 05/25/2010

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

**Part Number:** 0459851182
**Status:** Active
**Overview:** extreme_lphpower
**Description:** 1.27mm (.050"), 12.00mm (.472") Pitch, EXTreme LPHPower™ Header, Right Angle, 10 Power Contacts, 40 Signal Contacts, Select Gold (Au) Plating, for 2.36mm (.093") Thick PC Board

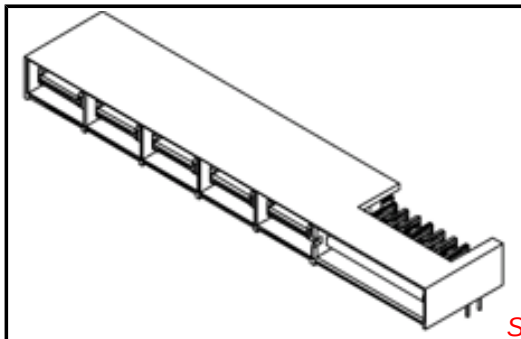


*image - Reference only*

**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) | 50 |
| Circuits (maximum) | 50 |
| Circuits Detail | 10 Power, 40 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 | No |
| 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) | 0.142 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, 50 |
| Plating min: Termination (µm) | 1.25, 3.75 |
| Polarized to Mating Part | Yes |

**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
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**
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 |

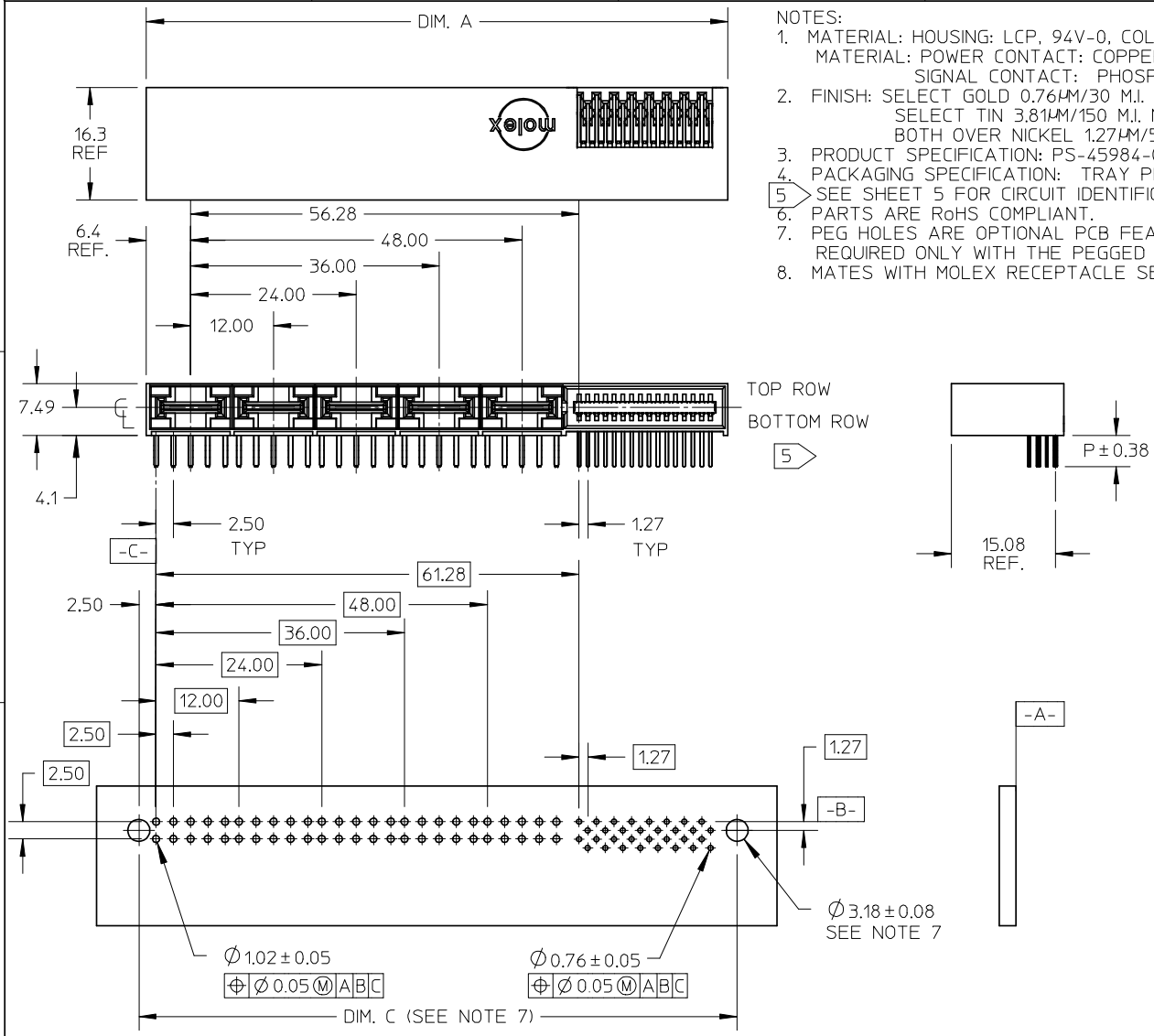
## Solder Process Data

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

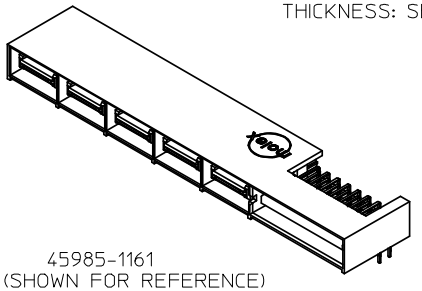
| | |
|---|---|
| Packaging Specification | PK-45984-001 |
| Product Specification | PS-45984-001 |
| Sales Drawing | SD-45985-100 |




PCB LAYOUT: COMPONENT SIDE
THICKNESS: SEE CHART

NOTES:
1. MATERIAL: HOUSING: LCP, 94V-0, COLOR: BLACK
   MATERIAL: POWER CONTACT: COPPER ALLOY
   SIGNAL CONTACT: PHOSPHOR BRONZE
2. FINISH: SELECT GOLD 0.76µM/30 M.I. MIN. IN CONTACT AREA.
   SELECT TIN 3.81µM/150 M.I. MIN. IN PC TAIL AREA.
   BOTH OVER NICKEL 1.27µM/50 M.I. MIN
3. PRODUCT SPECIFICATION: PS-45984-001
4. PACKAGING SPECIFICATION: TRAY PER PK-45984-001
5. SEE SHEET 5 FOR CIRCUIT IDENTIFICATION.
6. PARTS ARE RoHS COMPLIANT.
7. PEG HOLES ARE OPTIONAL PCB FEATURES AND ARE REQUIRED ONLY WITH THE PEGGED HOUSING OPTIONS.
8. MATES WITH MOLEX RECEPTACLE SERIES 45984-1***.

| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM P | PCB THK |
|---|---|---|---|---|
| 12 | 45985-1111 | 72.16 | 4.50 | 3.18 |
| 16 | 45985-1121 | 74.70 | | |
| 20 | 45985-1131 | 77.24 | | |
| 24 | 45985-1141 | 79.78 | | |
| 28 | 45985-1151 | 82.32 | | |
| 32 | 45985-1161 | 84.86 | | |
| 36 | 45985-1171 | 87.40 | | |
| 40 | 45985-1181 | 89.94 | | |
| 12 | 45985-1112 | 72.16 | 3.90 | 2.36 |
| 16 | 45985-1122 | 74.70 | | |
| 20 | 45985-1132 | 77.24 | | |
| 24 | 45985-1142 | 79.78 | | |
| 28 | 45985-1152 | 82.32 | | |
| 32 | 45985-1162 | 84.86 | | |
| 36 | 45985-1172 | 87.40 | | |
| 40 | 45985-1182 | 89.94 | | |
| 12 | 45985-1113 | 72.16 | 2.90 | 1.57 |
| 16 | 45985-1123 | 74.70 | | |
| 20 | 45985-1133 | 77.24 | | |
| 24 | 45985-1143 | 79.78 | | |
| 28 | 45985-1153 | 82.32 | | |
| 32 | 45985-1163 | 84.86 | | |
| 36 | 45985-1173 | 87.40 | | |
| 40 | 45985-1183 | 89.94 | | |



45985-1161
(SHOWN FOR REFERENCE)
SEE CHART

| REV | DESCRIPTION | | |
|---|---|---|---|
| C | REVISED | EC NO: UCP2007-3140 | 2008/03/03 |
| | DRWN:MBANDURA | CH'KD: | 2008/03/04 |
| | APPR:APATEL | | 2008/03/06 |

| 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
SCALE: 1:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

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

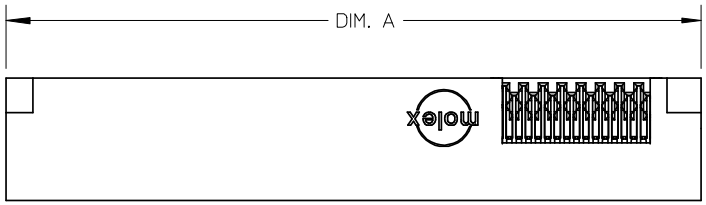
TITLE: LPH PLUG ASSEMBLY RT ANGLE 10 CIRCUIT POWER CONNECTOR

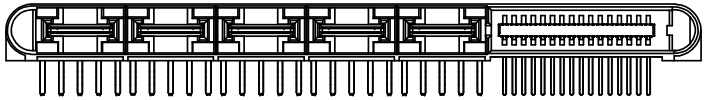
MOLEX INCORPORATED

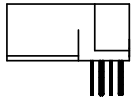
MATERIAL NO.: SEE CHARTS
DOCUMENT NO.: SD-45985-100
SHEET NO.: 1 OF 5

SIZE: A

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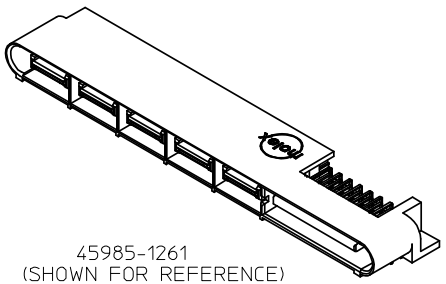





| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM P | PCB THK |
|---|---|---|---|---|
| 12 | 45985-1211 | 79.66 | 4.50 | 3.18 |
| 16 | 45985-1221 | 82.20 | | |
| 20 | 45985-1231 | 84.74 | | |
| 24 | 45985-1241 | 87.28 | | |
| 28 | 45985-1251 | 89.82 | | |
| 32 | 45985-1261 | 92.36 | | |
| 36 | 45985-1271 | 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 | | |

## GUIDE OPTIONS

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




45985-1261
(SHOWN FOR REFERENCE)
SEE CHART

| REV | DESCRIPTION |
|---|---|
| C | REVISED EC NO: UCP2007-3140 2008/03/03<br>DRWN:MBANDURA 2008/03/04<br>CH'KD: APPR:APATEL 2008/03/06 |

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
SCALE: 1:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: SCHAFER DATE: 2005/06/20
CHECKED BY: SAMIEC DATE: 2005/06/21
APPROVED BY: MARGULIS DATE: 2005/06/22

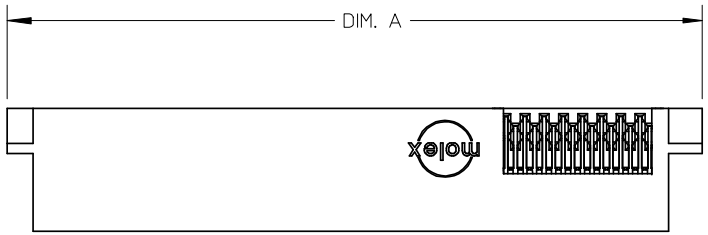
TITLE: LPH PLUG ASSEMBLY RT ANGLE 10 CIRCUIT POWER CONNECTOR

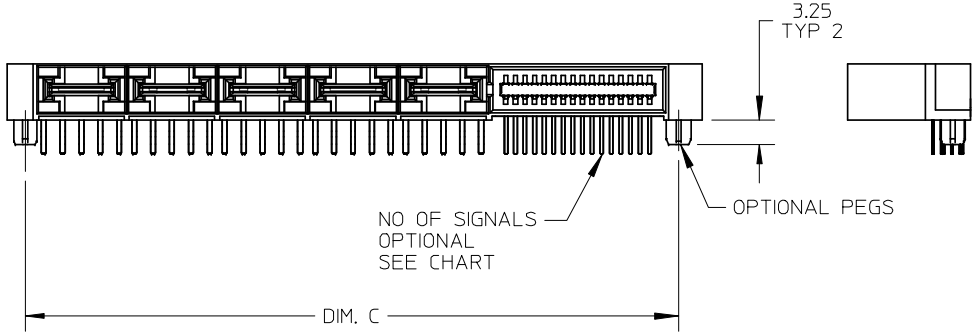
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MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-45985-100
SHEET NO.: 2 OF 5

SIZE: A

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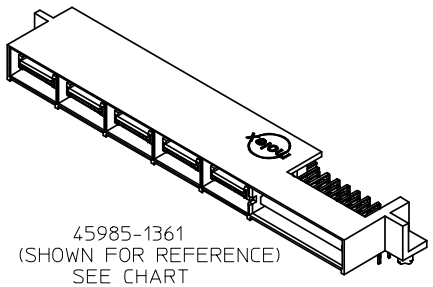



| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM C | DIM P | PCB THK |
|---|---|---|---|---|---|
| 12 | 45985-1311 | 79.66 | 73.98 | 4.50 | 3.18 |
| 16 | 45985-1321 | 82.20 | 76.52 | | |
| 20 | 45985-1331 | 84.74 | 79.06 | | |
| 24 | 45985-1341 | 87.28 | 81.60 | | |
| 28 | 45985-1351 | 89.82 | 84.14 | | |
| 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 | | |

## MOUNTING PEG OPTIONS

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




| REV | DESCRIPTION | |
|---|---|---|
| C | REVISED | |
| | EC NO: UCP2007-3140 | 2008/03/03 |
| | DRWN:MBANDURA | 2008/03/04 |
| | CH'KD: | |
| | APPR:APATEL | 2008/03/06 |

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
SCALE: 1:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

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

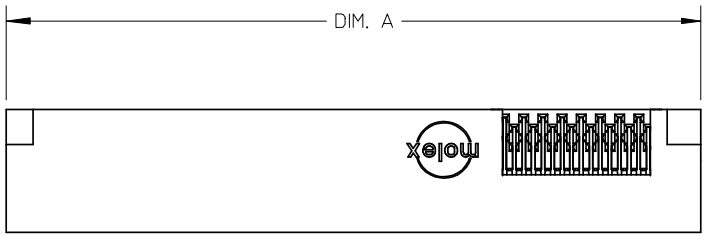
TITLE: LPH PLUG ASSEMBLY RT ANGLE 10 CIRCUIT POWER CONNECTOR

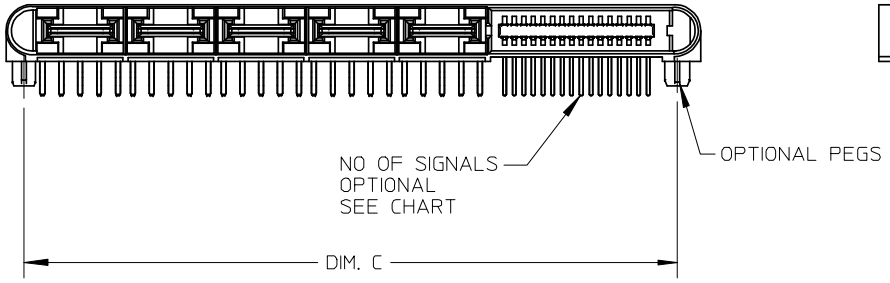
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MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-45985-100
SHEET NO.: 3 OF 5

SIZE: A

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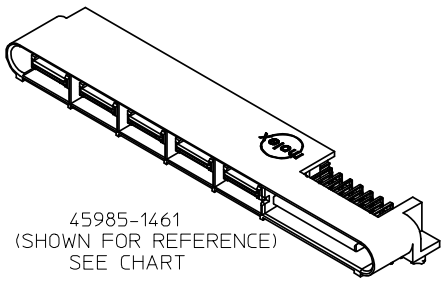



| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM C | DIM P | PCB THK |
|---|---|---|---|---|---|
| 12 | 45985-1411 | 79.66 | 73.98 | 4.50 | 3.18 |
| 16 | 45985-1421 | 82.20 | 76.52 | | |
| 20 | 45985-1431 | 84.74 | 79.06 | | |
| 24 | 45985-1441 | 87.28 | 81.60 | | |
| 28 | 45985-1451 | 89.82 | 84.14 | | |
| 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 | | |

## GUIDE & MOUNTING PEG OPTIONS

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




| REVISED | | DESCRIPTION |
|---|---|---|
| EC NO: UCP2007-3140 | 2008/03/03 | |
| DRWN:MBANDURA | 2008/03/04 | |
| CH'KD: | | |
| APPR:APATEL | 2008/03/06 | |

REV: C

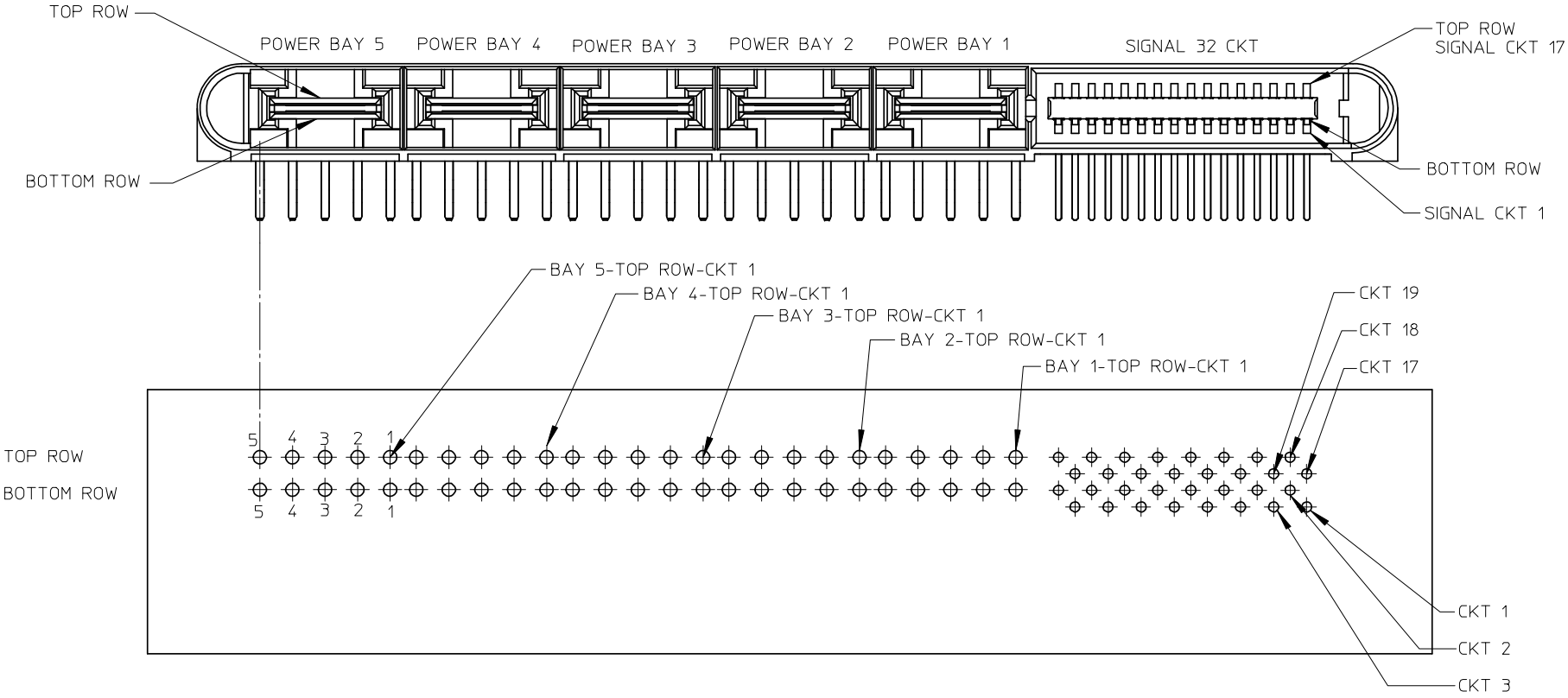
| GENERAL TOLERANCES (UNLESS SPECIFIED) | mm | INCH |
|---|---|---|
| 4 PLACES | ± --- | ± --- |
| 3 PLACES | ± --- | ± --- |
| 2 PLACES | ± 0.25 | ± --- |
| 1 PLACE | ± --- | ± --- |
| ANGULAR ±1/2° | | |

DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

| | | | |
|---|---|---|---|
| DIMENSION STYLE: MM ONLY | SCALE: 1:1 | DESIGN UNITS: METRIC | THIRD ANGLE PROJECTION |
| DRAWN BY: SCHAFER | DATE: 2005/06/20 | TITLE: LPH PLUG ASSEMBLY RT ANGLE 10 CIRCUIT POWER CONNECTOR | |
| CHECKED BY: SAMIEC | DATE: 2005/06/21 | | |
| APPROVED BY: MARGULIS | DATE: 2005/06/22 | MOLEX INCORPORATED | |
| MATERIAL NO.: SEE CHART | | DOCUMENT NO.: SD-45985-100 | SHEET NO.: 4 OF 5 |

SIZE: A

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PCB LAYOUT: COMPONENT SIDE

| REVISED | | | |
|---|---|---|---|
| EC NO: UCP2007-3140 | DRWN:MBANDURA | CH'KD: | APPR:APATEL |
| 2008/03/03 | 2008/03/04 | | 2008/03/06 |
| 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 | SCALE: 1:1 | DESIGN UNITS: METRIC | THIRD ANGLE PROJECTION | | |
| DRAWN BY: SCHAFER | DATE: 2005/06/20 | TITLE: LPH PLUG ASSEMBLY RT ANGLE 10 CIRCUIT POWER CONNECTOR | | | |
| CHECKED BY: SAMIEC | DATE: 2005/06/21 | | | | |
| APPROVED BY: MARGULIS | DATE: 2005/06/22 | molex MOLEX INCORPORATED | | | |
| MATERIAL NO.: SEE CHART | | DOCUMENT NO.: SD-45985-100 | | SHEET NO.: 5 OF 5 | |

SIZE A

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