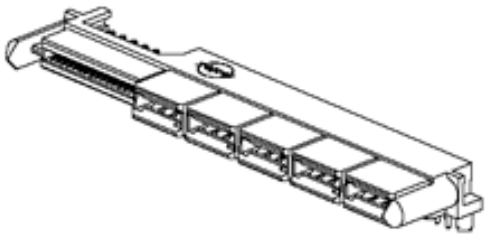
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# PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

**Part Number:** 0459841232
**Status:** Active
**Overview:** extreme_lphpower
**Description:** 1.27mm (.050"), 12.00mm (.472") Pitch, EXTreme LPHPower™ Receptacle Header, Right Angle, 10 Power Contacts, 20 Signal Contacts, Select Gold (Au) Plating, for 2.36mm (.093") Thick PC Board, with Guide Posts



*Series image - Reference only*

**Documents:**

3D Model
Drawing (PDF)
Product Specification PS-45984-001 (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) | 30 |
| Circuits (maximum) | 30 |
| Circuits Detail | 10 Power, 20 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 |

**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**
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 |

## Electrical

| | |
|---|---|
| Current - Maximum per Contact | 20A |
| Grounding to PCB | No |
| 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 |

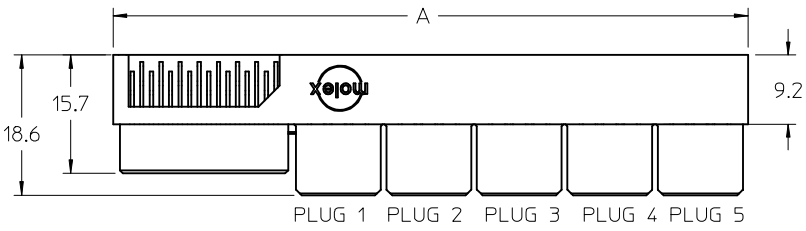
## Material Info

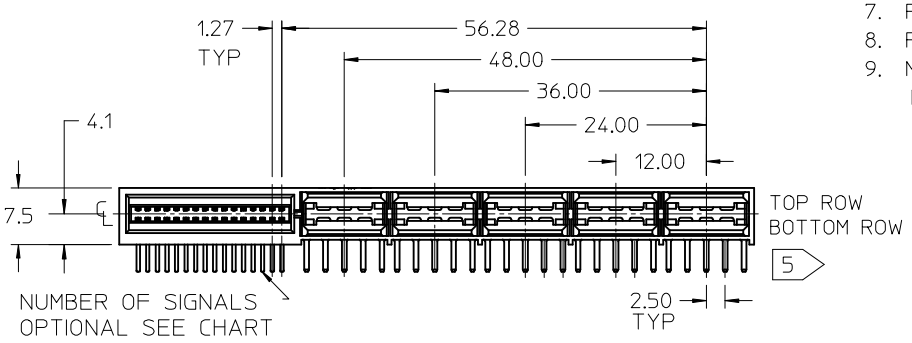
## Reference - Drawing Numbers

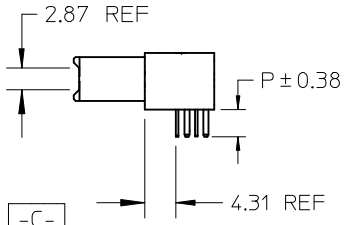
| | |
|---|---|
| Packaging Specification | PK-45984-001 |
| Product Specification | PS-45984-001 |
| Sales Drawing | SD-45984-100 |

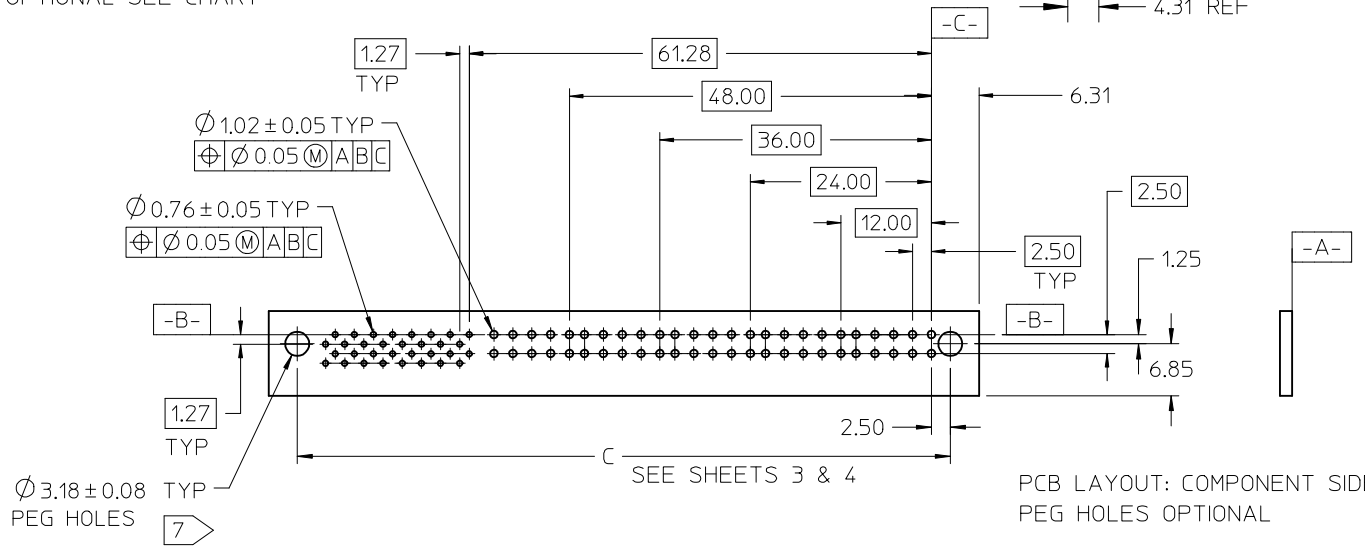
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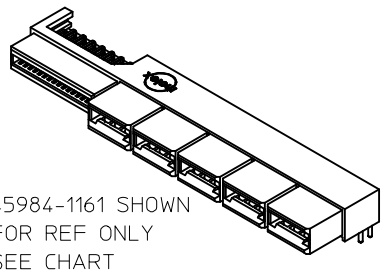




PCB LAYOUT: COMPONENT SIDE
PEG HOLES OPTIONAL

NOTES:
1. MATERIAL HOUSING: LCP, 94V-0, COLOR-BLACK.
   CONTACT: COPPER ALLOY.
2. FINISH: SELECT GOLD - .76 µM/30 MI MIN. CONTACT.
   SELECT TIN - 3.81 µM/150 MI MIN. TAIL.
   BOTH OVER NICKEL - 1.27 µM/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
9. MATES TO 1.57/.062 CARD EDGE OR
   MOLEX P/N 45985-1***

| NO OF SIGNAL | MATERIAL NUMBER | DIM A | DIM P | PCB THK |
|---|---|---|---|---|
| 12 | 45984-1111 | 71.5 | 4.50 | 3.18 |
| 16 | 45984-1121 | 74.0 | | |
| 20 | 45984-1131 | 76.6 | | |
| 24 | 45984-1141 | 79.1 | | |
| 28 | 45984-1151 | 81.6 | | |
| 32 | 45984-1161 | 84.2 | | |
| 36 | 45984-1171 | 86.7 | | |
| 40 | 45984-1181 | 89.3 | | |
| 12 | 45984-1112 | 71.5 | 3.60 | 2.36 |
| 16 | 45984-1122 | 74.0 | | |
| 20 | 45984-1132 | 76.6 | | |
| 24 | 45984-1142 | 79.1 | | |
| 28 | 45984-1152 | 81.6 | | |
| 32 | 45984-1162 | 84.2 | | |
| 36 | 45984-1172 | 86.7 | | |
| 40 | 45984-1182 | 89.3 | | |
| 12 | 45984-1113 | 71.5 | 2.90 | 1.57 |
| 16 | 45984-1123 | 74.0 | | |
| 20 | 45984-1133 | 76.6 | | |
| 24 | 45984-1143 | 79.1 | | |
| 28 | 45984-1153 | 81.6 | | |
| 32 | 45984-1163 | 84.2 | | |
| 36 | 45984-1173 | 86.7 | | |
| 40 | 45984-1183 | 89.3 | | |



45984-1161 SHOWN
FOR REF ONLY
SEE CHART

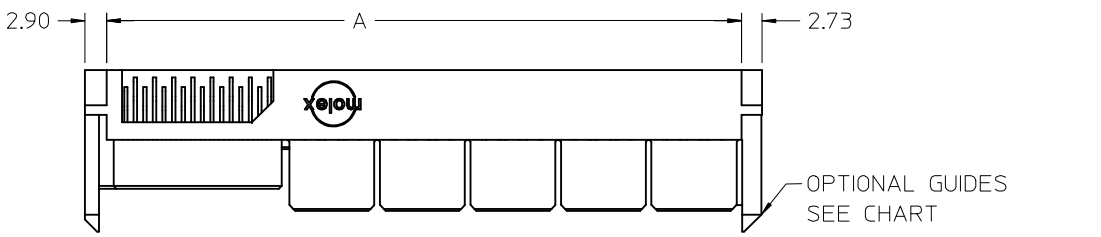
| REV | DESCRIPTION | |
|---|---|---|
| E | REVISED | 2008/11/13 |
| | EC NO: UCP2009-0971 | 2008/11/14 |
| | DRWN:MBANDURA | 2008/11/17 |
| | CH'KD: | |
| | APPR:APATEL | |

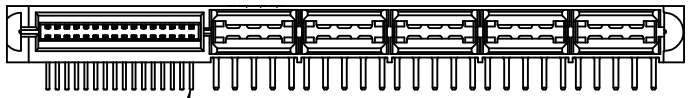
| GENERAL TOLERANCES (UNLESS SPECIFIED) | mm | INCH |
|---|---|---|
| 4 PLACES | ± --- | ± --- |
| 3 PLACES | ± --- | ± --- |
| 2 PLACES | ± 0.25 | ± --- |
| 1 PLACE | ± --- | ± --- |
| ANGULAR ±1/2° | | |

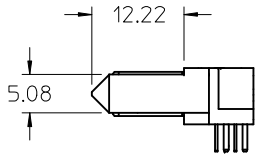
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

| | | | |
|---|---|---|---|
| DIMENSION STYLE: MM ONLY | SCALE: 1:1 | DESIGN UNITS: METRIC | THIRD ANGLE PROJECTION |
| DRAWN BY: SAMIEC | DATE: 2005/05/13 | TITLE: LPH RECEPTACLE ASSEMBLY RT ANGLE 10 CIRCUIT POWER CONNECTOR | |
| CHECKED BY: SAMIEC | DATE: 2005/05/13 | | |
| APPROVED BY: MARGULIS | DATE: 2005/05/13 | MOLEX INCORPORATED | |
| MATERIAL NO.: SEE CHART | | DOCUMENT NO.: SD-45984-100 | SHEET NO.: 1 OF 5 |

SIZE A
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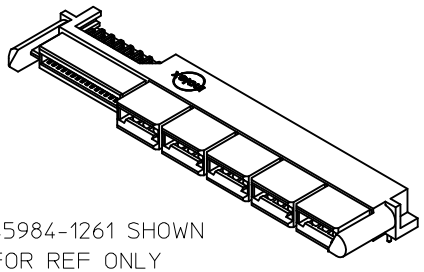






NO OF SIGNALS
OPTIONAL
SEE CHART

## 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 | | |
| 40 | 45984-1281 | 89.3 | | |
| 12 | 45984-1212 | 71.5 | 3.60 | 2.36 |
| 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 | | |
| 36 | 45984-1272 | 86.7 | | |
| 40 | 45984-1282 | 89.3 | | |
| 12 | 45984-1213 | 71.5 | 2.90 | 1.57 |
| 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 | | |



45984-1261 SHOWN
FOR REF ONLY
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| REV | DESCRIPTION |
|---|---|
| E | REVISED EC NO: UCP2009-0971 2008/11/13<br>DRWN:MBANDURA 2008/11/14<br>CH'KD: APPR:APATEL 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
SCALE: 1:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: SAMIEC DATE: 2005/05/13
CHECKED BY: SAMIEC DATE: 2005/05/13
APPROVED BY: MARGULIS DATE: 2005/05/13
MATERIAL NO.: SEE CHART

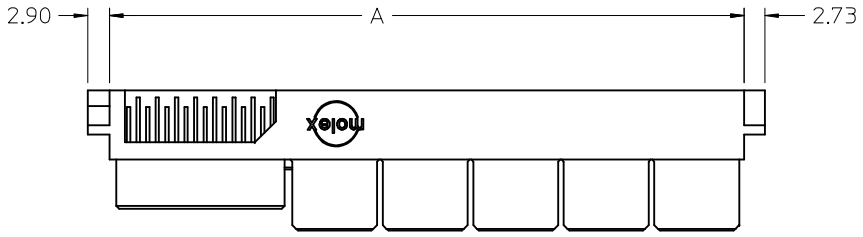
TITLE: LPH RECEPTACLE ASSEMBLY RT ANGLE 10 CIRCUIT POWER CONNECTOR

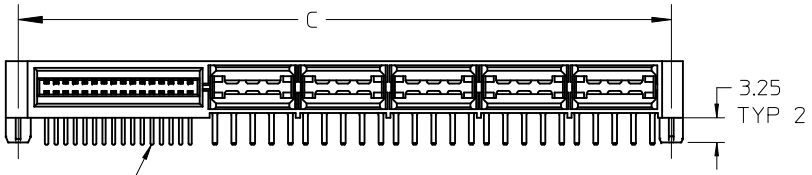
MOLEX INCORPORATED

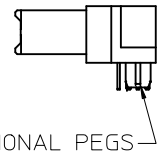
DOCUMENT NO.: SD-45984-100
SHEET NO.: 2 OF 5

SIZE: A

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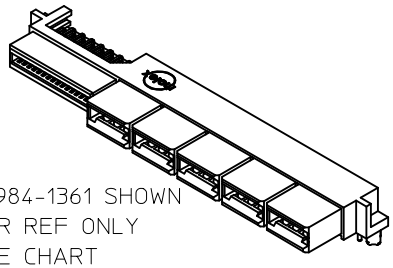



## MOUNTING PEG OPTIONS

| NO OF SIGNAL | MATERIAL NUMBER | DIM A | DIM C | DIM P | PCB 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

| REV | DESCRIPTION |
|---|---|
| E | REVISED<br>EC NO: UCP2009-0971 2008/11/13<br>DRWN:MBANDURA 2008/11/14<br>CH'KD: APPR:APATEL 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
SCALE: 1:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: SAMIEC DATE: 2005/05/13
CHECKED BY: SAMIEC DATE: 2005/05/13
APPROVED BY: MARGULIS DATE: 2005/05/13

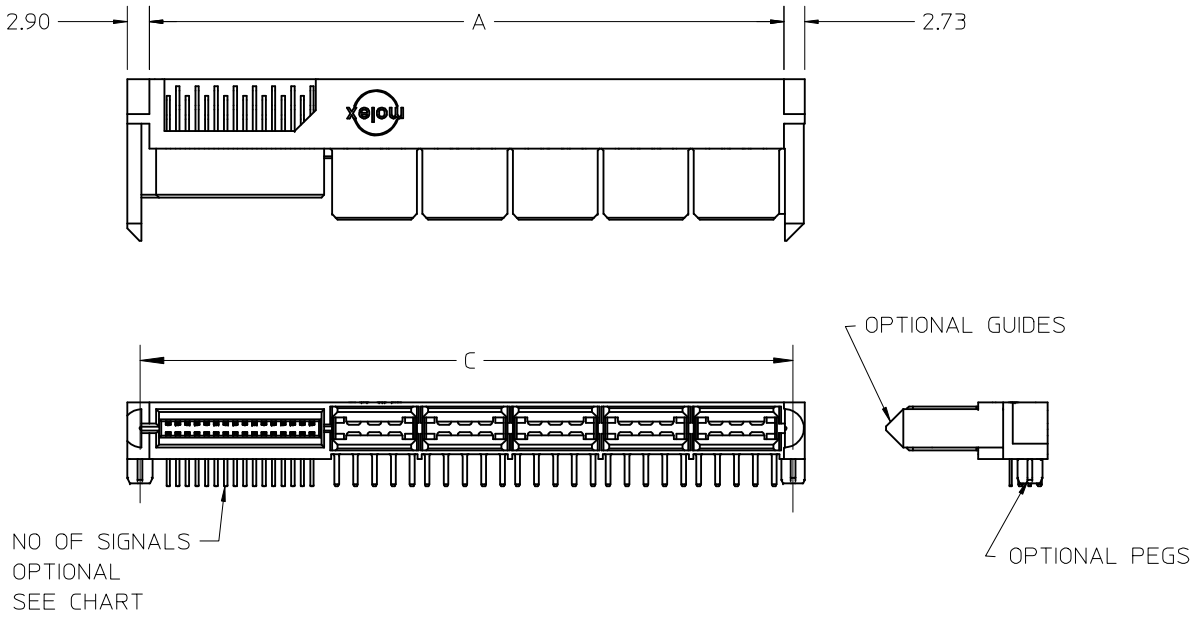
TITLE: LPH RECEPTACLE ASSEMBLY RT ANGLE 10 CIRCUIT POWER CONNECTOR

MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-45984-100
SHEET NO.: 3 OF 5

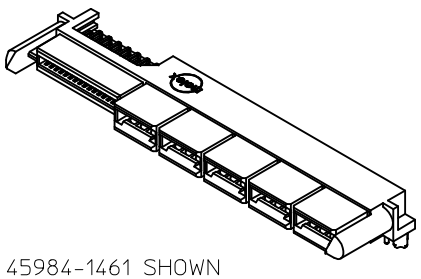
SIZE: A

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| 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 | | |
| 40 | 45984-1481 | 89.3 | 91.68 | | |
| 12 | 45984-1412 | 71.5 | 73.90 | 3.60 | 2.36 |
| 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 | | |
| 36 | 45984-1472 | 86.7 | 89.14 | | |
| 40 | 45984-1482 | 89.3 | 91.68 | | |
| 12 | 45984-1413 | 71.5 | 73.90 | 2.90 | 1.57 |
| 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 | | |

## GUIDE POST & MOUNTING PEG OPTIONS



45984-1461 SHOWN
FOR REF ONLY
SEE CHART

| REV | DESCRIPTION |
|---|---|
| E | REVISED EC NO: UCP2009-0971 2008/11/13<br>DRWN:MBANDURA 2008/11/14<br>CH'KD: APPR:APATEL 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
SCALE: 1:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: SAMIEC DATE: 2005/05/13
CHECKED BY: SAMIEC DATE: 2005/05/13
APPROVED BY: MARGULIS DATE: 2005/05/13

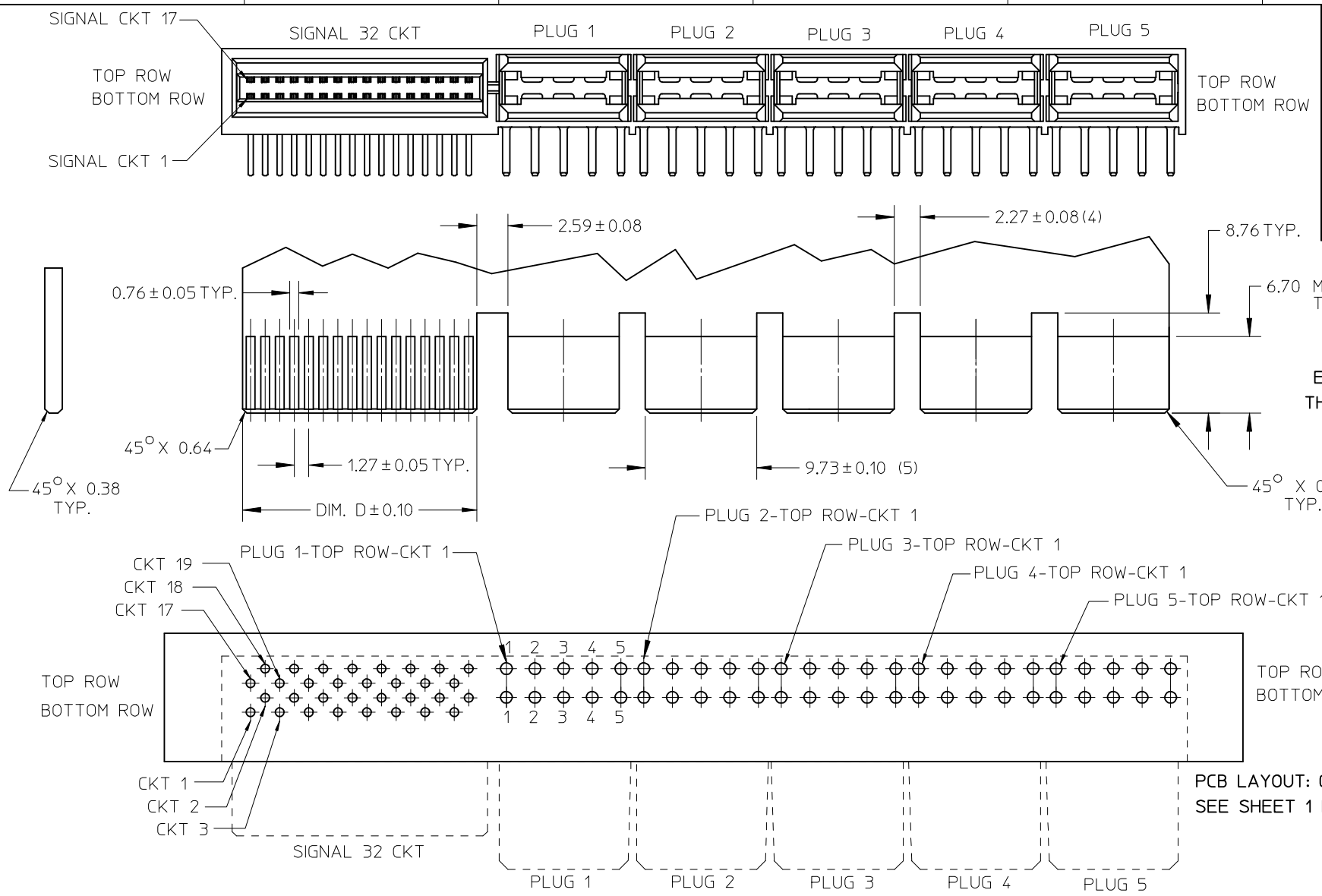
TITLE: LPH RECEPTACLE ASSEMBLY RT ANGLE 10 CIRCUIT POWER CONNECTOR

MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-45984-100
SHEET NO.: 4 OF 5

SIZE: A

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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 | DESCRIPTION | REV |
|---|---|---|
| EC NO: UCP2009-0971 | 2008/11/13 | E |
| DRWN:MBANDURA | 2008/11/14 | |
| CH'KD: | 2008/11/17 | |
| APPR:APATEL | | |

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: 2:1
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

| | | DATE |
|---|---|---|
| DRAWN BY | SAMIEC | 2005/05/13 |
| CHECKED BY | SAMIEC | 2005/05/13 |
| APPROVED BY | MARGULIS | 2005/05/13 |

TITLE: LPH RECEPTACLE ASSEMBLY RT ANGLE 10 CIRCUIT POWER CONNECTOR

MOLEX INCORPORATED

MATERIAL NO.

DOCUMENT NO.: SD-45984-100

SHEET NO.: 5 OF 5

SIZE: A

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