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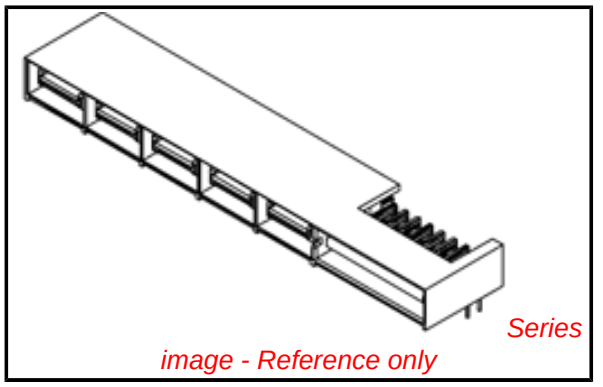
# PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

**Part Number:** 0459854132

**Status:** Active

**Overview:** extreme_lphpower

**Description:** 1.27mm (.050"), 12.00mm (.472") Pitch, EXTreme LPHPower™ Header, Right Angle, 4 Power Contacts, 20 Signal Contacts, Select Gold (Au) Plating, for 2.36mm (.093") Thick PC Board




**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) | 24 |
| Circuits (maximum) | 24 |
| Circuits Detail | 4 Power, 20 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

**China RoHS**

**REACH SVHC**
Contains SVHC: No

**Halogen-Free Status**
Halogen-Free

**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 | 30A |
| 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 |

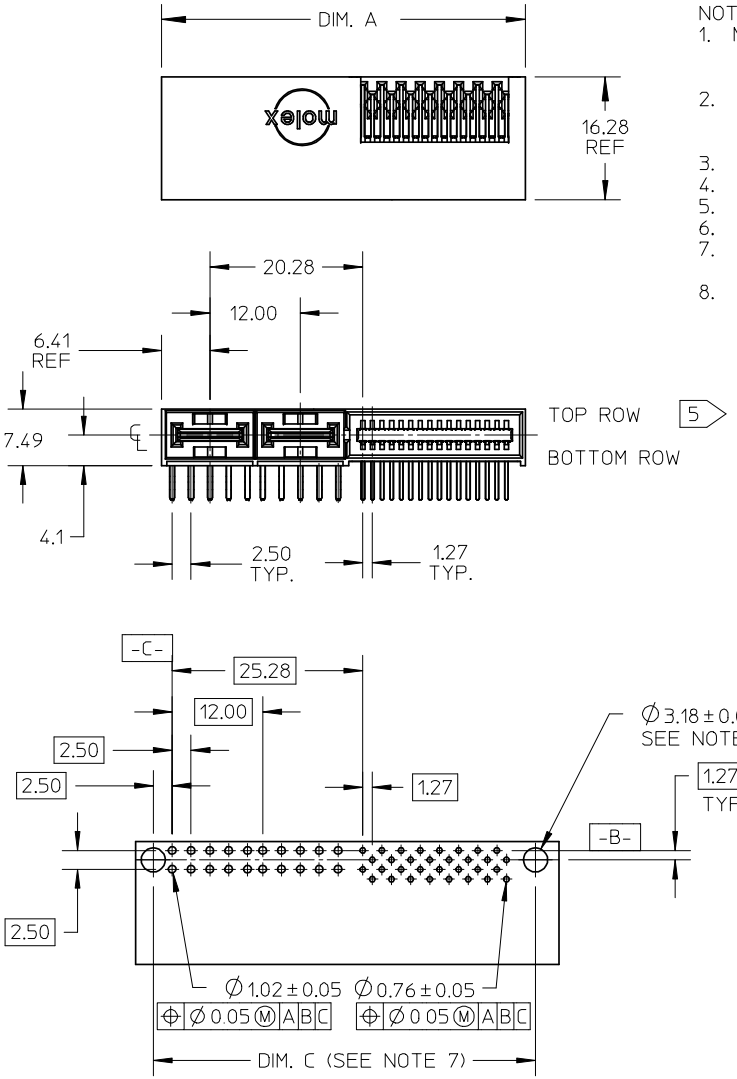
## Material Info

## Reference - Drawing Numbers

| | |
|---|---|
| Packaging Specification | PK-45984-001 |
| Product Specification | PS-45984-001 |
| Sales Drawing | SD-45985-400 |

This document was generated on 05/25/2010

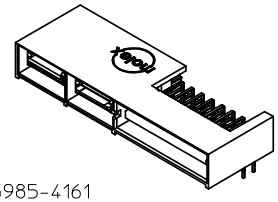
**PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION**




PCB LAYOUT: COMPONENT SIDE
THKNESS: SEE CHART

NOTES:
1. MATERIAL: LCP, 94V-0, BLACK
   POWER CONTACT: COPPER ALLOY
   SIGNAL CONTACT: PHOSPHOR BRONZE
2. FINISH: SELECT GOLD 0.76μM/30 MI MIN. IN CONTACT AREA
   SELECT TIN 3.81μM/150 MI MIN. IN PC TAIL AREA
   BOTH OVER NICKEL 1.27μM/50 MI 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 OPTIONS.
8. MATES WITH MOLEX RECEPTACLE SERIES 45984-4***.

| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM P | PCB THK |
|---|---|---|---|---|
| 12 | 45985-4111 | 36.16 | 4.50 | 3.18 |
| 16 | 45985-4121 | 38.70 | | |
| 20 | 45985-4131 | 41.24 | | |
| 24 | 45985-4141 | 43.78 | | |
| 28 | 45985-4151 | 46.32 | | |
| 32 | 45985-4161 | 48.86 | | |
| 36 | 45985-4171 | 51.40 | | |
| 40 | 45985-4181 | 53.94 | | |
| 12 | 45985-4112 | 36.16 | 3.90 | 2.36 |
| 16 | 45985-4122 | 38.70 | | |
| 20 | 45985-4132 | 41.24 | | |
| 24 | 45985-4142 | 43.78 | | |
| 28 | 45985-4152 | 46.32 | | |
| 32 | 45985-4162 | 48.86 | | |
| 36 | 45985-4172 | 51.40 | | |
| 40 | 45985-4182 | 53.94 | | |
| 12 | 45985-4113 | 36.16 | 2.90 | 1.57 |
| 16 | 45985-4123 | 38.70 | | |
| 20 | 45985-4133 | 41.24 | | |
| 24 | 45985-4143 | 43.78 | | |
| 28 | 45985-4153 | 46.32 | | |
| 32 | 45985-4163 | 48.86 | | |
| 36 | 45985-4173 | 51.40 | | |
| 40 | 45985-4183 | 53.94 | | |



45985-4161
(SHOWN FOR REFERENCE)
SEE CHART

| REV | DESCRIPTION | |
|---|---|---|
| C | REVISED | |
| | EC NO: UCP2007-314.0 | 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

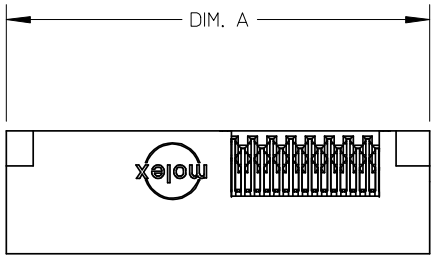
DRAWN BY: JSCHAFER DATE: 6-10-05
CHECKED BY: YMARGULIS DATE: 6-14-05
APPROVED BY: YMARGULIS DATE: 6-15-05

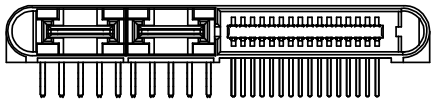
TITLE: LPH PLUG ASSEMBLY RT ANGLE 4 CIRCUIT POWER CONNECTOR

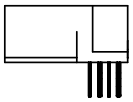
MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-45985-400
SHEET NO.: 1 OF 5
SIZE: A

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION



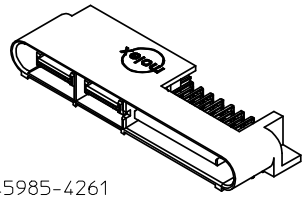





GUIDE OPTIONS

| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM P | PCB THK |
|---|---|---|---|---|
| 12 | 45985-4211 | 43.66 | 4.50 | 3.18 |
| 16 | 45985-4221 | 46.20 | | |
| 20 | 45985-4231 | 48.74 | | |
| 24 | 45985-4241 | 51.28 | | |
| 28 | 45985-4251 | 53.82 | | |
| 32 | 45985-4261 | 56.36 | | |
| 36 | 45985-4271 | 58.90 | | |
| 40 | 45985-4281 | 61.44 | | |
| 12 | 45985-4212 | 43.66 | 3.90 | 2.36 |
| 16 | 45985-4222 | 46.20 | | |
| 20 | 45985-4232 | 48.74 | | |
| 24 | 45985-4242 | 51.28 | | |
| 28 | 45985-4252 | 53.82 | | |
| 32 | 45985-4262 | 56.36 | | |
| 36 | 45985-4272 | 58.90 | | |
| 40 | 45985-4282 | 61.44 | | |
| 12 | 45985-4213 | 43.66 | 2.90 | 1.57 |
| 16 | 45985-4223 | 46.20 | | |
| 20 | 45985-4233 | 48.74 | | |
| 24 | 45985-4243 | 51.28 | | |
| 28 | 45985-4253 | 53.82 | | |
| 32 | 45985-4263 | 56.36 | | |
| 36 | 45985-4273 | 58.90 | | |
| 40 | 45985-4283 | 61.44 | | |

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



45985-4261
(SHOWN FOR REFERENCE)
SEE CHART

| REV | DESCRIPTION |
|---|---|
| C | REVISED<br>EC NO: UCP2007-314.0<br>DRWN:MBANDURA 2008/03/03<br>CH'KD: 2008/03/04<br>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

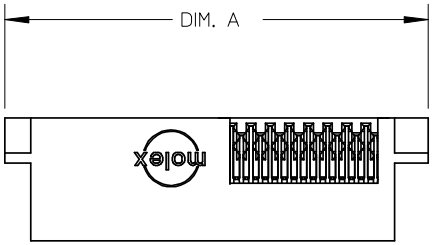
DRAWN BY: JSCHAFER DATE: 6-10-05
CHECKED BY: YMARGULIS DATE: 6-14-05
APPROVED BY: YMARGULIS DATE: 6-15-05

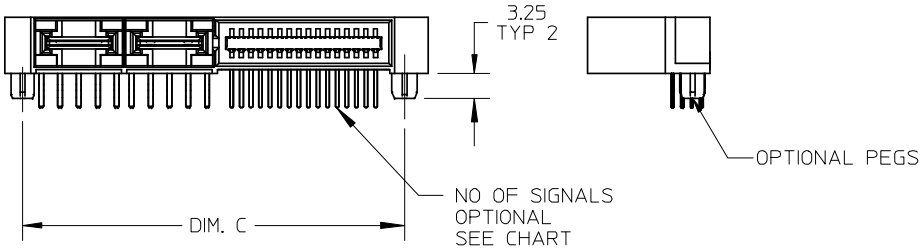
TITLE: LPH PLUG ASSEMBLY RT ANGLE 4 CIRCUIT POWER CONNECTOR

MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-45985-400
SHEET NO.: 2 OF 5
SIZE: A

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

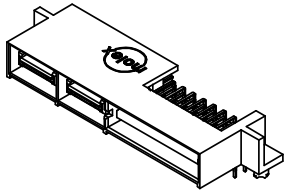



| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM C | DIM P | PCB THK |
|---|---|---|---|---|---|
| 12 | 45985-4311 | 43.66 | 37.98 | 4.50 | 3.18 |
| 16 | 45985-4321 | 46.20 | 40.52 | | |
| 20 | 45985-4331 | 48.74 | 43.06 | | |
| 24 | 45985-4341 | 51.28 | 45.60 | | |
| 28 | 45985-4351 | 53.82 | 48.14 | | |
| 32 | 45985-4361 | 56.36 | 50.68 | | |
| 36 | 45985-4371 | 58.90 | 53.22 | | |
| 40 | 45985-4381 | 61.44 | 55.76 | | |
| 12 | 45985-4312 | 43.66 | 37.98 | 3.90 | 2.36 |
| 16 | 45985-4322 | 46.20 | 40.52 | | |
| 20 | 45985-4332 | 48.74 | 43.06 | | |
| 24 | 45985-4342 | 51.28 | 45.60 | | |
| 28 | 45985-4352 | 53.82 | 48.14 | | |
| 32 | 45985-4362 | 56.36 | 50.68 | | |
| 36 | 45985-4372 | 58.90 | 53.22 | | |
| 40 | 45985-4382 | 61.44 | 55.76 | | |
| 12 | 45985-4313 | 43.66 | 37.98 | 2.90 | 1.57 |
| 16 | 45985-4323 | 46.20 | 40.52 | | |
| 20 | 45985-4333 | 48.74 | 43.06 | | |
| 24 | 45985-4343 | 51.28 | 45.60 | | |
| 28 | 45985-4353 | 53.82 | 48.14 | | |
| 32 | 45985-4363 | 56.36 | 50.68 | | |
| 36 | 45985-4373 | 58.90 | 53.22 | | |
| 40 | 45985-4383 | 61.44 | 55.76 | | |

## MOUNTING PEG OPTIONS

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



45985-4361
(SHOWN FOR REFERENCE)
SEE CHART

| REV | DESCRIPTION |
|---|---|
| C | REVISED<br>EC NO: UCP2007-3140<br>DRWN:MBANDURA 2008/03/03<br>CH'KD: 2008/03/04<br>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: JSCHAFER DATE: 6-10-05
CHECKED BY: YMARGULIS DATE: 6-14-05
APPROVED BY: YMARGULIS DATE: 6-15-05

TITLE: LPH PLUG ASSEMBLY RT ANGLE 4 CIRCUIT POWER CONNECTOR

MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-45985-400
SHEET NO.: 3 OF 5
SIZE: A

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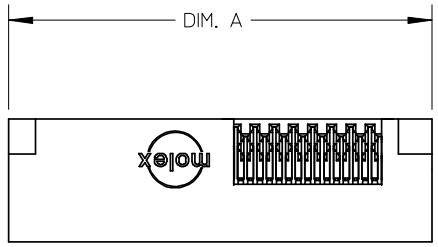
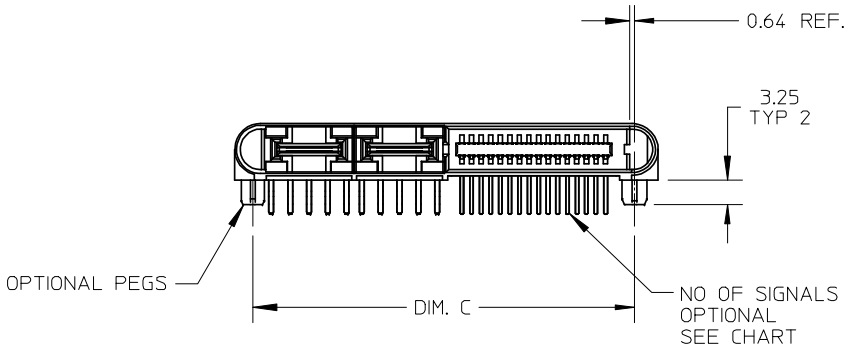
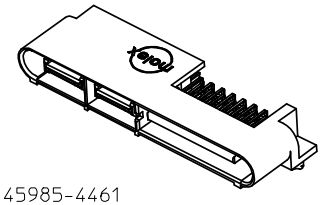



| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM C | DIM P | PCB THK |
|---|---|---|---|---|---|
| 12 | 45985-4411 | 43.66 | 37.98 | 4.50 | 3.18 |
| 16 | 45985-4421 | 46.20 | 40.52 | | |
| 20 | 45985-4431 | 48.74 | 43.06 | | |
| 24 | 45985-4441 | 51.28 | 45.60 | | |
| 28 | 45985-4451 | 53.82 | 48.14 | | |
| 32 | 45985-4461 | 56.36 | 50.68 | | |
| 36 | 45985-4471 | 58.90 | 53.22 | | |
| 40 | 45985-4481 | 61.44 | 55.76 | | |
| 12 | 45985-4412 | 43.66 | 37.98 | 3.90 | 2.36 |
| 16 | 45985-4422 | 46.20 | 40.52 | | |
| 20 | 45985-4432 | 48.74 | 43.06 | | |
| 24 | 45985-4442 | 51.28 | 45.60 | | |
| 28 | 45985-4452 | 53.82 | 48.14 | | |
| 32 | 45985-4462 | 56.36 | 50.68 | | |
| 36 | 45985-4472 | 58.90 | 53.22 | | |
| 40 | 45985-4482 | 61.44 | 55.76 | | |
| 12 | 45985-4413 | 43.66 | 37.98 | 2.90 | 1.57 |
| 16 | 45985-4423 | 46.20 | 40.52 | | |
| 20 | 45985-4433 | 48.74 | 43.06 | | |
| 24 | 45985-4443 | 51.28 | 45.60 | | |
| 28 | 45985-4453 | 53.82 | 48.14 | | |
| 32 | 45985-4463 | 56.36 | 50.68 | | |
| 36 | 45985-4473 | 58.90 | 53.22 | | |
| 40 | 45985-4483 | 61.44 | 55.76 | | |

## GUIDE & MOUNTING PEG OPTIONS

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



45985-4461
(SHOWN FOR REFERENCE)
SEE CHART

| REV | DESCRIPTION |
|---|---|
| C | REVISED<br>EC NO: UCP2007-3140<br>DRWN:MBANDURA 2008/03/03<br>CH'KD: 2008/03/04<br>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: JSCHAFER DATE: 6-10-05
CHECKED BY: YMARGULIS DATE: 6-14-05
APPROVED BY: YMARGULIS DATE: 6-15-05

TITLE: LPH PLUG ASSEMBLY RT ANGLE 4 CIRCUIT POWER CONNECTOR

MOLEX INCORPORATED

MATERIAL NO.: SEE CHART
DOCUMENT NO.: SD-45985-400
SHEET NO.: 4 OF 5
SIZE: A

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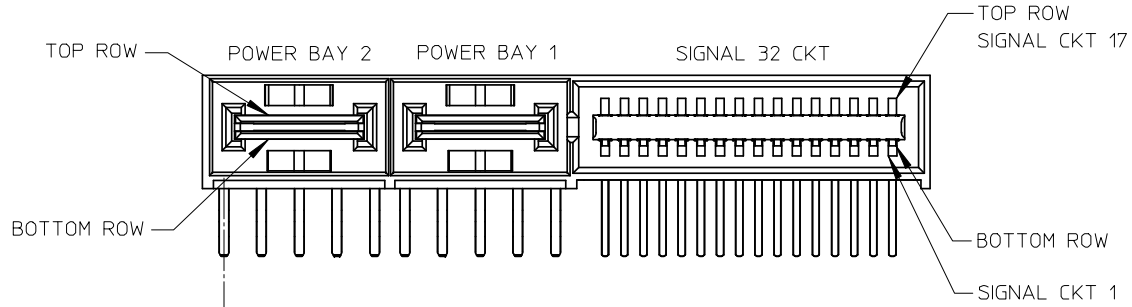
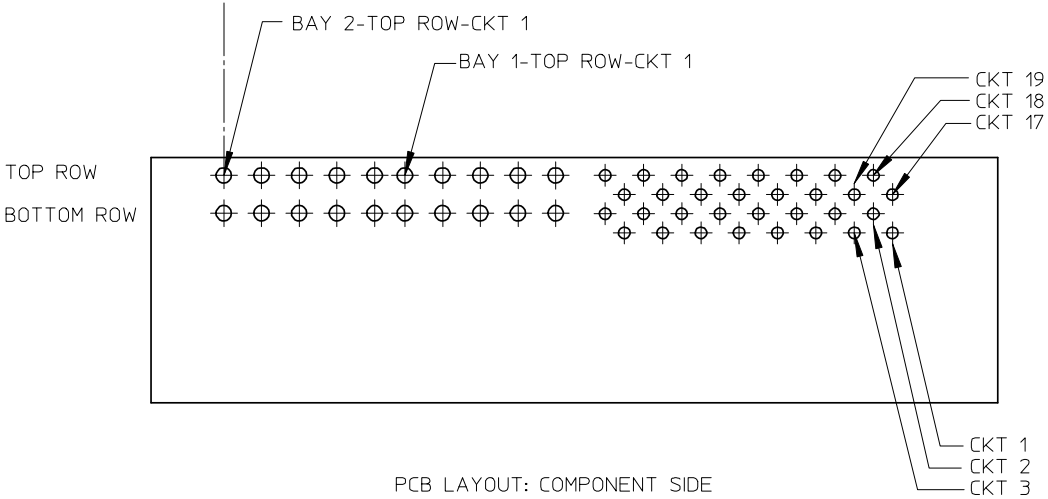
CIRCUIT NUMBERING SYSTEM




PCB LAYOUT: COMPONENT SIDE

| REVISED | | | |
|---|---|---|---|
| EC NO: UCP2007-3140 | | | |
| DRWN:MBANDURA | 2008/03/03 | | |
| CH'KD: | 2008/03/04 | | |
| APPR:APATEL | 2008/03/06 | | |
| REV | DESCRIPTION | | |
| 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 | SCALE | DESIGN UNITS | |
|---|---|---|---|
| MM ONLY | 2:1 | METRIC | THIRD ANGLE PROJECTION |

| DRAWN BY | DATE |
|---|---|
| JSCHAFER | 6-10-05 |
| CHECKED BY | DATE |
| YMARGULIS | 6-14-05 |
| APPROVED BY | DATE |
| YMARGULIS | 6-15-05 |

TITLE

LPH PLUG ASSEMBLY
RT ANGLE 4 CIRCUIT
POWER CONNECTOR

molex MOLEX INCORPORATED

| MATERIAL NO. | DOCUMENT NO. | SHEET NO. |
|---|---|---|
| SEE CHART | SD-45985-400 | 5 OF 5 |

SIZE A

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION