

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0459856272](#)
Status: **Active**
Overview: [extreme_lphpower](#)
Description: 1.27mm (.050"), 12.00mm (.472") Pitch, EXTreme LPHPower™ Header, Right Angle, 6 Power Contacts, 36 Signal Contacts, Select Gold (Au) Plating, for 2.36mm (.093") Thick PC Board, with Guide Pockets

Documents:

[3D Model](#) [Product Specification PS-45984-001 \(PDF\)](#)
[Drawing \(PDF\)](#) [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) | 42 |
| Circuits (maximum) | 42 |
| Circuits Detail | 6 Power, 36 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) | 0.142 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

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.

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 | 27A |
| 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 |

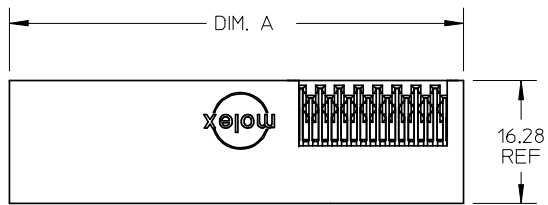
Material Info

Reference - Drawing Numbers

| | |
|-------------------------|--------------|
| Packaging Specification | PK-45984-001 |
| Product Specification | PS-45984-001 |
| Sales Drawing | SD-45985-600 |

This document was generated on 05/25/2010

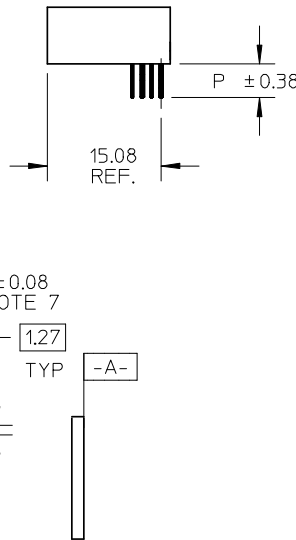
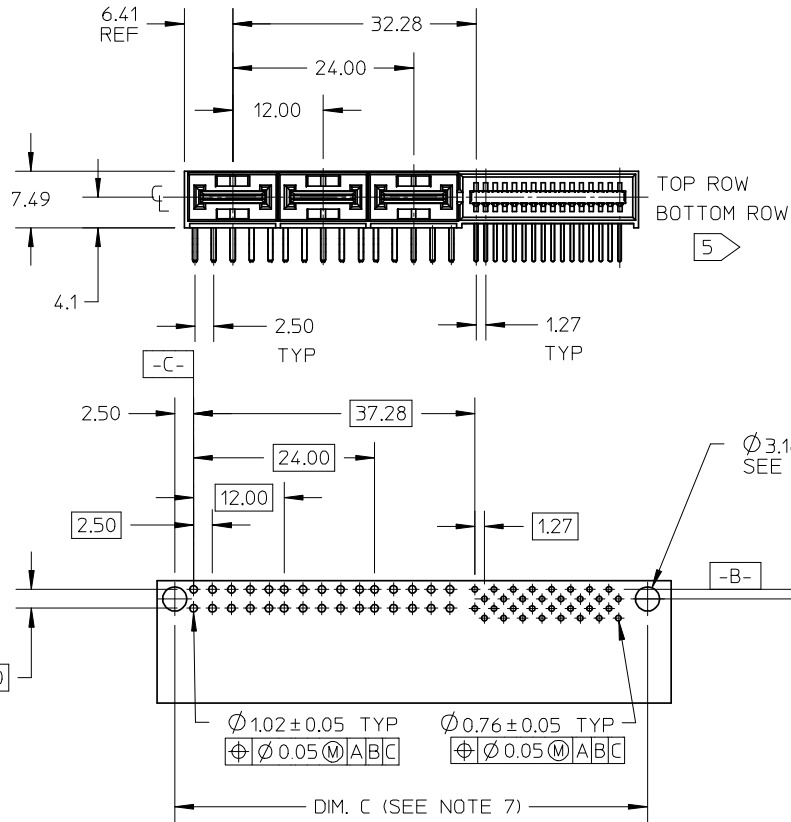
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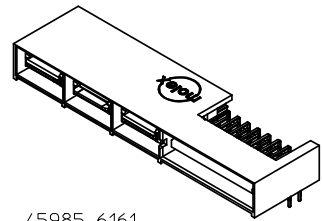
NOTES:

- MATERIAL: LCP, 94V-0, BLACK
POWER CONTACT: COPPER ALLOY
SIGNAL CONTACT: PHOSPHOR BRONZE
- FINISH: SELECT GOLD 0.76µM/30 MI MIN, IN CONTACT AREA
SELECT TIN 3.81µM/100 MI MIN, IN PC TAIL AREA
BOTH OVER NICKEL 1.27µM/50 MI MIN.
- PRODUCT SPECIFICATION: PS-45984-001
- PACKAGING SPECIFICATION: TRAY PER PK-45984-001
- SEE SHEET 5 FOR CIRCUIT IDENTIFICATION.
- PARTS ARE RoHS COMPLIANT.
- PEG HOLES ARE OPTIONAL PCB FEATURES AND ARE REQUIRED ONLY WITH THE PEGGED HOUSING OPTIONS.
- MATES WITH MOLEX RECEPTACLE SERIES 45984-6***.

| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM P | PCB THK |
|--------------|-----------------|-----------|-------|---------|
| 12 | 45985-6111 | 48.16 | 4.50 | 3.18 |
| 16 | 45985-6121 | 50.70 | | |
| 20 | 45985-6131 | 53.24 | | |
| 24 | 45985-6141 | 55.78 | | |
| 28 | 45985-6151 | 58.32 | | |
| 32 | 45985-6161 | 60.86 | | |
| 36 | 45985-6171 | 63.40 | 3.90 | 2.36 |
| 40 | 45985-6181 | 65.94 | | |
| 12 | 45985-6112 | 48.16 | | |
| 16 | 45985-6122 | 50.70 | | |
| 20 | 45985-6132 | 53.24 | | |
| 24 | 45985-6142 | 55.78 | | |
| 28 | 45985-6152 | 58.32 | 2.90 | 1.57 |
| 32 | 45985-6162 | 60.86 | | |
| 36 | 45985-6172 | 63.40 | | |
| 40 | 45985-6182 | 65.94 | | |
| 12 | 45985-6113 | 48.16 | | |
| 16 | 45985-6123 | 50.70 | | |
| 20 | 45985-6133 | 53.24 | 2.90 | 1.57 |
| 24 | 45985-6143 | 55.78 | | |
| 28 | 45985-6153 | 58.32 | | |
| 32 | 45985-6163 | 60.86 | | |
| 36 | 45985-6173 | 63.40 | 2.90 | 1.57 |
| 40 | 45985-6183 | 65.94 | | |



PCB LAYOUT: COMPONENT SIDE
THKNESS: SEE CHART



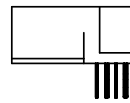
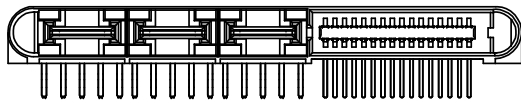
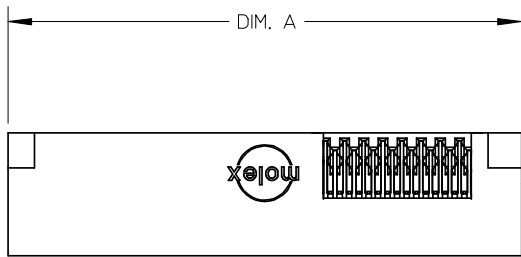
45985-6161
(SHOWN FOR REFERENCE)
SEE CHART

| | |
|---------------------|-------------|
| REVISED | DESCRIPTION |
| EC NO: UCP2007-3140 | 2008/03/03 |
| DRWN:MBANDURA | 2008/03/04 |
| CHKD: | 2008/03/04 |
| APPR:APATEL | 2008/03/06 |
| C | 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/IN | |
| DRAWN BY | DATE |
| JSCHAFFER | 6-9-05 |
| CHECKED BY | DATE |
| YMARGULIS | 6-14-05 |
| APPROVED BY | DATE |
| YMARGULIS | 6-15-05 |
| MATERIAL NO. | |
| SEE CHART | |
| SIZE | |
| A | |

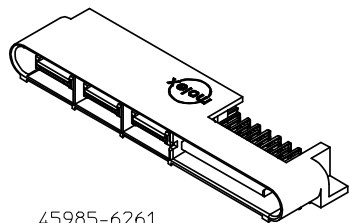
| | | |
|---|--------------|------------------------|
| SCALE | DESIGN UNITS | THIRD ANGLE PROJECTION |
| 1:1 | METRIC | |
| TITLE | | |
| LPH PLUG ASSEMBLY RT ANGLE 6 CIRCUIT POWER CONNECTOR | | |
| MOLEX INCORPORATED | | |
| DOCUMENT NO. | | SHEET NO. |
| SD-45985-600 | | 1 OF 5 |
| THIS DRAWING CONTAINS 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 | 45985-6211 | 55.66 | 4.50 | 3.18 |
| 16 | 45985-6221 | 58.20 | | |
| 20 | 45985-6231 | 60.74 | | |
| 24 | 45985-6241 | 63.28 | | |
| 28 | 45985-6251 | 65.82 | | |
| 32 | 45985-6261 | 68.36 | | |
| 36 | 45985-6271 | 70.90 | 3.90 | 2.36 |
| 40 | 45985-6281 | 73.44 | | |
| 12 | 45985-6212 | 55.66 | | |
| 16 | 45985-6222 | 58.20 | | |
| 20 | 45985-6232 | 60.74 | | |
| 24 | 45985-6242 | 63.28 | | |
| 28 | 45985-6252 | 65.82 | 2.90 | 1.57 |
| 32 | 45985-6262 | 68.36 | | |
| 36 | 45985-6272 | 70.90 | | |
| 40 | 45985-6282 | 73.44 | | |
| 12 | 45985-6213 | 55.66 | | |
| 16 | 45985-6223 | 58.20 | | |
| 20 | 45985-6233 | 60.74 | 2.90 | 1.57 |
| 24 | 45985-6243 | 63.28 | | |
| 28 | 45985-6253 | 65.82 | | |
| 32 | 45985-6263 | 68.36 | | |
| 36 | 45985-6273 | 70.90 | 2.90 | 1.57 |
| 40 | 45985-6283 | 73.44 | | |

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



45985-6261
(SHOWN FOR REFERENCE)
SEE CHART

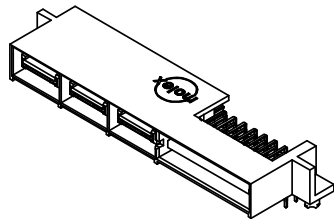
| | | | | | | | | | |
|--|--|-------|---------------------------|---------------------------|--|---|---------------------------|--|--|
| REVISED EC NO: UCP2007-3140 DRWN:MBANDURA 2008/03/03 CHKD: 2008/03/04 APPR:APATEL 2008/03/06 DESCRIPTION REV | GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE MM/IN | | SCALE 1:1 | DESIGN UNITS METRIC | THIRD ANGLE PROJECTION | | |
| | | mm | INCH | DRAWN BY JSCHAFFER | DATE 6-9-05 | TITLE LPH PLUG ASSEMBLY RT ANGLE 6 CIRCUIT POWER CONNECTOR | | | |
| | 4 PLACES | ± --- | ± --- | CHECKED BY YMARGUL IS | DATE 6-14-05 | | | | |
| | 3 PLACES | ± --- | ± --- | APPROVED BY YMARGUL IS | DATE 6-15-05 | MOLEX INCORPORATED DOCUMENT NO. SD-45985-600 | | | |
| 2 PLACES | ± 0.25 | ± --- | MATERIAL NO. SEE CHART | | SHEET NO. 2 OF 5 | | | | |
| 1 PLACE | ± --- | ± --- | ANGULAR ±1/2° | | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | | |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | | SIZE A | | | | | | |



MOUNTING PEG OPTIONS

| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM C | DIM P | PCB THK |
|--------------|-----------------|-----------|-------|-------|---------|
| 12 | 45985-6311 | 55.66 | 49.98 | 4.50 | 3.18 |
| 16 | 45985-6321 | 58.20 | 52.52 | | |
| 20 | 45985-6331 | 60.74 | 55.06 | | |
| 24 | 45985-6341 | 63.28 | 57.60 | | |
| 28 | 45985-6351 | 65.82 | 60.14 | | |
| 32 | 45985-6361 | 68.36 | 62.68 | | |
| 36 | 45985-6371 | 70.90 | 65.22 | 3.90 | 2.36 |
| 40 | 45985-6381 | 73.44 | 67.76 | | |
| 12 | 45985-6312 | 55.66 | 49.98 | | |
| 16 | 45985-6322 | 58.20 | 52.52 | | |
| 20 | 45985-6332 | 60.74 | 55.06 | | |
| 24 | 45985-6342 | 63.28 | 57.60 | | |
| 28 | 45985-6352 | 65.82 | 60.14 | | |
| 32 | 45985-6362 | 68.36 | 62.68 | | |
| 36 | 45985-6372 | 70.90 | 65.22 | | |
| 40 | 45985-6382 | 73.44 | 67.76 | 2.90 | 1.57 |
| 12 | 45985-6313 | 55.66 | 49.98 | | |
| 16 | 45985-6323 | 58.20 | 52.52 | | |
| 20 | 45985-6333 | 60.74 | 55.06 | | |
| 24 | 45985-6343 | 63.28 | 57.60 | | |
| 28 | 45985-6353 | 65.82 | 60.14 | | |
| 32 | 45985-6363 | 68.36 | 62.68 | | |
| 36 | 45985-6373 | 70.90 | 65.22 | | |
| 40 | 45985-6383 | 73.44 | 67.76 | | |

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



45985-6361
(SHOWN FOR REFERENCE)
SEE CHART

| | | | | | | | | | |
|--|--|-------|---------------------------|---------------------------|--|---|---------------------------|--|--|
| REVISED EC NO: UCP2007-3140 DRWN:MBANDURA 2008/03/03 CHKD: 2008/03/04 APPR:APATEL 2008/03/06 DESCRIPTION REV | GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE MM/IN | | SCALE 1:1 | DESIGN UNITS METRIC | THIRD ANGLE PROJECTION | | |
| | | mm | INCH | DRAWN BY JSCHAFFER | DATE 6-9-05 | TITLE LPH PLUG ASSEMBLY RT ANGLE 6 CIRCUIT POWER CONNECTOR | | | |
| | 4 PLACES | ± --- | ± --- | CHECKED BY YMARGUL IS | DATE 6-14-05 | | | | |
| | 3 PLACES | ± --- | ± --- | APPROVED BY YMARGUL IS | DATE 6-15-05 | MOLEX INCORPORATED DOCUMENT NO. SD-45985-600 | | | |
| 2 PLACES | ± 0.25 | ± --- | MATERIAL NO. SEE CHART | | SHEET NO. 3 OF 5 | | | | |
| 1 PLACE | ± --- | ± --- | ANGULAR ±1/2° | | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | | |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | | SIZE A | | | | | | |



GUIDE & MOUNTING PEG OPTIONS

| NO OF SIGNAL | MATERIAL NUMBER | DIM A REF | DIM C | DIM P | PCB THK |
|--------------|-----------------|-----------|-------|-------|---------|
| 12 | 45985-6411 | 55.66 | 49.98 | 4.50 | 3.18 |
| 16 | 45985-6421 | 58.20 | 52.52 | | |
| 20 | 45985-6431 | 60.74 | 55.06 | | |
| 24 | 45985-6441 | 63.28 | 57.60 | | |
| 28 | 45985-6451 | 65.82 | 60.14 | | |
| 32 | 45985-6461 | 68.36 | 62.68 | | |
| 36 | 45985-6471 | 70.90 | 65.22 | 3.90 | 2.36 |
| 40 | 45985-6481 | 73.44 | 67.76 | | |
| 12 | 45985-6412 | 55.66 | 49.98 | | |
| 16 | 45985-6422 | 58.20 | 52.52 | | |
| 20 | 45985-6432 | 60.74 | 55.06 | | |
| 24 | 45985-6442 | 63.28 | 57.60 | | |
| 28 | 45985-6452 | 65.82 | 60.14 | | |
| 32 | 45985-6462 | 68.36 | 62.68 | | |
| 36 | 45985-6472 | 70.90 | 65.22 | | |
| 40 | 45985-6482 | 73.44 | 67.76 | 2.90 | 1.57 |
| 12 | 45985-6413 | 55.66 | 49.98 | | |
| 16 | 45985-6423 | 58.20 | 52.52 | | |
| 20 | 45985-6433 | 60.74 | 55.06 | | |
| 24 | 45985-6443 | 63.28 | 57.60 | | |
| 28 | 45985-6453 | 65.82 | 60.14 | | |
| 32 | 45985-6463 | 68.36 | 62.68 | | |
| 36 | 45985-6473 | 70.90 | 65.22 | | |
| 40 | 45985-6483 | 73.44 | 67.76 | | |

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



45985-6461
(SHOWN FOR REFERENCE)
SEE CHART

| | |
|--------------------------|-------------|
| REVISED | DESCRIPTION |
| EC NO: UCP2007-3140 | |
| DRWN:MBANDURA 2008/03/03 | |
| CHKD: 2008/03/04 | |
| APPR:APATEL 2008/03/06 | |
| C | 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/IN | |
| DRAWN BY | DATE |
| JSCHAFFER | 6-9-05 |
| CHECKED BY | DATE |
| YMARGULIS | 6-14-05 |
| APPROVED BY | DATE |
| YMARGULIS | 6-15-05 |
| MATERIAL NO. | |
| SEE CHART | |

| | | |
|---|--------------|------------------------|
| SCALE | DESIGN UNITS | THIRD ANGLE PROJECTION |
| 1:1 | METRIC | |
| TITLE | | |
| LPH PLUG ASSEMBLY RT ANGLE 6 CIRCUIT POWER CONNECTOR | | |
| MOLEX INCORPORATED | | |
| DOCUMENT NO. | | SHEET NO. |
| SD-45985-600 | | 4 OF 5 |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |

CIRCUIT IDENTIFICATION



PCB LAYOUT: COMPONENT SIDE

| | | | | | | | |
|--|---------------------------------------|--------|--------------------------|--|-----------------|---|------------------------|
| REVISED EC NO: UCP2007-3140 DRWN:MBANDURA 2008/03/03 CHKD: 2008/03/04 APPR:APATEL 2008/03/06 DESCRIPTION REV | GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE MM/IN | | SCALE 2:1 | DESIGN UNITS METRIC | THIRD ANGLE PROJECTION |
| | | mm | INCH | DRAWN BY JSCHAFFER | DATE 6-9-05 | TITLE LPH PLUG ASSEMBLY RT ANGLE 6 CIRCUIT POWER CONNECTOR | |
| | 4 PLACES | ± --- | ± --- | CHECKED BY YMARGUL IS | DATE 6-14-05 | | |
| | 3 PLACES | ± --- | ± --- | APPROVED BY YMARGUL IS | DATE 6-15-05 | MOLEX INCORPORATED DOCUMENT NO. SD-45985-600 SHEET NO. 5 OF 5 | |
| | 2 PLACES | ± 0.25 | ± --- | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | | |
| 1 PLACE | ± --- | ± --- | SEE CHARTS | | | | |