

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

**Part Number:** [0459851931](#)  
**Status:** **Active**  
**Overview:** [extreme\\_lphpower](#)  
**Description:** 12.00mm (0.472") Pitch, EXTreme LPHPower™ Header, Right Angle, 10 Power Contacts, Select Gold (Au) Plating, for 1.57mm (.062") Thick PC Board

**Documents:**

[3D Model](#) [Product Specification PS-45984-001 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

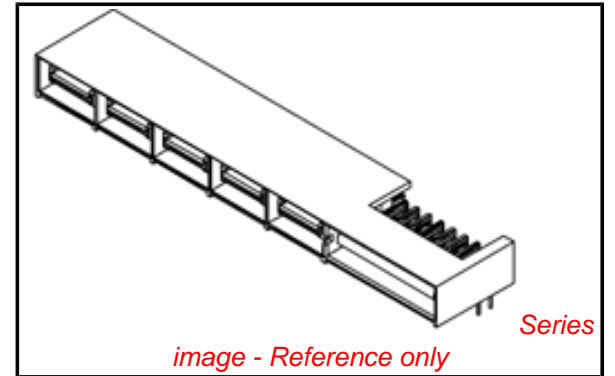
CSA LR19980  
TUV 30683046  
UL E29179

**General**

Product Family PCB Headers  
Series [45985](#)  
Application Board-to-Board  
Comments 10 Power Blades  
Overview [extreme\\_lphpower](#)  
Product Name EXTreme LPHPower™

**Physical**

Breakaway No  
Circuits (Loaded) 10  
Circuits (maximum) 10  
Circuits Detail 10 Power, No 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 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 No  
PCB Retention None  
PCB Thickness Recommended (in) 0.062 In  
PCB Thickness Recommended (mm) 1.57 mm  
Packaging Type Tray  
Pitch - Mating Interface (in) 0.472 In  
Pitch - Mating Interface (mm) 12.00 mm  
Pitch - Term. Interface (in) 0.079 In, 0.098 In  
Pitch - Term. Interface (mm) 2.00 mm, 2.50 mm  
Plating min: Mating (µin) 30  
Plating min: Mating (µm) 0.75  
Plating min: Termination (µin) 150



**EU RoHS**  
**ELV and RoHS**  
**Compliant**  
**REACH SVHC**  
Not Reviewed  
**Halogen-Free**  
**Status**  
**Not Reviewed**

**China RoHS**



**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.

**Search Parts in this Series**

[45985Series](#)

**Mates With**

[45984](#) EXTreme LPHPower™ PCB Receptacles

Plating min: Termination (µm)	3.75
Polarized to Mating Part	Yes
Polarized to PCB	No
Shrouded	Closed Ends
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)	15
Lead-free Process Capability	SMC & Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	3
Process Temperature max. C	230

### **Material Info**

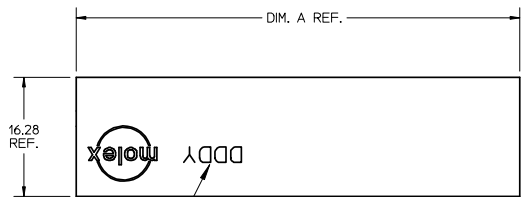
#### **Reference - Drawing Numbers**

Packaging Specification	PK-45984-001
Product Specification	PS-45984-001
Sales Drawing	SD-45985-102

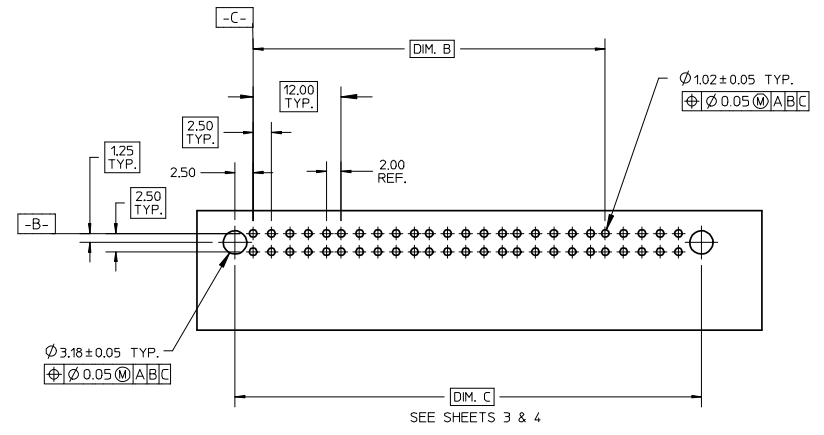
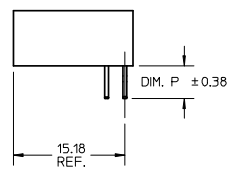
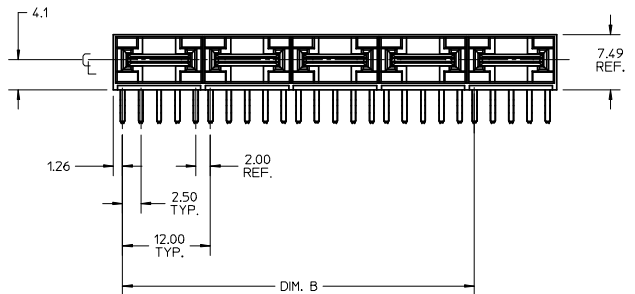
This document was generated on 05/25/2010

**PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION**

10 9 8 7 6 5 4 3 2 1



SEE NOTE 10



SEE SHEETS 3 & 4

PCB LAYOUT: COMPONENT SIDE  
THICKNESS: SEE CHART

CKT SIZE	MATERIAL NUMBER	DIM. A REF	DIM B	DIM P
4	45985-4911	24.60	12.00	4.50
6	45985-6911	36.60	24.00	
8	45985-8911	48.60	36.00	
10	45985-1911	60.60	48.00	3.90
4	45985-4921	24.60	12.00	
6	45985-6921	36.60	24.00	
8	45985-8921	48.60	36.00	2.90
10	45985-1921	60.60	48.00	
4	45985-4931	24.60	12.00	
6	45985-6931	36.60	24.00	
8	45985-8931	48.60	36.00	
10	45985-1931	60.60	48.00	

- NOTES:
- MATERIAL: LCP, 94V-0, BLACK  
MATERIAL: TERMINAL: COPPER ALLOY
  - FINISH: SELECT GOLD: 0.76 µM/30 MI MIN. IN CONTACT AREA,  
SELECT TIN: 3.81 µM/150 MI MIN. IN PC TAIL AREA  
BOTH OVER NICKEL: 1.27 µM/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. SEE SHEET 3 & 4.
  - MATES TO MOLEX 45984 SERIES RECEPTACLE.
  - PARTS CONFORM TO CLASS B REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.
  - DATE CODE (3-DIGIT DAY, 1-DIGIT YEAR) TO BE LOCATED AND PRINTED AS SHOWN.

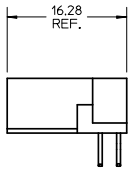
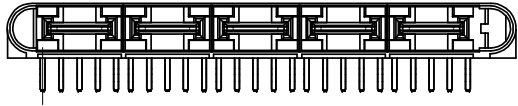
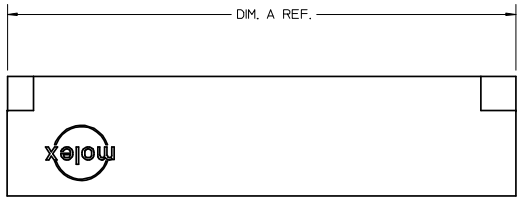
RELEASED	DESCRIPTION
EC NO: UCP2007-3140	
DRW:MBANDURA	2008/03/03
CHKD:	2008/03/04
APPR:APATEL	2008/03/06
REV	

GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION	
mm	INCH	MM ONLY		1:1	METRIC		
4 PLACES ± ---	± ---	DRAWN BY	DATE	TITLE LPH PLUG ASSEMBLY RIGHT ANGLE POWER CONNECTOR MOLEX INCORPORATED			
3 PLACES ± ---	± ---	BANDURA	5/16/2006				
2 PLACES ± 0.25	± ---	CHECKED BY	DATE				
1 PLACE ± ---	± ---	BANDURA	5/27/2006				
ANGULAR ± 1/2°		APPROVED BY	DATE	MATERIAL NO. SEE CHART			
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		PATEL		DOCUMENT NO. SD-45985-102		SHEET NO. 1 OF 5	
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION							

9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1

CKT SIZE	MATERIAL NUMBER	DIM. A REF	DIM B	DIM P
4	45985-4912	33.36	12.00	4.50
6	45985-6912	45.36	24.00	
8	45985-8912	57.36	36.00	
10	45985-1912	69.36	48.00	3.90
4	45985-4922	33.36	12.00	
6	45985-6922	45.36	24.00	
8	45985-8922	57.36	36.00	2.90
10	45985-1922	69.36	48.00	
4	45985-4932	33.36	12.00	
6	45985-6932	45.36	24.00	
8	45985-8932	57.36	36.00	
10	45985-1932	69.36	48.00	

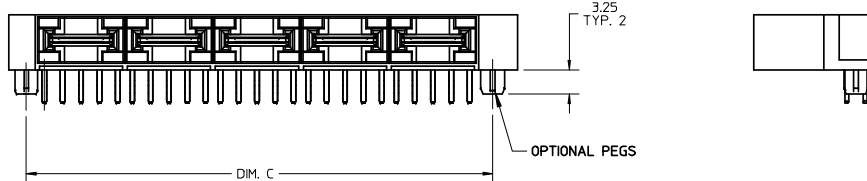
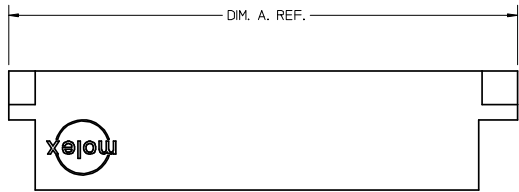


NOTE:  
1. SEE SHEET 1 FOR DIMENSIONS NOT SHOWN.

RELEASED EC NO: UCP2007-3140 DRWN: BANDURA 2008/03/03 CHKD: 2008/03/04 APPR: APATEL 2008/03/06	DESCRIPTION REV	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY BANDURA	DATE 5/16/2006	TITLE LPH PLUG ASSEMBLY RIGHT ANGLE POWER CONNECTOR			
		4 PLACES	± ---	± ---	CHECKED BY	DATE				
		3 PLACES	± ---	± ---	BANDURA	5/27/2006	MOLEX INCORPORATED			
		2 PLACES	± 0.25	± ---	APPROVED BY PATEL	DATE				
1 PLACE	± ---	± ---	MATERIAL NO. SEE CHART		DOCUMENT NO. SD-45985-102	SHEET NO. 2 OF 5				
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		ANGULAR ±1/2°		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1



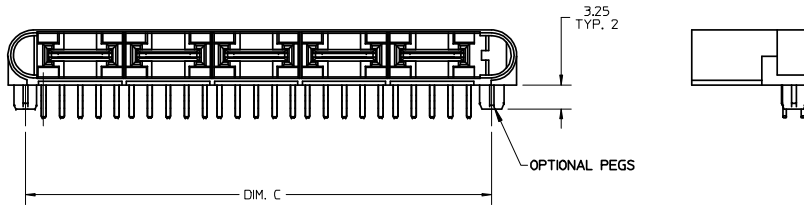
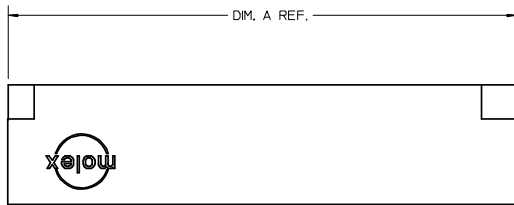
CKT SIZE	MATERIAL NUMBER	DIM. A REF	DIM B	DIM C	DIM P
4	45985-4913	33.36	12.00	27.60	4.50
6	45985-6913	45.36	24.00	39.60	
8	45985-8913	57.36	36.00	51.60	
10	45985-1913	69.36	48.00	63.60	3.90
4	45985-4923	33.36	12.00	27.60	
6	45985-6923	45.36	24.00	39.60	
8	45985-8923	57.36	36.00	51.60	2.90
10	45985-1923	69.36	48.00	63.60	
4	45985-4933	33.36	12.00	27.60	
6	45985-6933	45.36	24.00	39.60	
8	45985-8933	57.36	36.00	51.60	
10	45985-1933	69.36	48.00	63.60	

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

RELEASED EC NO: UCP2007-3140 DRWN: BANDURA 2008/03/03 CHKD: 2008/03/04 APPR: APATEL 2008/03/06	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION			
				MM ONLY		1:1	METRIC				
				mm	INCH	DRAWN BY	DATE	TITLE			
				4 PLACES ± ---	± ---	BANDURA	5/16/2006	LPH PLUG ASSEMBLY RIGHT ANGLE POWER CONNECTOR			
				3 PLACES ± ---	± ---	CHECKED BY	DATE				
		2 PLACES ± 0.25	± ---	BANDURA	5/27/2006	MOLEX INCORPORATED					
		1 PLACE ± ---	± ---	APPROVED BY	DATE						
		ANGULAR ± 1/2°		PATEL		DOCUMENT NO.		SHEET NO.			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE CHART		SD-45985-102		3 OF 5			
				SIZE B		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					

9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1



CKT SIZE	MATERIAL NUMBER	DIM. A REF	DIM B	DIM C	DIM P
4	45985-4914	33.36	12.00	27.60	4.50
6	45985-6914	45.36	24.00	39.60	
8	45985-8914	57.36	36.00	51.60	
10	45985-1914	69.36	48.00	63.60	
4	45985-4924	33.36	12.00	27.60	3.90
6	45985-6924	45.36	24.00	39.60	
8	45985-8924	57.36	36.00	51.60	
10	45985-1924	69.36	48.00	63.60	
4	45985-4934	33.36	12.00	27.60	2.90
6	45985-6934	45.36	24.00	39.60	
8	45985-8934	57.36	36.00	51.60	
10	45985-1934	69.36	48.00	63.60	

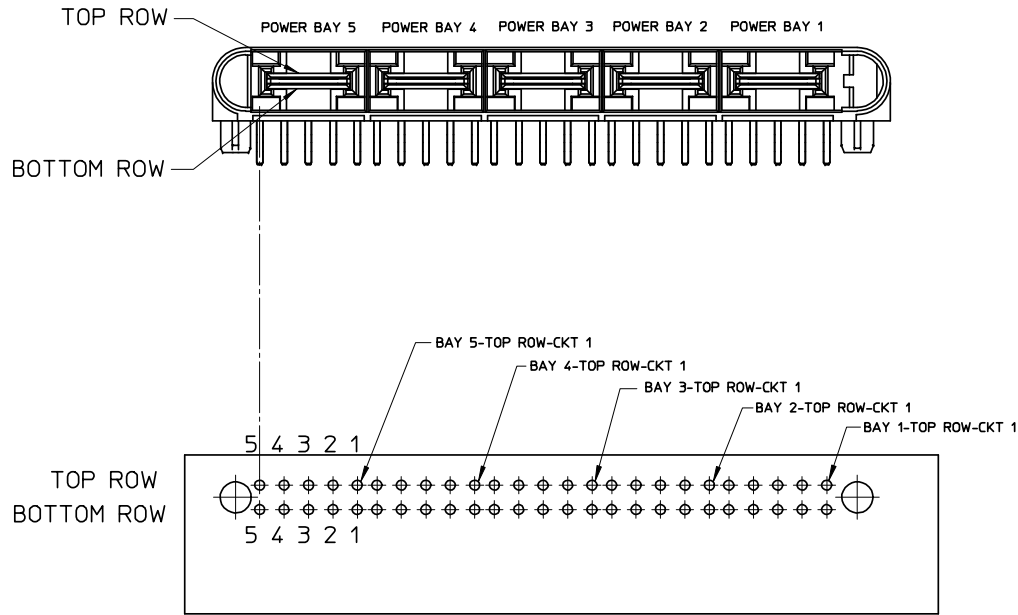
NOTE:  
1. SEE SHEET 1 FOR DIMENSIONS NOT SHOWN.

RELEASED EC NO: UCP2007-3140 DRWN: BANDURA 2008/03/03 CHKD: 2008/03/04 APPR: APATEL 2008/03/06	DESCRIPTION REV	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY	DATE	TITLE LPH PLUG ASSEMBLY RIGHT ANGLE POWER CONNECTOR			
		4 PLACES	± ---	± ---	BANDURA	5/16/2006				
		3 PLACES	± ---	± ---	CHECKED BY	DATE	MOLEX INCORPORATED			
		2 PLACES	± 0.25	± ---	BANDURA	5/27/2006				
1 PLACE	± ---	± ---	APPROVED BY	DATE	DOCUMENT NO. SD-45985-102		SHEET NO. 4 OF 5			
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		ANGULAR ±1/2°		MATERIAL NO. SEE CHART		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1

CIRCUIT IDENTIFICATION



PCB LAYOUT: COMPONENT SIDE

RELEASED EC NO: UCP2007-3140 DRWN: BANDURA 2008/03/03 CHKD: 2008/03/04 APPR: APATEL 2008/03/06	DESCRIPTION REV	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
		4 PLACES ± --- ± ---	mm INCH	DRAWN BY BANDURA	DATE 5/16/2006	TITLE LPH PLUG ASSEMBLY RIGHT ANGLE POWER CONNECTOR				
		3 PLACES ± --- ± ---	± 0.25 ± ---	CHECKED BY BANDURA	DATE 5/27/2006					
		2 PLACES ± 0.25 ± ---	± --- ± ---	APPROVED BY PATEL		MATERIAL NO. SEE CHART				
1 PLACE ± --- ± ---	ANGULAR ±1/2°	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SIZE B	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			MOLEX INCORPORATED	DOCUMENT NO. SD-45985-102	SHEET NO. 5 OF 5

9 8 7 6 5 4 3 2 1