

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

**Part Number:** **0459856123**  
**Status:** **Active**  
**Overview:** extreme\_lphpower  
**Description:** 1.27mm (.050"), 12.00mm (.472") Pitch, EXTreme LPHPower™ Header, Right Angle, 6 Power Contacts, 16 Signal 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
Overview	<u>extreme_lphpower</u>
Product Name	EXTreme LPHPower™

**Physical**

Breakaway	No
Circuits (Loaded)	22
Circuits (maximum)	22
Circuits Detail	6 Power, 16 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)	0.114 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)	0.050 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](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.

**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

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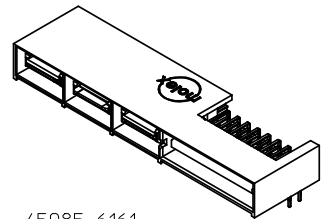
NOTES:

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/100 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 HOUSING OPTIONS.
8. 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		
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	1:1	DESIGN UNITS	METRIC	THIRD ANGLE PROJECTION
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	3.90	2.36
36	45985-6271	70.90		
40	45985-6281	73.44		
12	45985-6212	55.66		
16	45985-6222	58.20		
20	45985-6232	60.74	2.90	1.57
24	45985-6242	63.28		
28	45985-6252	65.82		
32	45985-6262	68.36		
36	45985-6272	70.90		
40	45985-6282	73.44	2.90	1.57
12	45985-6213	55.66		
16	45985-6223	58.20		
20	45985-6233	60.74		
24	45985-6243	63.28		
28	45985-6253	65.82		
32	45985-6263	68.36		
36	45985-6273	70.90		
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 REV DESCRIPTION	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		
	2 PLACES	± 0.25	± ---	MATERIAL NO. SEE CHART				
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



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		
12	45985-6413	55.66	49.98	2.90	1.57
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 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
TITLE LPH PLUG ASSEMBLY RT ANGLE 6 CIRCUIT POWER CONNECTOR		
MOLEX INCORPORATED		
DOCUMENT NO. SD-45985-600	SHEET NO. 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 YMARGULIS	DATE 6-14-05			
	3 PLACES	± ---	± ---	APPROVED BY YMARGULIS	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	± ---	± ---	ANGULAR ±1/2°		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			