

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0459844441](#)
Status: **Active**
Overview: [extreme_lphpower](#)
Description: 1.27mm (.050"), 12.00mm (.472") Pitch, EXTreme LPHPower™ Receptacle Header, Right Angle, 4 Power Contacts, 24 Signal Contacts, Select Gold (Au) Plating, for 3.18mm (.125") Thick PC Board, with Guide Posts, with Press-fit Plastic Pegs

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

Agency Certification

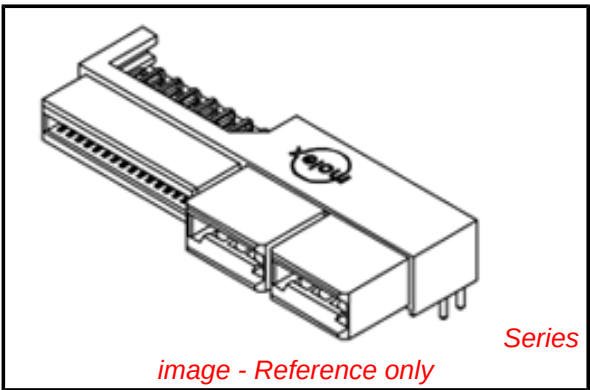
CSA	LR19980
UL	E29179

General

Product Family	PCB Receptacles
Series	45984
Application	Board-to-Board
Overview	extreme_lphpower
Product Name	EXTreme LPHPower™

Physical

Circuits (Loaded)	28
Circuits (maximum)	28
Circuits Detail	4 Power, 24 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)	0.177 In
PC Tail Length (mm)	4.50 mm
PCB Locator	Yes
PCB Retention	Yes
PCB Thickness Recommended (in)	0.125 In
PCB Thickness Recommended (mm)	3.18 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	30A
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-45984-400

This document was generated on 05/27/2010

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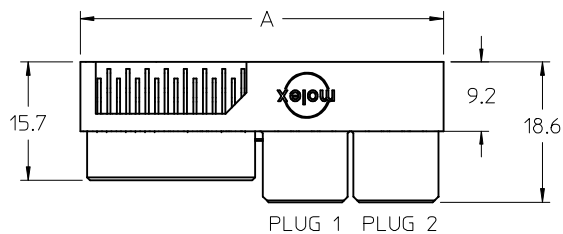
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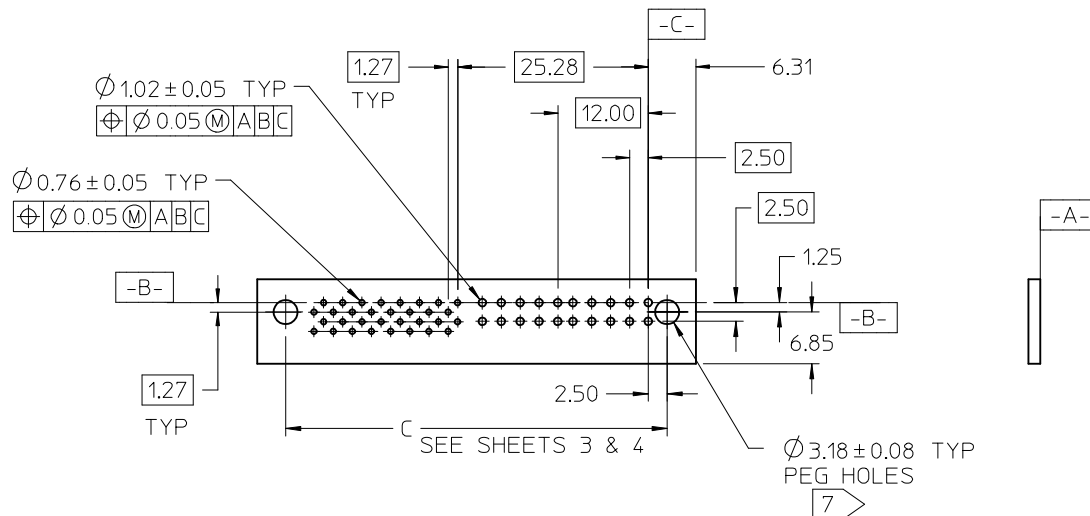
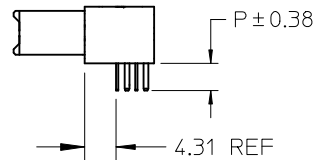
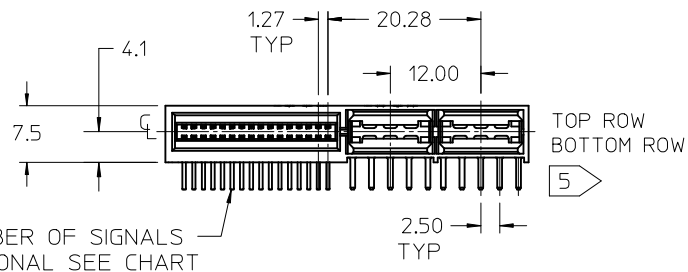
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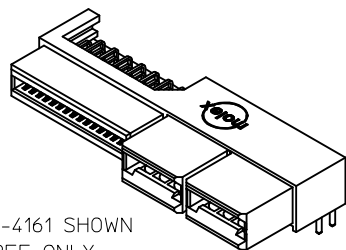


NOTES:

1. MATERIAL HOUSING: LCP, 94V-0, COLOR-BLACK.
CONTACT: COPPER ALLOY.
2. FINISH: SELECT GOLD - .76 μ M/30 MI MIN. CONTACT AREA.
SELECT TIN - 3.81 μ M/150 MI MIN. TAIL AREA.
BOTH OVER NICKEL - 1.27 μ M/50 MI MIN.
3. POWER TERMINALS ARE LUBRICATED IN CONTACT AREA.
3. PRODUCT SPECIFICATION: PS-45984-001.
4. PACKAGING: TRAY PER PK-45984-001.
5. SEE SHEET 5 FOR CKT IDENTIFICATION.
6. PARTS ARE RoHS COMPLIANT.
7. PEG HOLES ARE OPTIONAL SEE SHEET 3 AND 4.
8. MATES TO 1577.062 CARD EDGE OR MOLEX P/N 45985-4***.



RECOMMENDED PCB LAYOUT: COMPONENT SIDE
PEG HOLES OPTIONAL



45984-4161 SHOWN
FOR REF ONLY
SEE CHART

REVISED	EC NO: UCP2009-0971	2008/11/13	2008/11/14	2008/11/17	DESCRIPTION
	DRWN:MBANDURA				
	CHKD:				
	APPR:APATEL				
REV					

GENERAL TOLERANCES
(UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.25	± ---
1 PLACE	± ---	± ---

ANGULAR $\pm 1/2^\circ$

DRAFT WHERE APPLICABLE
MUST REMAIN
WITHIN DIMENSIONS

DIMENSION STYLE
MM ONLY

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

SCALE
1:1DESIGN UNITS
METRICTHIRD ANGLE
PROJECTION

LPH RECEPTACLE ASSEMBLY
RT ANGLE 4 CIRCUIT
POWER CONNECTOR

MOLEX INCORPORATED

DOCUMENT NO.
SD-45984-400

SHEET NO.
1 OF 5

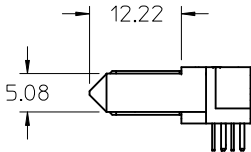
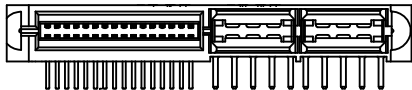
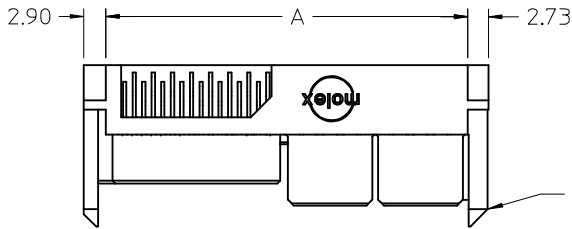
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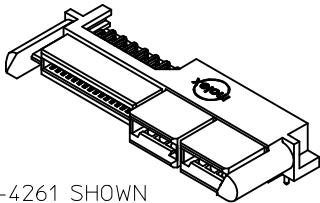
A



NO OF SIGNALS
OPTIONAL
SEE CHART

GUIDE POST OPTIONS

NO OF SIGNAL	MATERIAL NUMBER	DIM A	DIM P	PCB THK
12	45984-4211	35.5	4.50	3.18
16	45984-4221	38.0		
20	45984-4231	40.6		
24	45984-4241	43.1		
28	45984-4251	45.6		
32	45984-4261	48.2		
36	45984-4271	50.7	3.60	2.36
40	45984-4281	53.3		
12	45984-4212	35.5		
16	45984-4222	38.0		
20	45984-4232	40.6		
24	45984-4242	43.1		
28	45984-4252	45.6		
32	45984-4262	48.2		
36	45984-4272	50.7	2.90	1.57
40	45984-4282	53.3		
12	45984-4213	35.5		
16	45984-4223	38.0		
20	45984-4233	40.6		
24	45984-4243	43.1		
28	45984-4253	45.6		
32	45984-4263	48.2		
36	45984-4273	50.7		
40	45984-4283	53.3		



45984-4261 SHOWN
FOR REF ONLY
SEE CHART

REVISED EC NO: UCP2009-0971 DRWN:MBANDURA 2008/11/13 CHKD: 2008/11/14 APPR:APATEL 2008/11/17	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)			DIMENSION STYLE MM ONLY		SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
			mm	INCH	DRAWN BY	DATE	TITLE LPH RECEPTACLE ASSEMBLY RT ANGLE 4 CIRCUIT POWER CONNECTOR	MOLEX INCORPORATED				
		4 PLACES	± ---	± ---	SAMIEC	2005/05/13						
		3 PLACES	± ---	± ---	CHECKED BY	DATE						
		2 PLACES	± 0.25	± ---	SAMIEC	2005/05/13						
		1 PLACE	± ---	± ---	APPROVED BY	DATE						
		ANGULAR ±1/2°			MARGULIS	2005/05/13	DOCUMENT NO. SD-45984-400			SHEET NO. 2 OF 5		
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			MATERIAL NO.							
		SIZE A		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								

D

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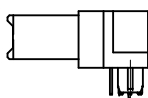
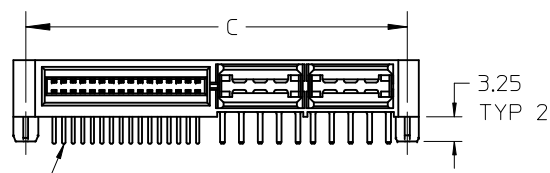
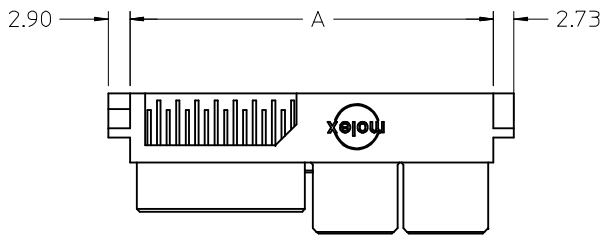
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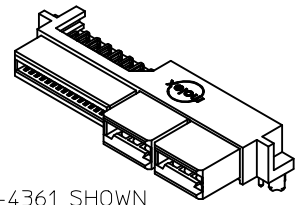
B

A



OPTIONAL PEGS

MOUNTING PEG OPTIONS



45984-4361 SHOWN
FOR REF ONLY
SEE CHART

REVISED	EC NO: UCP2009-0971	2008/11/13	DESCRIPTION
	DRWN:MBANDURA	2008/11/14	
	CHKD:		
	APPR:APATEL	2008/11/17	
			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 ONLY	
DRAWN BY	DATE
SAMIEC	2005/05/13
CHECKED BY	DATE
SAMIEC	2005/05/13
APPROVED BY	DATE
MARGULIS	2005/05/13
MATERIAL NO.	
SIZE	
A	

SCALE 1:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
TITLE LPH RECEPTACLE ASSEMBLY RT ANGLE 4 CIRCUIT POWER CONNECTOR			
MOLEX INCORPORATED			
DOCUMENT NO. SD-45984-400			SHEET NO. 3 OF 5
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	DIM C	DIM P	PCB THK
12	45984-4311	35.5	37.90	4.50	3.18
16	45984-4321	38.0	40.44		
20	45984-4331	40.6	42.98		
24	45984-4341	43.1	45.52		
28	45984-4351	45.6	48.06		
32	45984-4361	48.2	50.60		
36	45984-4371	50.7	53.14		
40	45984-4381	53.3	55.68		
12	45984-4312	35.5	37.90	3.60	2.36
16	45984-4322	38.0	40.44		
20	45984-4332	40.6	42.98		
24	45984-4342	43.1	45.52		
28	45984-4352	45.6	48.06		
32	45984-4362	48.2	50.60		
36	45984-4372	50.7	53.14		
40	45984-4382	53.3	55.68		
12	45984-4313	35.5	37.90	2.90	1.57
16	45984-4323	38.0	40.44		
20	45984-4333	40.6	42.98		
24	45984-4343	43.1	45.52		
28	45984-4353	45.6	48.06		
32	45984-4363	48.2	50.60		
36	45984-4373	50.7	53.14		
40	45984-4383	53.3	55.68		

D

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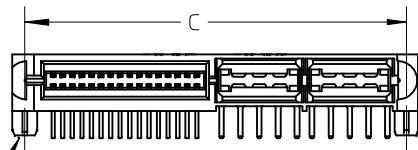
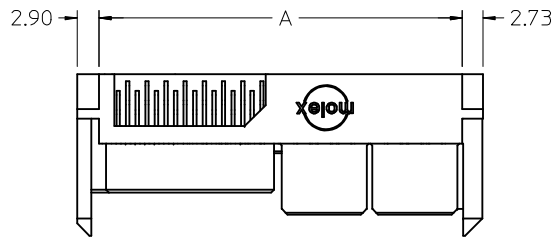
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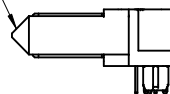
B

A



NO OF SIGNALS
OPTIONAL
SEE CHART

OPTIONAL GUIDES



OPTIONAL PEGS

GUIDE POST & MOUNTING PEG OPTIONS

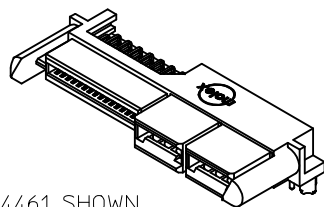
NO OF SIGNAL	MATERIAL NUMBER	DIM A	DIM C	DIM P	PCB THK
12	45984-4411	35.5	37.90	4.50	3.18
16	45984-4421	38.0	40.44		
20	45984-4431	40.6	42.98		
24	45984-4441	43.1	45.52		
28	45984-4451	45.6	48.06		
32	45984-4461	48.2	50.60		
36	45984-4471	50.7	53.14		
40	45984-4481	53.3	55.68		
12	45984-4412	35.5	37.90	3.60	2.36
16	45984-4422	38.0	40.44		
20	45984-4432	40.6	42.98		
24	45984-4442	43.1	45.52		
28	45984-4452	45.6	48.06		
32	45984-4462	48.2	50.60		
36	45984-4472	50.7	53.14		
40	45984-4482	53.3	55.68		
12	45984-4413	35.5	37.90	2.90	1.57
16	45984-4423	38.0	40.44		
20	45984-4433	40.6	42.98		
24	45984-4443	43.1	45.52		
28	45984-4453	45.6	48.06		
32	45984-4463	48.2	50.60		
36	45984-4473	50.7	53.14		
40	45984-4483	53.3	55.68		

D

C

B

A



45984-4461 SHOWN
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REVISED	EC NO: UCP2009-0971	2008/11/13	DRWN:MBANDURA	2008/11/14	CHKD:	2008/11/17	APPR:APATEL	2008/11/17	DESCRIPTION
1									

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

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

SCALE
1:1

DESIGN UNITS
METRIC

THIRD ANGLE
PROJECTION

TITLE
LPH RECEPTACLE ASSEMBLY
RT ANGLE 4 CIRCUIT
POWER CONNECTOR

MOLEX INCORPORATED

DOCUMENT NO.
SD-45984-400

SHEET NO.
4 OF 5

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1

SIGNAL CKT 17

SIGNAL 32 CKT

PLUG 1

PLUG 2

TOP ROW
BOTTOM ROWTOP ROW
BOTTOM ROW

SIGNAL CKT 1

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

2.59±0.08

2.27±0.08

8.76 TYP.

6.70 MIN. PAD
DEPTH TYP.

0.76±0.05 TYP.

45°X 0.38
TYP.

45°X 0.64

1.27±0.05 TYP.

45°X 0.89
TYP.

9.73±0.10 (2)

DIM. D±0.10

RECOMMENDED EDGE CARD LAYOUT
EDGE CARD THICKNESS: 1.57/0.62

CIRCUIT IDENTIFICATION

CKT 19
CKT 18
CKT 17

PLUG 1-TOP ROW-CKT 1

PLUG 2-TOP ROW-CKT 1

TOP ROW
BOTTOM ROWTOP ROW
BOTTOM ROWCKT 1
CKT 2
CKT 3

SIGNAL 32 CKT

PLUG 1

PLUG 2

PCB LAYOUT: COMPONENT SIDE
SEE SHEET 1 FOR DIMENSIONS

REVISED EC NO: UCP2009-0971 DRWN:MBANDURA 2008/11/13 CHKD: 2008/11/14 APPR:APATEL 2008/11/17	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE 2:1	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY SAMIEC	DATE 2005/05/13	TITLE LPH RECEPTACLE ASSEMBLY RT ANGLE 4 CIRCUIT POWER CONNECTOR			
		4 PLACES	± ---	± ---	CHECKED BY SAMIEC	DATE 2005/05/13				
		3 PLACES	± ---	± ---	APPROVED BY MARGULIS		DATE 2005/05/13		molex MOLEX INCORPORATED	
		2 PLACES	± 0.25	± ---						
		1 PLACE	± ---	± ---						
	ANGULAR ±1/2°			MATERIAL NO.		DOCUMENT NO. SD-45984-400		SHEET NO. 5 OF 5		
REV	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								

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