

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

**Part Number:** [0876312001](#)  
**Status:** **Active**  
**Overview:** [extreme\\_powerplus\\_ssi](#)  
**Description:** 6.35mm (.250") Pitch Power, 2.54mm (.100") Pitch Signal, EXTreme PowerPlus™ P-S-P Header, Through Hole, Right Angle, Short Contacts, 52 Circuits, Power Alpha 2, Signal 48, Power Beta 2, Recessed Signal Pins A1, A12, D1, D12, Lead-free

**Documents:**

[3D Model](#) [Product Specification PS-87631-006 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

CSA LR19980  
TUV R50078473

**General**

Product Family PCB Headers  
Series [87631](#)  
Application Board-to-Board  
Comments <LI>Short Contacts|<LI>Recessed Signal Pins: A1, A12, D1, D12  
Overview [extreme\\_powerplus\\_ssi](#)  
Product Name EXTreme PowerPlus™

**Physical**

Breakaway No  
Circuits (Loaded) 52  
Circuits Detail Power Alpha 2, Signal 48, Power Beta 2  
Color - Resin Black  
Durability (mating cycles max) 100  
First Mate / Last Break Yes  
Flammability 94V-0  
Glow-Wire Compliant No  
Guide to Mating Part Yes  
Keying to Mating Part Yes  
Lock to Mating Part Yes  
Material - Metal Copper Alloy  
Material - Plating Mating Gold  
Material - Plating Termination Tin  
Material - Resin High Temperature Thermoplastic  
Number of Rows 4  
Orientation Right Angle  
PC Tail Length (in) 0.135 In  
PC Tail Length (mm) 3.43 mm  
PCB Retention Yes  
PCB Thickness Recommended (in) 0.062 In  
PCB Thickness Recommended (mm) 1.57 mm  
Packaging Type Tray  
Pitch - Mating Interface (in) 0.100 In, 0.125 In, 0.250 In  
Pitch - Mating Interface (mm) 2.54 mm, 3.18 mm, 6.35 mm  
Plating min: Mating (µin) 30  
Plating min: Mating (µm) 0.76  
Plating min: Termination (µin) 100  
Plating min: Termination (µm) 2.54  
Polarized to Mating Part Yes  
Polarized to PCB Yes



**EU RoHS**

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

**China RoHS**



**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.

**Search Parts in this Series**

[87631Series](#)

**Mates With**

[87633](#) Vertical Press-Fit Receptacle. [87622](#) Vertical Through Hole Receptacle. [87632](#) Right Angle Through Hole Receptacle

Shrouded	Fully
Stackable	No
Temperature Range - Operating	-20°C to +105°C
Termination Interface: Style	Through Hole

#### **Electrical**

Current - Maximum per Contact	2.5A, 50A
Voltage - Maximum	250V DC

#### **Solder Process Data**

Duration at Max. Process Temperature (seconds)	10
Lead-free Process Capability	SMC & Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	3
Process Temperature max. C	260

#### **Material Info**

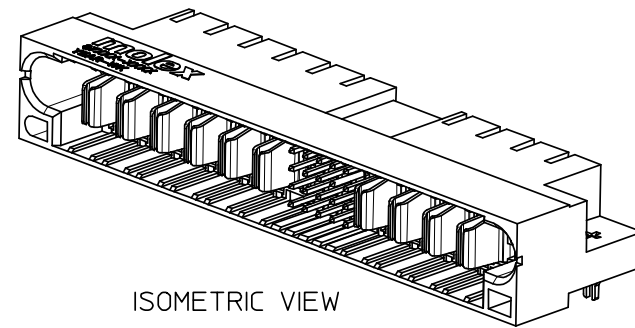
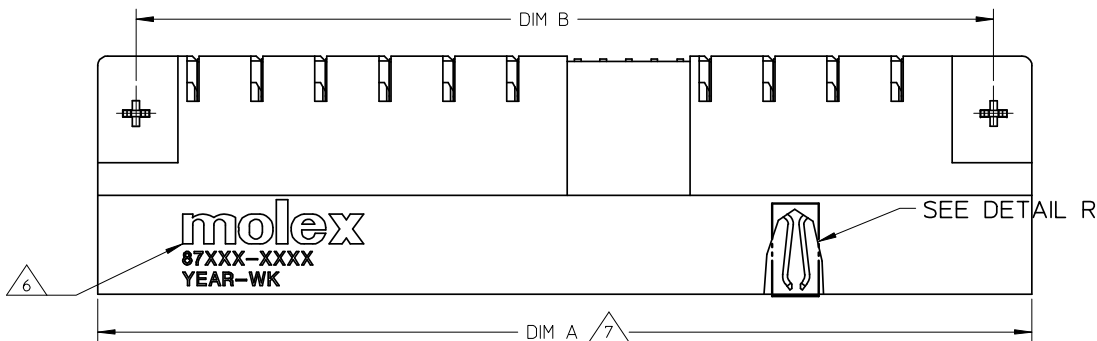
#### **Reference - Drawing Numbers**

Application Specification	AS-87631-018
Product Specification	PS-87631-006
Sales Drawing	SD-87631-014

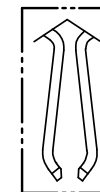
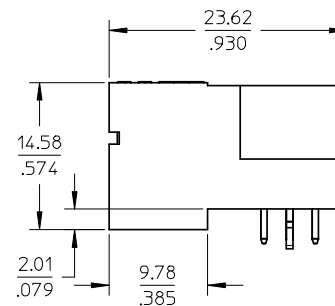
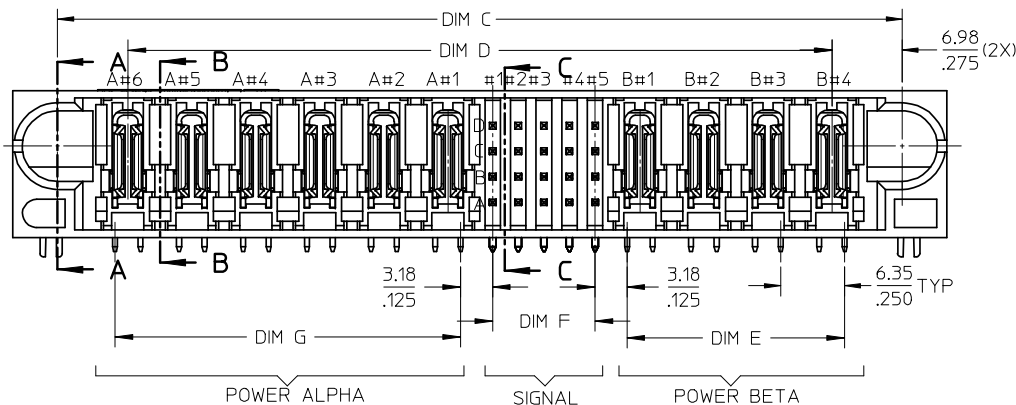
This document was generated on 05/25/2010

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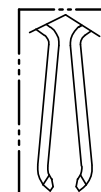
10 9 8 7 6 5 4 3 2 1



ISOMETRIC VIEW



SHORT BLADE OPTION



LONG BLADE OPTION

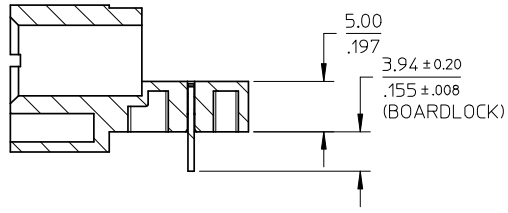
DETAIL R  
(SEE TABLE FOR BLADE OPTION)

NOTES:

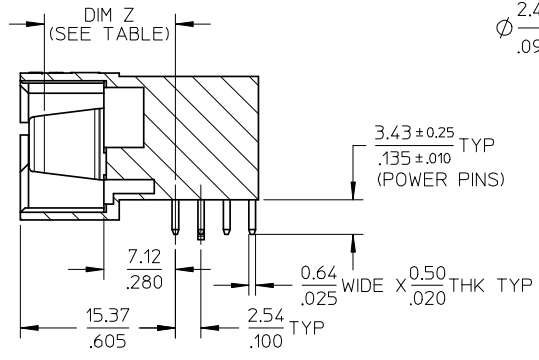
- MATERIALS: LCP GLASS FILLED , UL94V-0, COLOUR: BLACK  
POWER PINS - COPPER ALLOY  
SIGNAL PINS - COPPER ALLOY
- FINISHES: POWER & SIGNAL PINS:  
SELECTIVE GOLD IN CONTACT AREA.  
THICKNESS= 0.76 MICROMETER/ 30 MICROINCH MINIMUM  
SELECTIVE TIN THE PC TAIL AREA  
THICKNESS= 2.54 MICROMETER/100 MICROINCH MINIMUM  
1.27um NICKEL OVERALL.
- PRODUCT SPECIFICATION: PS-87631-006.
- SEE SHEET 2 FOR RECOMMENDED PCB LAYOUT AND THICKNESS.
- COMPONENT STAY AWAY ZONE FROM CONNECTOR.
- MANUFACTURER LOGO, PART NUMBER AND YEAR-WEEK CODE.
- 6P ALPHA-20 SIGNAL-4P BETA CONFIGURATION IS SHOWN FOR ILLUSTRATION. P-S-P CONFIGURATION IS AVAILABLE UP TO 203mm/8 INCHES. PLEASE CONTACT MOLEX SALES PERSONNEL FOR OTHER CONFIGURATION AND OPTION NEEDED.

<b>PDR#S-001800-00-00</b> EC NO: S2008-1060 DRW:WATSEE 2008/06/13 CHKD:SKANG 2008/06/13 APPR:MLONG 2008/06/13 D6	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM/IN		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY	DATE	TITLE			
		4 PLACES	± ---	± ---	BHLOW	2002/09/24	POWER CONNECTOR HEADER			
		3 PLACES	± ---	± .010	CHECKED BY	DATE	P(A)-S-P(B) CONFIG.			
			2 PLACES	± 0.25	± ---	KCL ING	2002/09/30	R/A, T/H, BOARD-LOCK		
			1 PLACE	± ---	± ---	APPROVED BY	DATE	MOLEX INCORPORATED		
			ANGULAR ± 3 °		SKTOH	2002/10/03	DOCUMENT NO.		SHEET NO.	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		MATERIAL NO.		SD-87631-014		1 OF 3		
		SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

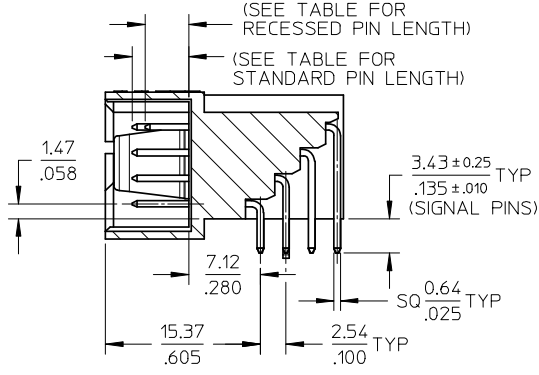
9 8 7 6 5 4 3 2 1



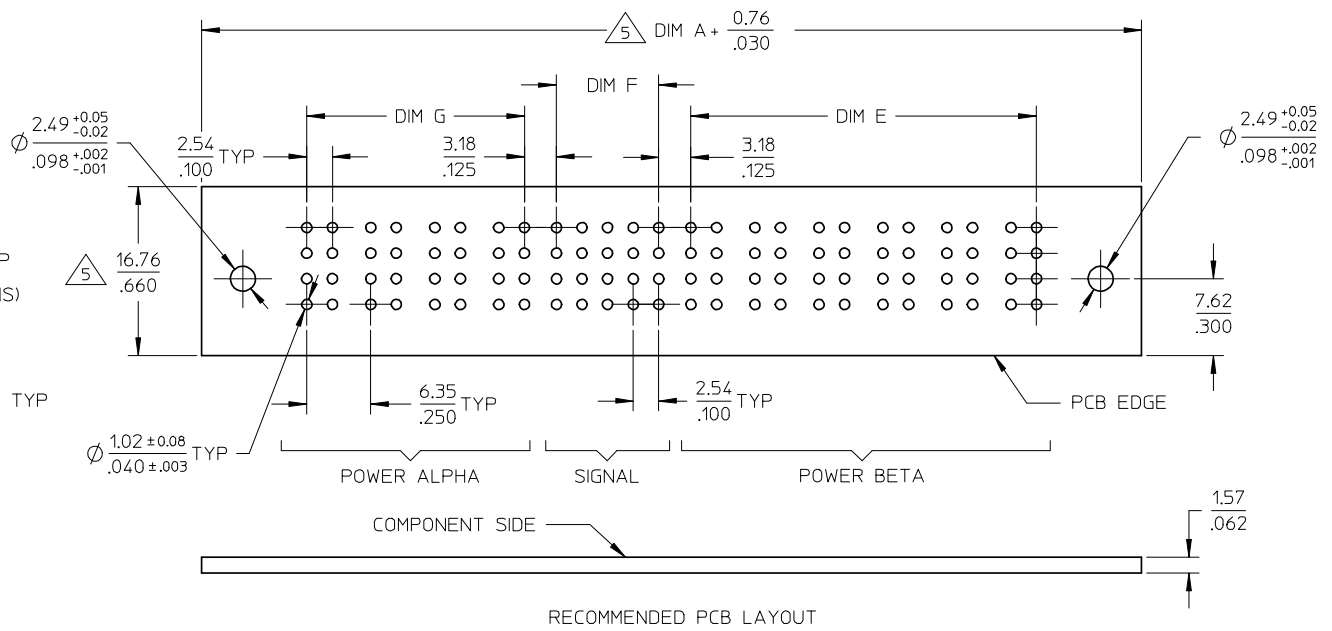
SECTION A-A



SECTION B-B



SECTION C-C



RECOMMENDED PCB LAYOUT

<b>PDR#S-001800-00-00</b> EC NO: S2008-1060 DRWN:ATSEE 2008/06/13 CHKD:SKANG 2008/06/13 APPR:MLONG 2008/06/13	QUALITY SYMBOLS ▽=0 ∇=0	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	DIMENSION STYLE MM/IN DRAWN BY DATE BHLW 2002/09/24 CHECKED BY DATE KCL ING 2002/09/30 APPROVED BY DATE SKTOH 2002/10/03	SCALE NTS DESIGN UNITS METRIC THIRD ANGLE PROJECTION	TITLE POWER CONNECTOR HEADER P(A)-S-P(B) CONFIG. R/A, T/H, BOARD-LOCK MOLEX INCORPORATED DOCUMENT NO. SD-87631-014	SHEET NO. 2 OF 3
	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			
	REV D6	DESCRIPTION				

10		9		8		7		6		5		4		3		2		1	
PART NUMBER	P-S-P CONFIGURATION			DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	DIM G	POWER TYPE	BLADE OPTIONS DIM Z ± 0.13/0.005	STANDARD SIGNAL PIN LENGTH	RECESSED SIGNAL PIN		VOID SIGNAL LOCATION	PACKAGING		
	POWER ALPHA	SIGNAL	POWER BETA											LENGTH	LOCATION				
87631-2001	2	48	2	72.38 2.850	64.77 2.550	63.49 2.500	49.53 1.950	8.89 .350	27.94 1.100	8.89 .350	SHORT CONTACT	13.32/524	5.59/.220	4.32/.170	A1,A12,D1,D12	NIL	TRAY		
87631-2002	7	32	6	119.38 4.700	111.76 4.400	110.48 4.350	96.52 3.800	34.29 1.350	17.78 .700	40.64 1.600	SHORT CONTACT	13.32/524	5.59/.220	4.32/.170	A3,B6,C3,D5	NIL			
87631-2003	7	32	6	119.38 4.700	111.76 4.400	110.48 4.350	96.52 3.800	34.29 1.350	17.78 .700	40.64 1.600	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	A3,B6,C3,D5	NIL			
87631-2004	5	32	5	100.33 3.950	92.71 3.650	91.44 3.600	77.47 3.050	27.94 1.100	17.78 .700	27.94 1.100	LONG CONTACT	14.12/.556	6.45/.254	NIL	NIL	NIL			
87631-2005	2	24	2	57.15 2.250	49.53 1.950	48.26 1.900	34.29 1.350	8.89 .350	12.70 .500	8.89 .350	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	B3,D3	A6,B6,C5,D5			
87631-2006	4	28	4	85.09 3.350	77.47 3.050	76.20 3.000	62.23 2.450	21.59 .850	15.24 .600	21.59 .850	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	A1	NIL			
87631-2010	1	16	1	39.37 1.550	31.75 1.250	30.48 1.200	16.51 .650	2.54 .100	7.62 .300	2.54 .100	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	B1	NIL			
87631-2013	4	40	4	92.71 3.650	85.09 3.350	83.82 3.300	69.85 2.750	21.59 .850	22.86 .900	21.59 .850	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	A1,A10	NIL			
87631-2014	4	16	2	64.77 2.550	57.15 2.250	55.88 2.200	41.91 1.650	8.89 .350	7.62 .300	21.59 .850	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	A1,A2,A4,B1B3,C2,C4,D1,D2,D3,D4	NIL			
87631-2019	2	24	2	57.15 2.250	49.53 1.950	48.26 1.900	34.29 1.350	8.89 .350	12.70 .500	8.89 .350	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	A6,B6,C6,D6	NIL			
87631-2020	2	16	2	52.08 2.050	44.45 1.750	43.19 1.700	29.22 1.150	8.89 .350	7.62 .300	8.89 .350	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	NIL	NIL			
87631-2021	4	24	2	69.84 2.750	62.23 2.450	60.95 2.400	46.99 1.850	8.89 .350	12.70 .500	21.59 .850	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	C1	NIL			
87631-2022	6	24	6	107.95 4.250	100.33 3.950	99.06 3.900	85.09 3.350	34.29 1.350	12.70 .500	34.29 1.350	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	B4	NIL			
87631-2023	3	24	3	69.85 2.750	62.23 2.450	60.96 2.400	46.99 1.850	15.24 0.600	12.70 .500	15.24 0.600	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	B3,D6	NIL			
87631-2025	6	60	6	130.81 5.150	123.19 4.850	121.92 4.800	107.95 4.250	34.29 1.350	35.56 1.400	34.29 1.350	LONG CONTACT	14.12/.556	6.86/.270	NIL	NIL	NIL			
87631-2026	4	24	4	82.55 3.250	74.93 2.950	73.66 2.900	59.69 2.350	21.59 .850	12.70 .500	21.59 .850	LONG CONTACT	14.12/.556	6.86/.270	NIL	NIL	NIL			
87631-2028	3	24	3	69.85 2.750	62.23 2.450	60.96 2.400	46.99 1.850	15.24 0.600	12.70 .500	15.24 0.600	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	D2	NIL			
87631-2030	2	24	2	57.15 2.250	49.53 1.950	48.26 1.900	34.29 1.350	8.89 .350	12.70 .500	8.89 .350	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	C6	NIL			
87631-2032	4	16	2	64.77 2.550	57.15 2.250	55.88 2.200	41.91 1.650	8.89 .350	7.62 .300	21.59 .850	LONG CONTACT	14.12/.556	6.86/.270	5.59/.220	A1,A2,A3,A4,B2,B4,C1,C3,D1,D2,D4	NIL			

<b>PDR#S-001800-00-00</b> EC NO: S2008-1060 DRW: N/AT/SEE CHKD: SKANG APPR: M/LONG 2008/06/13 2008/06/13 2008/06/13	QUALITY SYMBOLS = 0 = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE <b>MM/IN</b>		SCALE <b>NTS</b>	DESIGN UNITS <b>METRIC</b>	THIRD ANGLE PROJECTION			
		4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± ---	mm      INCH	DRAWN BY BHL0W	DATE 2002/09/24	TITLE <b>POWER CONNECTOR HEADER          P(A)-S-P(B) CONFIG.          R/A, T/H, BOARD-LOCK</b>					
		ANGULAR ± 3 °		CHECKED BY KCL ING	DATE 2002/09/30	MOLEX INCORPORATED					
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		APPROVED BY SKTOH	DATE 2002/10/03	MATERIAL NO. <b>SEE TABLE</b>	DOCUMENT NO. <b>SD-87631-014</b>	SHEET NO. <b>3 OF 3</b>			