

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

**Part Number:** [0876313024](#)  
**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, Long Contacts, 14 Circuits, Power Alpha 1, Signal 12, Power Beta 1, No Recessed Signal Pin, 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>Long Contacts|<LI>Recessed Signal Pin: Nil  
Overview [extreme\\_powerplus\\_ssi](#)  
Product Literature Order No 987650-3002  
Product Name EXTreme PowerPlus™

**Physical**

Breakaway No  
Circuits (Loaded) 14  
Circuits (maximum) 14  
Circuits Detail Power Alpha 1, Signal 12, Power Beta 1  
Color - Resin Black  
Durability (mating cycles max) 100  
First Mate / Last Break No  
Flammability 94V-0  
Glow-Wire Compliant No  
Guide to Mating Part Yes  
Keying to Mating Part None  
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 Locator Yes  
PCB Retention Yes  
PCB Thickness Recommended (in) 0.062 In  
PCB Thickness Recommended (mm) 1.60 mm  
Packaging Type Tray  
Pitch - Mating Interface (in) 0.100 In, 0.250 In  
Pitch - Mating Interface (mm) 2.54 mm, 6.35 mm  
Plating min: Mating (µin) 30  
Plating min: Mating (µm) 0.76  
Plating min: Termination (µin) 101.6  
Plating min: Termination (µm) 2.54



**EU RoHS**

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

**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**

[87631Series](#)

**Mates With**

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

Polarized to Mating Part	Yes
Polarized to PCB	Yes
Shrouded	Fully
Stackable	No
Surface Mount Compatible (SMC)	Yes
Temperature Range - Operating	-20°C to +105°C
Termination Interface: Style	Through Hole

### **Electrical**

Current - Maximum per Contact	2.5A, 30A
Voltage - Maximum	50V 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

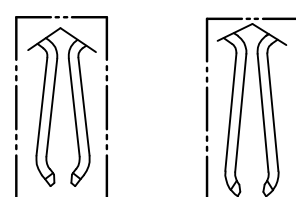
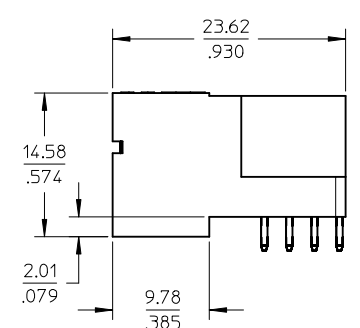
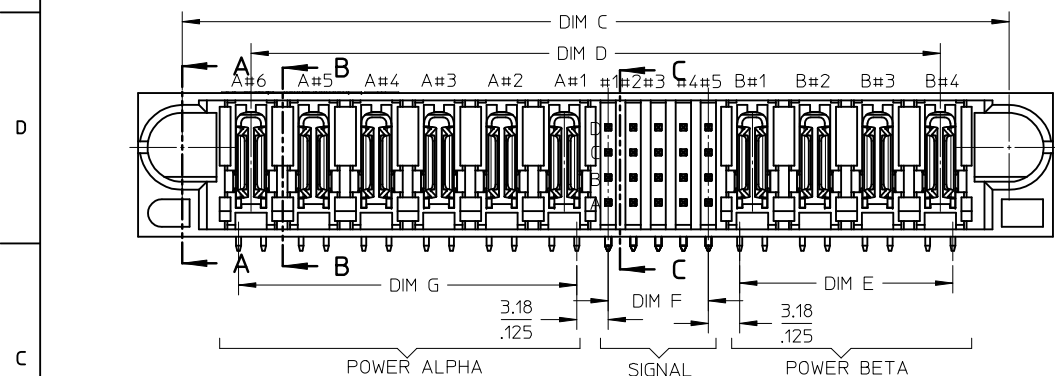
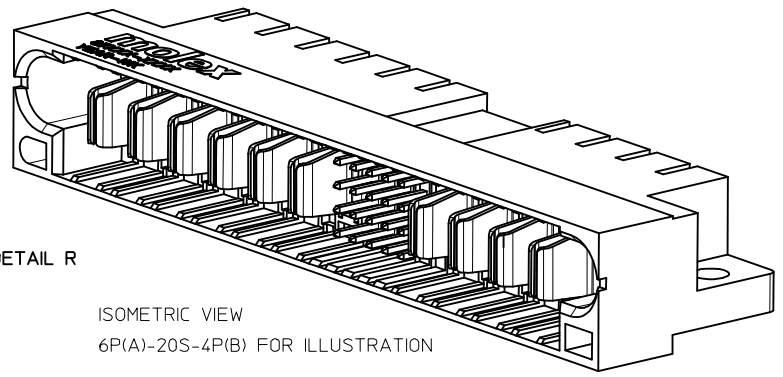
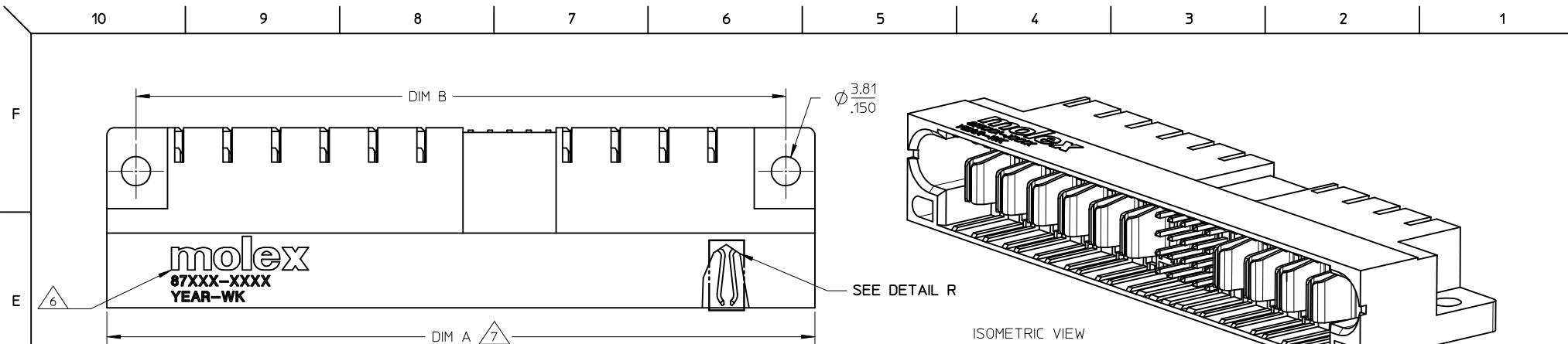
### **Material Info**

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

Application Specification	AS-87631-018
Product Specification	PS-87631-006
Sales Drawing	SD-87631-013

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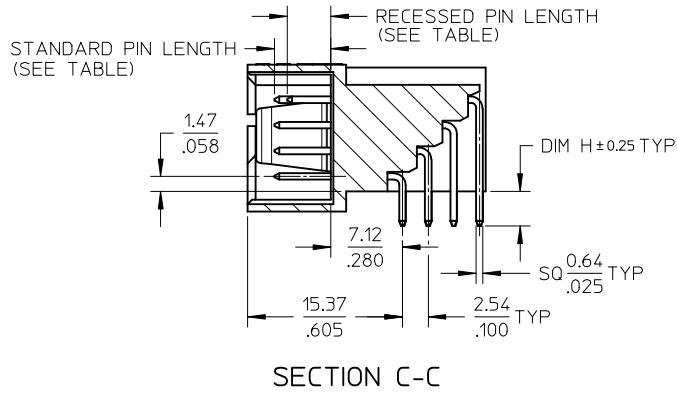


SHORT BLADE OPTION LONG BLADE OPTION  
DETAIL R

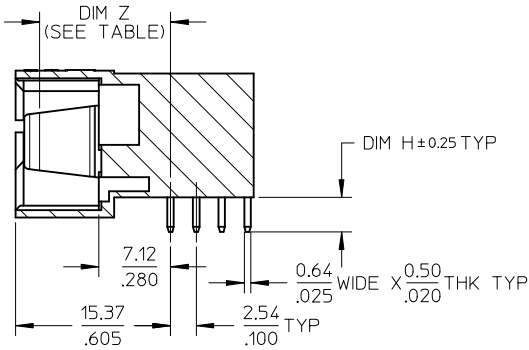
(SEE TABLE FOR BLADE OPTION)

- NOTES:
- MATERIALS: HOUSING- 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 IN 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.
5. COMPONENT STAY AWAY ZONE FROM CONNECTOR.
6. MANUFACTURER LOGO, PART NUMBER AND YEAR-WEEK CODE.
7. 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.

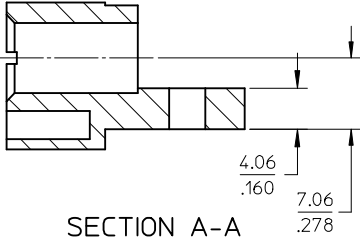
ADD P/N 87631-3050 EC NO: S2009-0538 DRWN:SKANG CHKD:ATSEE APPR:MLONG 2009/02/09 2009/02/09 2009/02/13	DESCRIPTION C13 REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
		$\nabla=0$ $\nabla=0$	mm      INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3°	MM/IN	NTS	METRIC	
			DRAWN BY: BHLW      DATE: 2002/11/25 CHECKED BY: PTLIM      DATE: 2002/11/26 APPROVED BY: SKTOH      DATE: 2002/11/27	TITLE	POWER CONNECTOR HEADER P(A)-S-P(B) CONFIG. R/A, T/H, SCREW-MOUNT		
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-87631-013	MOLEX INCORPORATED		SHEET NO. 1 OF 4



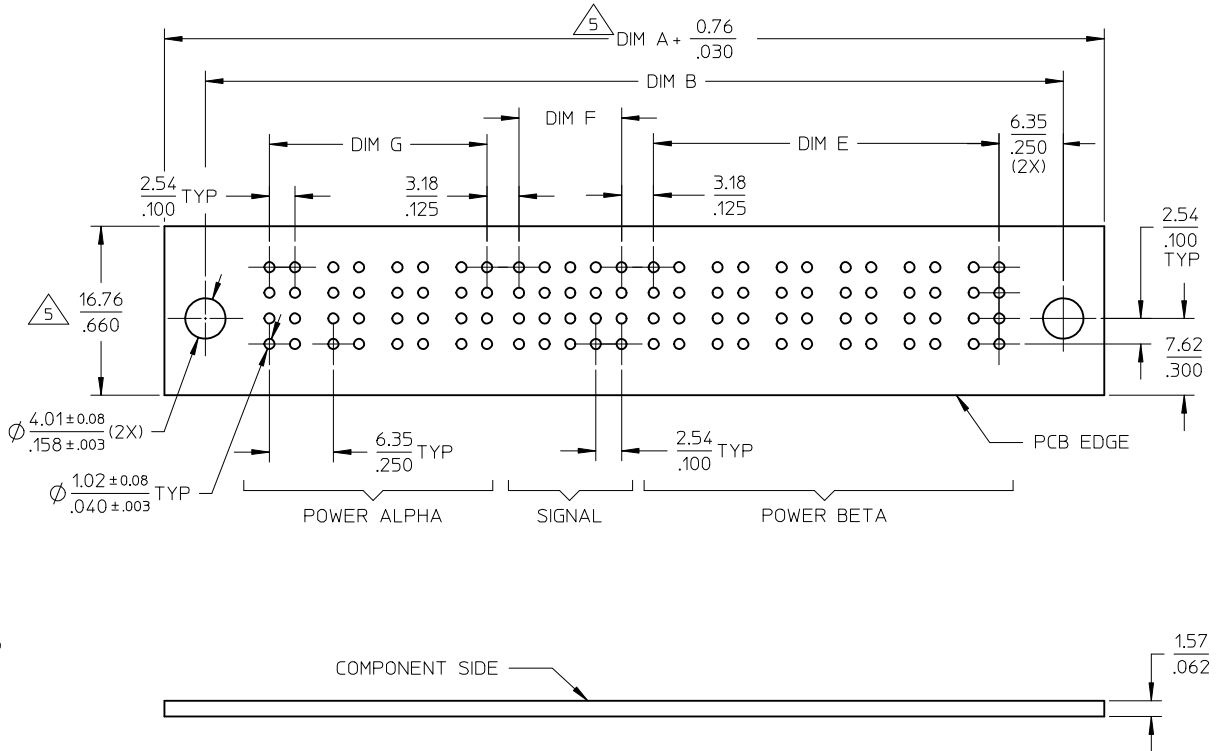
SECTION C-C



SECTION B-B



SECTION A-A



RECOMMENDED PCB LAYOUT

ADD P/N 87631-3050 EC NO: S2009-0538 DRWN:SKANG CHKD:ATSEE APPR:MLONG	2009/02/09 2009/02/09 2009/02/13	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
			$\nabla=0$ $\square=0$	mm    INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	MM/IN	NTS	METRIC	DRAWN BY: BHLW    DATE: 2002/11/25 CHECKED BY: PTLIM    DATE: 2002/11/26 APPROVED BY: SKTOH    DATE: 2002/11/27	TITLE	POWER CONNECTOR HEADER P(A)-S-P(B) CONFIG. R/A, T/H, SCREW-MOUNT
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE TABLE	MATERIAL NO. SKTOH	MOLEX INCORPORATED DOCUMENT NO. SD-87631-013	SHEET NO. 2 OF 4			
			SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

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	DIM H	POWER BLADE OPTIONS		STANDARD SIGNAL		RECESSED SIGNAL PIN		VOID SIGNAL LOCATION	PACKAGING
	POWER ALPHA	SIGNAL	POWER BETA									TYPE	DIM Z ±0.13/.005	PIN LENGTH	LENGTH	LOCATION			
87631-3000	3	24	5	82.54 3.250	74.93 2.950	73.65 2.900	59.69 2.350	27.94 1.100	12.70 .500	15.24 .600	3.43 .135	SHORT CONTACT	13.32 / .524	5.59 / .220	4.32/.170		NIL		TRAY
87631-3001	6	20	4	92.71 3.650	85.10 3.350	83.82 3.300	69.86 2.750	21.59 .850	10.16 .400	34.29 1.350							C2		TRAY
87631-3002	4	24	4	82.54 3.250	74.93 2.950	73.65 2.900	59.69 2.350	21.59 .850	12.70 .500	21.59 .850							A1		TRAY
87631-3003	3	24	3	69.84 2.750	62.23 2.450	60.95 2.400	46.99 1.850	15.24 .600	12.70 .500	15.24 .600							NIL		TRAY
87631-3004	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							NIL		TRAY
87631-3006	2	32	2	62.23 2.450	54.61 2.150	53.34 2.100	39.37 1.550	8.89 .350	17.78 .700	8.89 .350							NIL		TRAY
87631-3008	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							B4		TRAY
87631-3009	2	24	4	69.84 2.750	62.23 2.450	60.95 2.400	46.99 1.850	21.59 .850	12.70 .500	8.89 .350							B4		TRAY
87631-3010	4	24	6	95.24 3.750	87.63 3.450	86.35 3.400	72.39 2.850	34.29 1.350	12.70 .500	21.59 .850							B4		TRAY
87631-3011	6	24	5	101.59 4.000	93.98 3.700	92.70 3.650	78.74 3.100	27.94 1.100	12.70 .500	34.29 1.350							A3, B6, C3, D5		TRAY
87631-3013	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							C1		TRAY
87631-3020	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	TRAY
87631-3015	4	20	4	80.00 3.150	72.39 2.850	71.11 2.800	57.15 2.250	21.59 .850	10.16 .400	21.59 .850							B3		TRAY
87631-3021	6	24	5	101.59 4.000	93.98 3.700	92.70 3.650	78.74 3.100	27.94 1.100	12.70 .500	34.29 1.350							A3, B6, C3, D5		TRAY
87631-3022	2	12	2	49.53 1.950	41.91 1.650	40.64 1.600	26.67 1.050	8.89 .350	5.08 .200	8.89 .350							B2 C3		TRAY
87631-3023	2	12	2	49.53 1.950	41.91 1.650	40.64 1.600	26.67 1.050	8.89 .350	5.08 .200	8.89 .350	2.34 .092						B1 C3		TRAY
87631-3024	1	12	1	36.83 1.450	29.21 1.150	27.94 1.100	13.97 .550	2.54 .100	5.08 .200	2.54 .100	3.43 .135						NIL		TRAY
87631-3028	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	3.43 .135						C6		TRAY
87631-3031	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	3.43 .135						C1		TRAY
87631-3037	3	24	3	69.84 2.750	62.23 2.450	60.95 2.400	46.99 1.850	15.24 .600	12.70 .500	15.24 .600	3.43 .135						ALL EXCEPT A6,B1,C1		TRAY
87631-3038	4	16	2	64.77 2.550	57.16 2.250	55.88 2.200	41.92 1.650	8.89 .350	7.62 .300	21.59 .850	3.43 .135						A1,A2,A4,B1,B3 C2,C4,D1,D2,D3,D4		TRAY
87631-3041	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	3.43 .135						C3		TRAY

<b>A</b> ADD P/N 87631-3050 EC NO: S2009-0538 DRWN:SKANG CHYD:ATSEE APPR:MLONG 2009/02/09 2009/02/09 2009/02/13 DESCRIPTION REV C13	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 <b>MM/IN</b> DRAWN BY BHLW DATE 2002/11/25 CHECKED BY PTL IM DATE 2002/11/26 APPROVED BY SKTOH DATE 2002/11/27 MATERIAL NO. SEE TABLE DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SCALE NTS DESIGN UNITS METRIC THIRD ANGLE PROJECTION	TITLE <b>POWER CONNECTOR HEADER P(A)-S-P(B) CONFIG. R/A, T/H, SCREW-MOUNT</b> <b>MOLEX INCORPORATED</b> DOCUMENT NO. SD-87631-013 SHEET NO. 3 OF 4
	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				
	SIZE A3				
	INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

PART NUMBER	P-S-P CONFIGURATION			DIM A	DIM B	DIM C	DIM D	DIM E	DIM F	DIM G	DIM H	POWER BLADE OPTIONS		STANDARD SIGNAL PIN LENGTH	RECESSED SIGNAL PIN		VOID SIGNAL LOCATION		PACKAGING
	POWER ALPHA	SIGNAL	POWER BETA									TYPE	DIM Z ± 0.13/.005		LENGTH	LOCATION	SIGNAL LOCATION		
87631-3042	2	16	2	52.07 2.050	44.45 1.750	43.18 1.700	29.21 1.150	8.89 .350	7.62 .300	8.89 .350	3.43 .135	LONG CONTACT	14.12 / .556	6.86 / .270	5.59/.220	B3,C4	NIL	TRAY	
87631-3043	7	28	7	123.19 4.850	115.57 4.550	114.30 4.500	100.33 3.950	40.64 1.600	15.24 .600	40.64 1.600	3.43 .135	LONG CONTACT	14.12 / .556	6.86 / .270	5.59/.220	B4,C4		TRAY	
87631-3044	7	28	7	123.19 4.850	115.57 4.550	114.30 4.500	100.33 3.950	40.64 1.600	15.24 .600	40.64 1.600	3.43 .135	LONG CONTACT	14.12 / .556	6.86 / .270	5.59/.220	NIL		TRAY	
87631-3045	6	28	4	97.79 3.850	90.17 3.550	88.90 3.500	74.93 2.950	21.59 .850	15.24 .600	34.29 1.350	3.43 .135	LONG CONTACT	14.12 / .556	6.86 / .270	5.59/.220	A1	A7,B7,C7,D7	TRAY	
87631-3046	6	24	4	95.25 3.750	87.63 3.450	86.36 3.400	72.39 2.850	21.59 .850	12.70 .500	34.29 1.350	3.43 .135	LONG CONTACT	14.12 / .556	6.86 / .270	5.59/.220	A1	NIL	TRAY	
87631-3047	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	3.43 .135	LONG CONTACT	14.12 / .556	6.86 / .270	5.59/.220	A6,B6,C6,D6		TRAY	
87631-3048	2	16	2	52.07 2.050	44.45 1.750	43.18 1.700	29.21 1.150	8.89 .350	7.62 .300	8.89 .350	3.43 .135	LONG CONTACT	14.12 / .556	6.86 / .270	5.59/.220	A2,D4	A1,B2,C2,D1	TRAY	
87631-3049	4	24	4	82.54 3.250	74.93 2.950	73.65 2.900	59.69 2.350	21.59 .850	12.70 .500	21.59 .850	3.43 .135	LONG CONTACT	14.12 / .556	6.86 / .270	5.59/.220	A6	NIL	TRAY	
87631-3050	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	3.43 .135	LONG CONTACT	14.12 / .556	6.86 / .270	5.59/.220	A5	NIL	TRAY	

ADD P/N 87631-3050 EC NO: S2009-0538 DRWN:SKANG CHKD:ATSEE APPR:MLONG	2009/02/09 2009/02/09 2009/02/13	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
			$\nabla = 0$ $\square = 0$	mm    INCH	MM/IN	NTS	METRIC	DRAWN BY: BHLW    DATE: 2002/11/25 CHECKED BY: PTLIM    DATE: 2002/11/26 APPROVED BY: SKTOH    DATE: 2002/11/27	TITLE	
				4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	SEE TABLE			POWER CONNECTOR HEADER P(A)-S-P(B) CONFIG. R/A, T/H, SCREW-MOUNT MOLEX INCORPORATED		
				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		MATERIAL NO.    DOCUMENT NO. SD-87631-013	SHEET NO. 4 OF 4	