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Part Number: [0876313004](#)
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, 28 Circuits, Power Alpha 2, Signal 24, Power Beta 2, 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 Short Contacts|Recessed Signal Pin: Nil
Overview [extreme_powerplus_ssi](#)
Product Name EXTreme PowerPlus™

Physical

Breakaway No
Circuits (Loaded) 28
Circuits Detail Power Alpha 2, Signal 24, Power Beta 2
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 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 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) 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
Not Reviewed

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

[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, 30A |
| Voltage - Maximum | 250V DC |

Solder Process Data

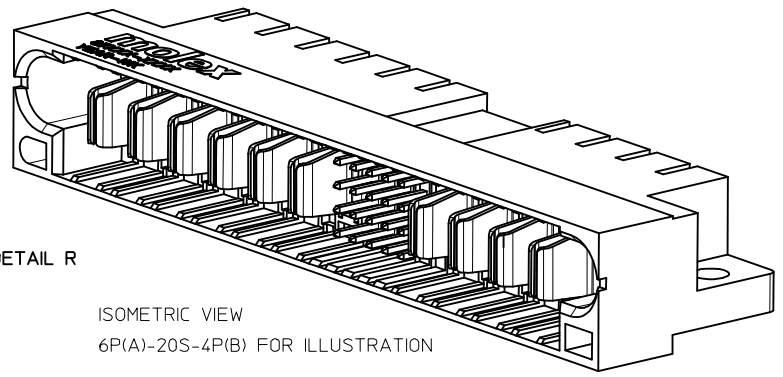
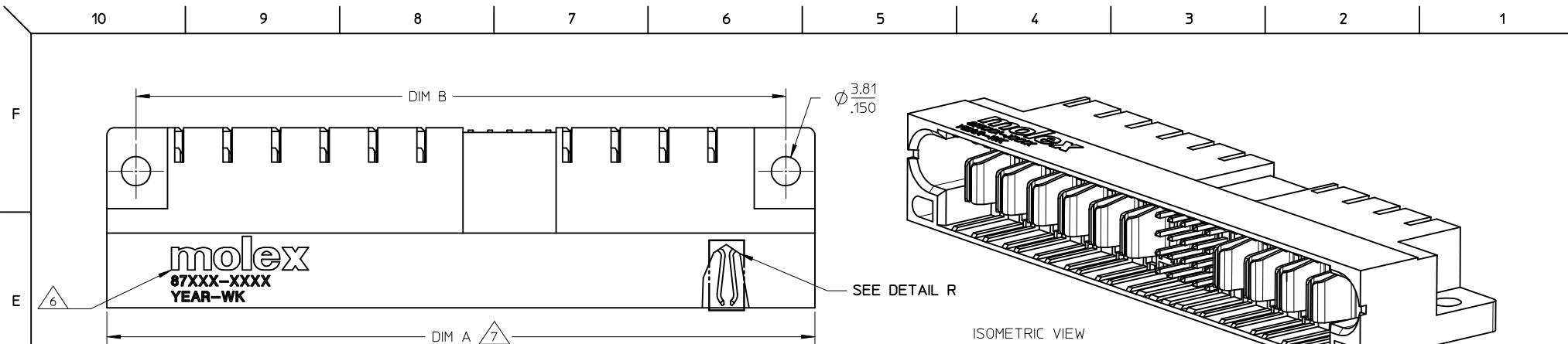
| | |
|--|------------------------------|
| Duration at Max. Process Temperature (seconds) | 10 |
| Lead-free Process Capability | SMC & Wave Capable (TH only) |
| Max. Cycles at Max. Process Temperature | 3 |
| Process Temperature max. C | 260 |

Material Info**Reference - Drawing Numbers**

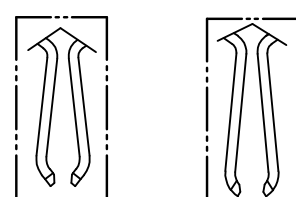
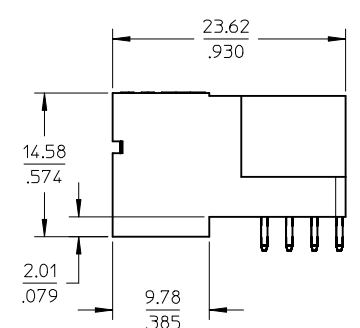
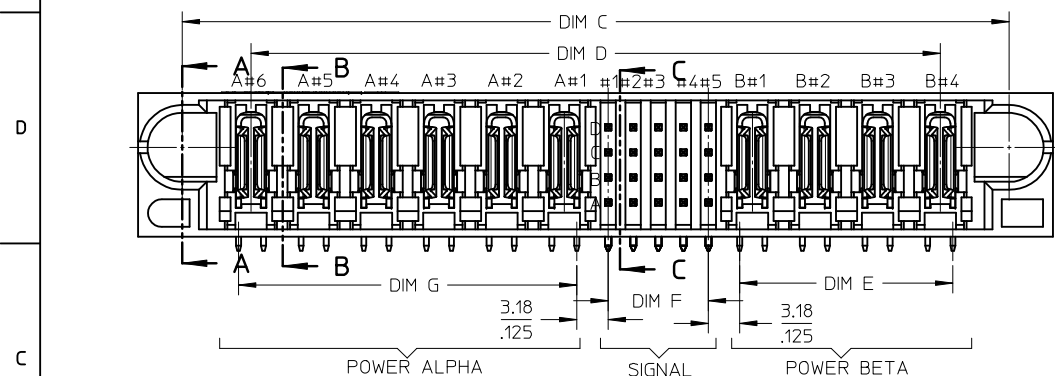
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|---------------------------|--------------|
| Application Specification | AS-87631-018 |
| Product Specification | PS-87631-006 |
| Sales Drawing | SD-87631-013 |

This document was generated on 05/25/2010

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ISOMETRIC VIEW
6P(A)-20S-4P(B) FOR ILLUSTRATION

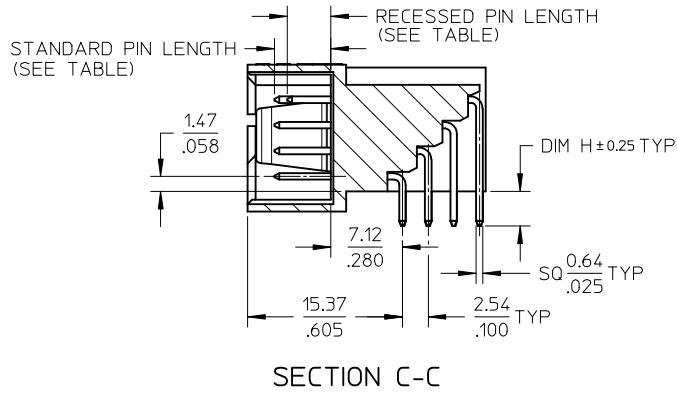


SHORT BLADE OPTION LONG BLADE OPTION
DETAIL R

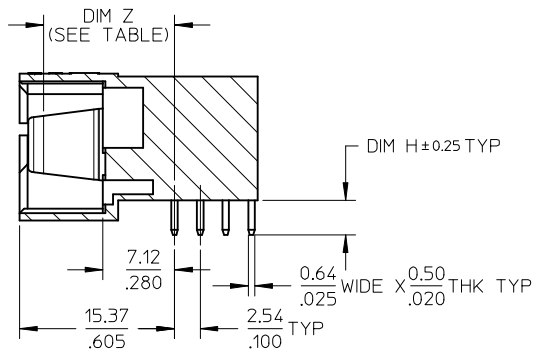
(SEE TABLE FOR BLADE OPTION)

- 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.

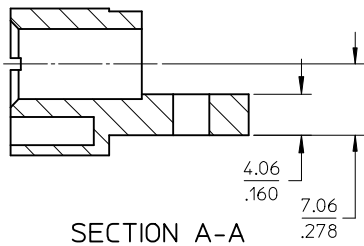
| | | | | | | | | |
|---|--|---|-----------------------|---------------------------------------|-----------------|------------------------|--------------|------------------------|
| ADD P/N 87631-3050 EC NO: S2009-0538 DRWN:SKANG CHKD:ATSEE APPR:MLONG | 2009/02/09 2009/02/09 2009/02/13 | DESCRIPTION C13 | QUALITY SYMBOLS | GENERAL TOLERANCES (UNLESS SPECIFIED) | DIMENSION STYLE | SCALE | DESIGN UNITS | THIRD ANGLE PROJECTION |
| | | | ▽=0 | mm INCH | MM/IN | NTS | METRIC | |
| | | | ▽=0 | 4 PLACES ± --- ± --- | BHLOW DATE | TITLE | | |
| | | | | 3 PLACES ± --- ± .010 | CHECKED BY DATE | POWER CONNECTOR HEADER | | |
| | 2 PLACES ± 0.25 ± --- | PTL IM DATE | P(A)-S-P(B) CONFIG. | | | | | |
| | 1 PLACE ± --- ± --- | APPROVED BY DATE | R/A, T/H, SCREW-MOUNT | | | | | |
| | ANGULAR ± 3° | SKTOH DATE | MOLEX INCORPORATED | | | | | |
| | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | MATERIAL NO. | SEE TABLE | | DOCUMENT NO. | SHEET NO. | | |
| | | SIZE | A3 | | SD-87631-013 | 1 OF 4 | | |
| | | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | | | | |



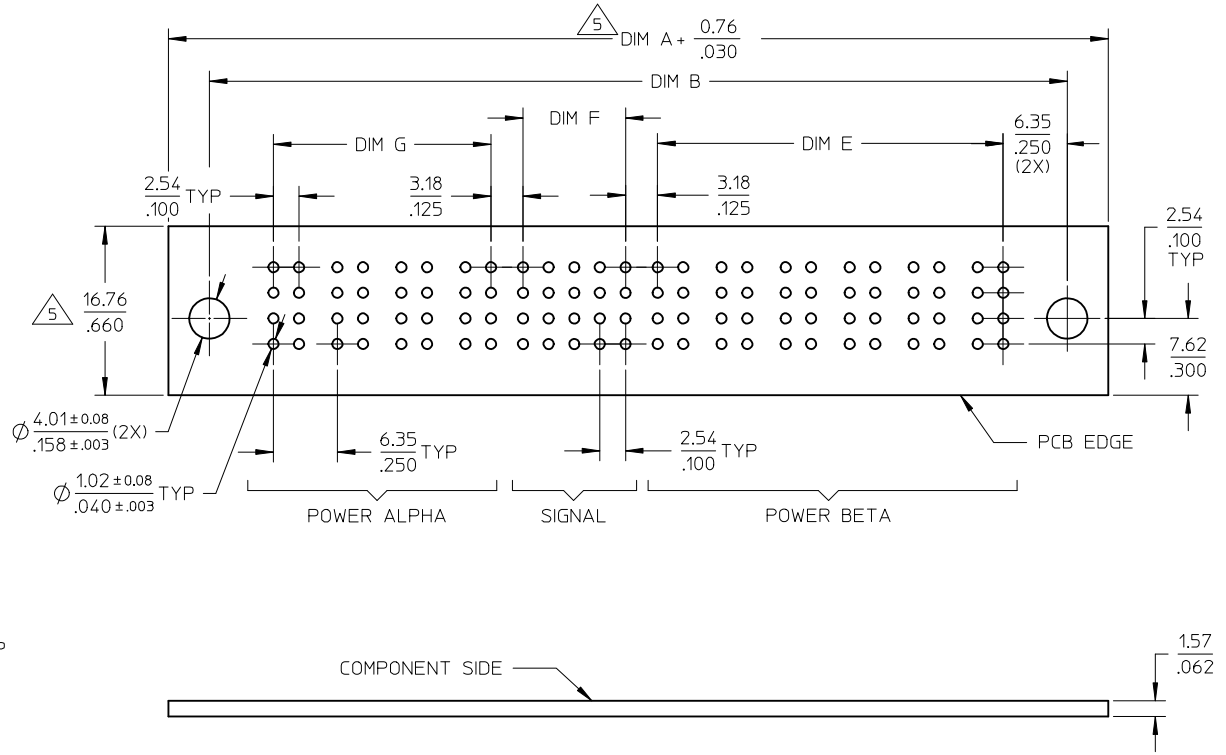
SECTION C-C



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 | |
| | | | $\nabla=0$ $\nabla C=0$ | mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 ° | MM/IN | NTS | METRIC | | |
| | | | | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | 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 | | |
| | | | C13 | | SEE TABLE THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | MOLEX INCORPORATED DOCUMENT NO. SD-87631-013 SHEET NO. 2 OF 4 | | | |

| 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 3.350 | 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 |

| | | | | | | |
|---|---|--|--|--|--|------------------|
| A 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 MM/IN 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 | SCALE NTS DESIGN UNITS METRIC THIRD ANGLE PROJECTION | TITLE POWER CONNECTOR HEADER P(A)-S-P(B) CONFIG. R/A, T/H, SCREW-MOUNT MOLEX INCORPORATED DOCUMENT NO. SD-87631-013 | SHEET NO. 3 OF 4 |
| | 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 | | | | | |
| | SIZE A3 | | | | | |

| 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 | | |
| 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 | POWER CONNECTOR HEADER P(A)-S-P(B) CONFIG. R/A, T/H, SCREW-MOUNT |
| | | | | 4 PLACES ± --- ± --- 3 PLACES ± --- ± .010 2 PLACES ± 0.25 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 ° | SEE TABLE | MOLEX INCORPORATED SD-87631-013 | SHEET NO. 4 OF 4 | | | |
| | | | 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 | | | | | | |