

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

**Part Number:** [0444281201](#)  
**Status:** **Active**  
**Overview:** [microfit 30](#)  
**Description:** 3.00mm (.118") Pitch Micro-Fit 3.0 BMI™ Header, Surface Mount Compatible, Dual Row, Right Angle, with Snap-in Plastic Peg PCB Lock, 12 Circuits, Tin (Sn) Plating

**Documents:**

[3D Model](#) [Product Specification PS-44300-001 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

|     |           |
|-----|-----------|
| CSA | LR19980   |
| TUV | R72081037 |
| UL  | E29179    |

**General**

|                             |  |
|-----------------------------|--|
| Product Family              | PCB Headers  |
| Series                      | <a href="#">44428</a>  |
| Application                 | Board-to-Board, Wire-to-Board                                    |
| Comments                    | High Temperature Square Pin Solder Type Polarized to Mating Part |
| Overview                    | <a href="#">microfit 30</a>                                      |
| Product Literature Order No | USA-106  |
| Product Name                | Micro-Fit 3.0 BMI™   |

**Physical**

|                                |                                |
|--------------------------------|--------------------------------|
| Breakaway                      | No                             |
| Circuits (Loaded)              | 12                             |
| Circuits (maximum)             | 12                             |
| Color - Resin                  | Black                          |
| Durability (mating cycles max) | 30                             |
| First Mate / Last Break        | No                             |
| Flammability                   | 94V-0                          |
| Glow-Wire Compliant            | No                             |
| Guide to Mating Part           | No                             |
| Keying to Mating Part          | None                           |
| Lock to Mating Part            | Yes                            |
| Material - Metal               | Brass                          |
| Material - Plating Mating      | Tin                            |
| Material - Plating Termination | Tin                            |
| Material - Resin               | High Temperature Thermoplastic |
| Number of Rows                 | 2                              |
| Orientation                    | Right Angle                    |
| PC Tail Length (in)            | 0.138 In                       |
| PC Tail Length (mm)            | 3.50 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)  | 0.118 In                       |
| Pitch - Mating Interface (mm)  | 3.00 mm                        |
| Plating min: Mating (µin)      | 200                            |
| Plating min: Mating (µm)       | 5.08                           |
| Plating min: Termination (µin) | 200                            |
| Plating min: Termination (µm)  | 5.08                           |



**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC Contains SVHC: No**  
**Halogen-Free Status**

**China RoHS**



**Not 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**

[44428Series](#)

**Mates With**

[44133](#) , [44764](#) , [44769](#)

|                                |                 |
|--------------------------------|-----------------|
| 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 | 5A   |
| Voltage - Maximum             | 250V |

### **Solder Process Data**

|  |                        |
|--|------------------------|
| Duration at Max. Process Temperature (seconds) | 5                      |
| Lead-free Process Capability                   | Wave Capable (TH only) |
| Max. Cycles at Max. Process Temperature        | 1                      |
| Process Temperature max. C                     | 260                    |

### **Material Info**

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

|                         |                             |
|-------------------------|-----------------------------|
| Packaging Specification | PK-44428-001                |
| Product Specification   | PS-44300-001, RPS-44300-001 |
| Sales Drawing           | SD-44428-001                |

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| CIRCUIT SIZE | A              | B              | C              |
|--------------|----------------|----------------|----------------|
| 04           | .512<br>13.00  | .118<br>3.00   | NA             |
| 06           | .630<br>16.00  | .236<br>6.00   | NA             |
| 08           | .748<br>19.00  | .354<br>9.00   | .184<br>4.68   |
| 10           | .866<br>22.00  | .472<br>12.00  | .302<br>7.68   |
| 12           | .984<br>25.00  | .590<br>15.00  | .420<br>10.68  |
| 14           | 1.102<br>28.00 | .709<br>18.00  | .539<br>13.68  |
| 16           | 1.220<br>31.00 | .827<br>21.00  | .657<br>16.68  |
| 18           | 1.338<br>34.00 | .945<br>24.00  | .775<br>19.68  |
| 20           | 1.457<br>37.00 | 1.063<br>27.00 | .893<br>22.68  |
| 22           | 1.575<br>40.00 | 1.181<br>30.00 | 1.011<br>25.68 |
| 24           | 1.693<br>43.00 | 1.299<br>33.00 | 1.129<br>28.68 |



PCB LAYOUT:  
COMPONENT SIDE  
4 CIRCUIT ONLY

PCB LAYOUT:  
COMPONENT SIDE  
6 CIRCUIT ONLY



PCB LAYOUT: COMPONENT SIDE  
RECOMMENDED PCB THICKNESS .062/1.57  
8 THRU 24 CIRCUITS

NOTES :

- MATERIALS - HOUSING : NYLON , GLASS-FILLED, UL94V-0 COLOR - BLACK  
TERMINAL : BRASS ALLOY  
TERMINAL POSITIONING STRIP : MYLAR, COLOR - NATURAL
- FINISH:  
A= .000200/(0.00508) MIN. TIN OVER .000050/(0.00127) MIN. NICKEL.  
B= .000015/(0.00038) MIN. SELECT GOLD IN CONTACT AREA, .000100/(0.00254) MIN. MATTE TIN ON SOLDER TAILS, BOTH OVER .000050/(0.00127) MIN. NICKEL.  
C= .000030/(0.00076) MIN. SELECT GOLD IN CONTACT AREA, .000100/(0.00254) MIN. MATTE TIN ON SOLDER TAILS, BOTH OVER .000050/(0.00127) MIN. NICKEL.  
\* THE PRIMARY SHIPPING CARTON WILL BE LABELED "COMPLIANT TO RoHS DIRECTIVE 2002/95/EC AND ELV ANNEX II OF DIRECTIVE 2000/53/EC." CARTONS WITHOUT THIS LABEL MAY CONTAIN PRODUCT WITH TIN/LEAD IN THE PC TAIL AREA.
- PRODUCT SPECIFICATION : PS-44300-001
- PACKAGING SPECIFICATION : PK-44428-001
- THIS ASSEMBLY MATES WITH MOLEX BMI PANEL MOUNT RECEPTACLE (SEE DRAWING SD-44133-001) WITH FEMALE CRIMP TERMINAL (SEE DRAWING SD-43030-\*\*\*\*) AND BMI RECEPTACLE HEADERS (SEE DRAWING SD-44764-001 OR SD-44769-001).
- THIS PART CONFORMS TO CLASS 'B' REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.

|   |                               |  |                     |  |                    |                              |                           |                        |
|---|-------------------------------|--|---------------------|--|--------------------|------------------------------|---------------------------|------------------------|
| CORRECT .230 DIM.<br>EC NO: UCP2008-0675<br>DRAWN:KIPER 2007/12/12<br>CHKD:SSOUSEK 2007/12/14<br>APPR:FSMLTH 2007/12/14 | QUALITY SYMBOLS<br>▽=0<br>▽=0 | GENERAL TOLERANCES (UNLESS SPECIFIED)                      |                     | DIMENSION STYLE<br>IN/MM   |                    | SCALE<br>4:1                 | DESIGN UNITS<br>METRIC    | THIRD ANGLE PROJECTION |
|   |                               | 4 PLACES ±--- ±---   | 3 PLACES ±--- ±.010 | 2 PLACES ±0.25 ±.015   | 1 PLACE ±0.38 ±--- | ANGULAR ±1/2°                | DRAWN BY<br>MUELLER       | DATE<br>1999/11/29     |
| H2  | REV                           | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |                     | APPROVED BY<br>EDGLEY  |                    | DATE<br>1999/11/30           | MATERIAL NO.<br>SEE CHART |                        |
|   |                               | SIZE<br>C  |                     | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                    | DOCUMENT NO.<br>SD-44428-001 | SHEET NO.<br>1 OF 2       |                        |

|   | 13              | 12                 | 11            | 10                   | 9               | 8                  | 7             | 6                    | 5   | 4 | 3 | 2 | 1 |
|---|-----------------|--------------------|---------------|----------------------|-----------------|--------------------|---------------|----------------------|---|---|---|---|---|
| J | MATERIAL NUMBER | NUMBER OF CIRCUITS | FINISH OPTION | RETENTION PEG OPTION | MATERIAL NUMBER | NUMBER OF CIRCUITS | FINISH OPTION | RETENTION PEG OPTION | <p style="text-align: center;"><b>POLARIZATION LAYOUT</b><br/><b>4-24 CIRCUITS</b></p>  <p style="text-align: center;">4 CIRCUIT</p>  <p style="text-align: center;">6 CIRCUIT</p>  <p style="text-align: center;">8 CIRCUIT</p>  <p style="text-align: center;">10 CIRCUIT</p>  <p style="text-align: center;">12 CIRCUIT</p>  <p style="text-align: center;">14 CIRCUIT</p>  <p style="text-align: center;">16 CIRCUIT</p>  <p style="text-align: center;">18 CIRCUIT</p>  <p style="text-align: center;">20 CIRCUIT</p>  <p style="text-align: center;">22 CIRCUIT</p>  <p style="text-align: center;">24 CIRCUIT</p> |   |   |   |   |
| I | 44428-0401      | 04                 | A             | YES                  | 44428-1601      | 16                 | A             | YES                  |   |   |   |   |   |
|   | 44428-0402      | 04                 | B             | YES                  | 44428-1602      | 16                 | B             | YES                  |   |   |   |   |   |
|   | 44428-0403      | 04                 | C             | YES                  | 44428-1603      | 16                 | C             | YES                  |   |   |   |   |   |
|   | 44428-0404      | 04                 | A             | NO                   | 44428-1604      | 16                 | A             | NO                   |   |   |   |   |   |
|   | 44428-0405      | 04                 | B             | NO                   | 44428-1605      | 16                 | B             | NO                   |   |   |   |   |   |
|   | 44428-0406      | 04                 | C             | NO                   | 44428-1606      | 16                 | C             | NO                   |   |   |   |   |   |
|   | 44428-0601      | 06                 | A             | YES                  | 44428-1801      | 18                 | A             | YES                  |   |   |   |   |   |
|   | 44428-0602      | 06                 | B             | YES                  | 44428-1802      | 18                 | B             | YES                  |   |   |   |   |   |
|   | 44428-0603      | 06                 | C             | YES                  | 44428-1803      | 18                 | C             | YES                  |   |   |   |   |   |
| H | 44428-0604      | 06                 | A             | NO                   | 44428-1804      | 18                 | A             | NO                   |   |   |   |   |   |
|   | 44428-0605      | 06                 | B             | NO                   | 44428-1805      | 18                 | B             | NO                   |   |   |   |   |   |
|   | 44428-0606      | 06                 | C             | NO                   | 44428-1806      | 18                 | C             | NO                   |   |   |   |   |   |
|   | 44428-0801      | 08                 | A             | YES                  | 44428-2001      | 20                 | A             | YES                  |   |   |   |   |   |
|   | 44428-0802      | 08                 | B             | YES                  | 44428-2002      | 20                 | B             | YES                  |   |   |   |   |   |
| G | 44428-0803      | 08                 | C             | YES                  | 44428-2003      | 20                 | C             | YES                  |   |   |   |   |   |
|   | 44428-0804      | 08                 | A             | NO                   | 44428-2004      | 20                 | A             | NO                   |   |   |   |   |   |
|   | 44428-0805      | 08                 | B             | NO                   | 44428-2005      | 20                 | B             | NO                   |   |   |   |   |   |
|   | 44428-0806      | 08                 | C             | NO                   | 44428-2006      | 20                 | C             | NO                   |   |   |   |   |   |
|   | 44428-1001      | 10                 | A             | YES                  | 44428-2201      | 22                 | A             | YES                  |   |   |   |   |   |
| F | 44428-1002      | 10                 | B             | YES                  | 44428-2202      | 22                 | B             | YES                  |   |   |   |   |   |
|   | 44428-1003      | 10                 | C             | YES                  | 44428-2203      | 22                 | C             | YES                  |   |   |   |   |   |
|   | 44428-1004      | 10                 | A             | NO                   | 44428-2204      | 22                 | A             | NO                   |   |   |   |   |   |
|   | 44428-1005      | 10                 | B             | NO                   | 44428-2205      | 22                 | B             | NO                   |   |   |   |   |   |
| E | 44428-1006      | 10                 | C             | NO                   | 44428-2206      | 22                 | C             | NO                   |   |   |   |   |   |
|   | 44428-1201      | 12                 | A             | YES                  | 44428-2401      | 24                 | A             | YES                  |   |   |   |   |   |
|   | 44428-1202      | 12                 | B             | YES                  | 44428-2402      | 24                 | B             | YES                  |   |   |   |   |   |
|   | 44428-1203      | 12                 | C             | YES                  | 44428-2403      | 24                 | C             | YES                  |   |   |   |   |   |
|   | 44428-1204      | 12                 | A             | NO                   | 44428-2404      | 24                 | A             | NO                   |   |   |   |   |   |
| D | 44428-1205      | 12                 | B             | NO                   | 44428-2405      | 24                 | B             | NO                   |   |   |   |   |   |
|   | 44428-1206      | 12                 | C             | NO                   | 44428-2406      | 24                 | C             | NO                   |   |   |   |   |   |
|   | 44428-1401      | 14                 | A             | YES                  |                 |                    |               |                      |   |   |   |   |   |
|   | 44428-1402      | 14                 | B             | YES                  |                 |                    |               |                      |   |   |   |   |   |
|   | 44428-1403      | 14                 | C             | YES                  |                 |                    |               |                      |   |   |   |   |   |
| C | 44428-1404      | 14                 | A             | NO                   |                 |                    |               |                      |   |   |   |   |   |
|   | 44428-1405      | 14                 | B             | NO                   |                 |                    |               |                      |   |   |   |   |   |
|   | 44428-1406      | 14                 | C             | NO                   |                 |                    |               |                      |   |   |   |   |   |

|  |   |  |  |   |  |                  |              |                        |  |  |  |
|--|---|--|--|---|--|------------------|--------------|------------------------|--|--|--|
| SEE SHEET 1<br>FCC NO: UICP2007-0836<br>DRAWN/KIPPER 2006/10/04<br>CHKD:SSOUSEK 2006/10/04<br>APPR:FSM TH 2006/10/05<br>H1 | QUALITY SYMBOLS<br> = 0<br> = 0 | GENERAL TOLERANCES (UNLESS SPECIFIED)                |  | DIMENSION STYLE   |  | SCALE            | DESIGN UNITS | THIRD ANGLE PROJECTION |  |  |  |
|  |   |  |  | IN/MM   |  | 4:1              | METRIC       |                        |  |  |  |
|  |   |  |  | DRAWN BY DATE   |  | CHECKED BY DATE  |              | TITLE                  |  |  |  |
|  |   |  |  | APPROVED BY DATE  |  | MATERIAL NO.     |              | DOCUMENT NO.           |  |  |  |
|  |   | ANGULAR ±1/2°  |  | EDGLEY 1999/11/30   |  | SD-44428-001     |              |                        |  |  |  |
|  |   | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |  | SEE CHART   |  | SHEET NO. 2 OF 2 |              |                        |  |  |  |
|  |   |  |  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  |                  |              |                        |  |  |  |