

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

**Part Number:** [0452802201](#)  
**Status:** **Active**  
**Overview:** [microfit\\_30](#)  
**Description:** 3.00mm (.118") Pitch Micro-Fit 3.0 BMI CPI™ Compliant Pin Header, Blind Mate Interface, Dual Row, Vertical, 22 Circuits, PA Polyamide Nylon 4/6, UL 94V-0, Tin (Sn) Over Nickel (Ni) 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="#">45280</a>         |
| Application                   | Board-to-Board, Wire-to-Board |
| Application Tooling Part Link | 622008400                     |
| Overview                      | <a href="#">microfit_30</a>   |
| Product Literature Order No   | USA-106                       |
| Product Name                  | Micro-Fit 3.0 BMI CPI™        |

**Physical**

|                                |                                |
|--------------------------------|--------------------------------|
| Breakaway                      | No                             |
| Circuits (Loaded)              | 22                             |
| Circuits (maximum)             | 22                             |
| Color - Resin                  | Black                          |
| Durability (mating cycles max) | 30                             |
| Flammability                   | 94V-0                          |
| Glow-Wire Compliant            | No                             |
| Guide to Mating Part           | Yes                            |
| Lock to Mating Part            | None                           |
| Material - Metal               | High Performance Alloy (HPA)   |
| Material - Plating Mating      | Tin                            |
| Material - Plating Termination | Tin                            |
| Material - Resin               | High Temperature Thermoplastic |
| Number of Rows                 | 2                              |
| Orientation                    | Vertical                       |
| PC Tail Length (in)            | 0.189 In                       |
| PC Tail Length (mm)            | 4.80 mm                        |
| PCB Locator                    | Yes                            |
| PCB Retention                  | Yes                            |
| 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                              |
| Plating min: Termination (µin) | 200                            |
| Plating min: Termination (µm)  | 5                              |
| Polarized to Mating Part       | Yes                            |
| Polarized to PCB               | Yes                            |
| Shrouded                       | Fully                          |
| Stackable                      | No                             |

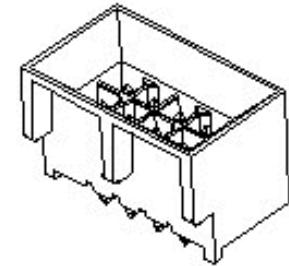


image - Reference only

Series

**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**

[45280Series](#)

**Mates With**

[44133-2200](#) Panel Mount Receptacle,  
[44764-2201](#) Right Angle Receptacle Header,  
[44769-2201](#) Vertical Receptacle Header

**Application Tooling | FAQ**

*Tooling specifications and manuals are found by selecting the products below. Crimp Height Specifications are then contained in the Application Tooling Specification document.*

**Global**

| Description         | Product #                  |
|---------------------|----------------------------|
| Micro-Fit™          | <a href="#">0622008400</a> |
| Compliant Pin       |                            |
| Insertion Flat Rock |                            |
| Tool                |                            |

|                                |                              |
|--------------------------------|------------------------------|
| Surface Mount Compatible (SMC) | No                           |
| Temperature Range - Operating  | -40°C to +105°C              |
| Termination Interface: Style   | Through Hole - Compliant Pin |

### **Electrical**

|                               |      |
|-------------------------------|------|
| Current - Maximum per Contact | 5A   |
| Voltage - Maximum             | 250V |

### **Material Info**

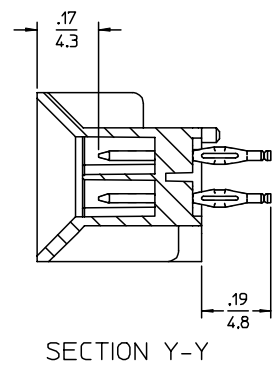
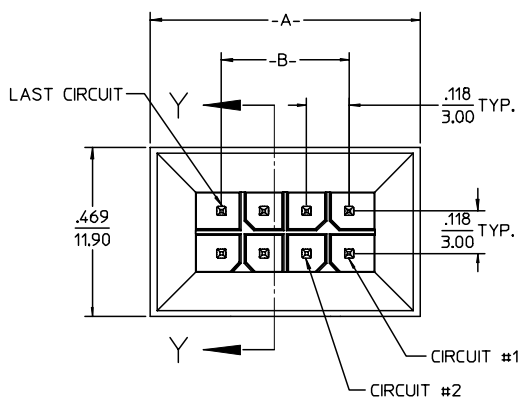
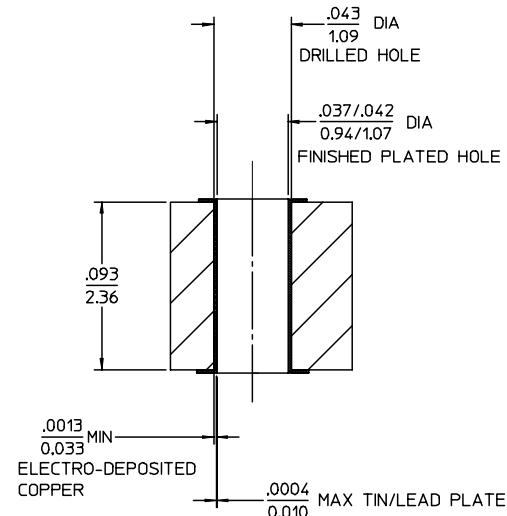
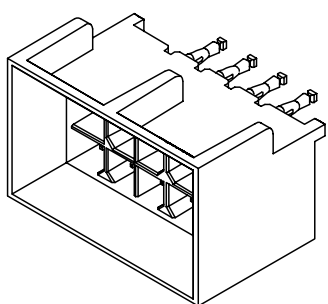
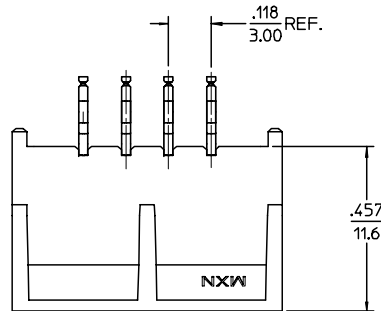
### **Reference - Drawing Numbers**

|                         |                             |
|-------------------------|-----------------------------|
| Packaging Specification | PK-45280-002                |
| Product Specification   | PS-44300-001, RPS-44300-001 |
| Sales Drawing           | SD-45280-001                |
| Test Summary            | TS-45280-001                |

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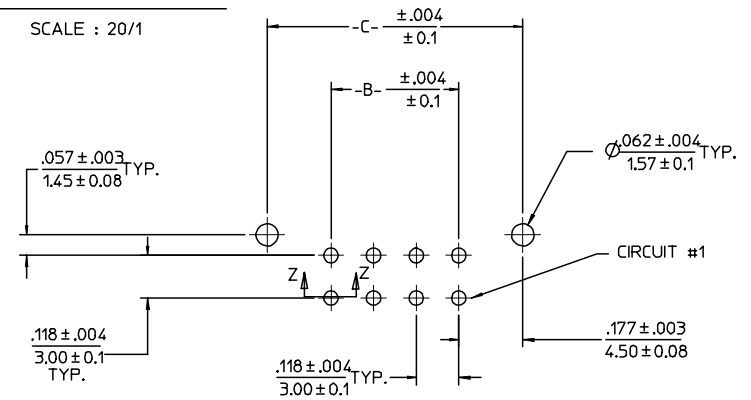
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| CIRCUIT SIZE | DIM. -A-    | DIM. -B-    | DIM. -C-    |
|--------------|-------------|-------------|-------------|
| 04           | .512/13.00  | .118/3.00   | .472/12.00  |
| 06           | .630/16.00  | .236/6.00   | .590/15.00  |
| 08           | .748/19.00  | .354/9.00   | .709/18.00  |
| 10           | .866/22.00  | .472/12.00  | .827/21.00  |
| 12           | .984/25.00  | .590/15.00  | .945/24.00  |
| 14           | 1.102/28.00 | .709/18.00  | 1.063/27.00 |
| 16           | 1.220/31.00 | .827/21.00  | 1.181/30.00 |
| 18           | 1.338/34.00 | .945/24.00  | 1.299/33.00 |
| 20           | 1.457/37.00 | 1.063/27.00 | 1.417/36.00 |
| 22           | 1.575/40.00 | 1.181/30.00 | 1.535/39.00 |
| 24           | 1.693/43.00 | 1.299/33.00 | 1.653/42.00 |



SECTION Z-Z

SCALE : 20/1



RECOMMENDED PCB LAYOUT  
(COMPONENT SIDE)  
RECOMMENDED PCB THICKNESS .093/2.36 MIN.

NOTES:

- MATERIALS:  
HOUSING: GLASS FILLED NYLON, UL94V-0, COLOR: BLACK,  
TERMINALS: COPPER ALLOY.
- FINISH:  
A= .000200/(0.00508) MIN. BRIGHT TIN OVER .000050/(0.00127) MIN. NICKEL.  
B= .000015/(0.00038) MIN. GOLD IN CONTACT AREA AND .000100/(0.00254) MIN. TIN/LEAD (90/10) ON PCB TAILS BOTH OVER .000050/(0.00127) MIN. NICKEL OVERALL.  
C= .000030/(0.00076) MIN. GOLD IN CONTACT AREA AND .000100/(0.00254) MIN. TIN/LEAD (95/05) ON PCB TAILS BOTH OVER .000050/(0.00127) MIN. NICKEL OVERALL.  
D= .000200/(0.00508) MIN. MATTE TIN IN CONTACT AREA AND .000100/(0.00254) MIN. MATTE TIN ON PCB TAILS BOTH OVER .000050/(0.00127) MIN. NICKEL. OVERALL.
- PRODUCT SPECIFICATION: PS-44300-001
- PACKAGING SPECIFICATION: PK-45280-002.
- 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 HEADER REQUIRES A MOLEX INSERTION TOOL (62200-8400) TO PROPERLY INSTALL IT TO THE PCB.

|  |                             |  |      |                           |                    |   |                        |                        |
|--|-----------------------------|--|------|---------------------------|--------------------|---|------------------------|------------------------|
| ADD 'D' FINISH<br>FCC NO: UCP2007-2424<br>DRAWN:MK/PPER 2007/04/24<br>CHKD:SSOUSEK 2007/04/24<br>APPR:FSM/TH 2007/04/26<br>REV | 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 |
|  |                             | mm   | INCH | DRAWN BY<br>MARGULIS      | DATE<br>2002/06/11 | TITLE<br>MICRO-FIT (3.0)<br>DUAL ROW VERTICAL<br>BMI CPI HEADER - ASS'Y |                        |                        |
| 4 PLACES ± --- ± ---   |                             | 3 PLACES ± --- ± .010                                      |      | CHECKED BY<br>MARGULIS    |                    | DATE<br>2002/06/11  |                        | MOLEX INCORPORATED     |
| 2 PLACES ± 0.25 ± .015   |                             | 1 PLACE ± 0.38 ± ---                                       |      | APPROVED BY<br>R. FRY     |                    | DATE<br>2002/06/11  |                        |                        |
| ANGULAR ±1/2°  |                             | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |      | MATERIAL NO.<br>SEE CHART |                    | DOCUMENT NO.<br>SD-45280-001  |                        | SHEET NO.<br>1 OF 2    |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION  |                             |  |      |                           |                    |   |                        |                        |

|   | 13              | 12           | 11             | 10 | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |   |
|---|-----------------|--------------|----------------|----|---|---|---|---|---|---|---|---|---|---|
|   | MATERIAL NUMBER | CIRCUIT SIZE | PLATING OPTION |    |   |   |   |   |   |   |   |   |   |   |
| J | 452800401       | 04           | A              |    |   |   |   |   |   |   |   |   |   | J |
|   | 452800402       | 04           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452800403       | 04           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452800404       | 04           | D              |    |   |   |   |   |   |   |   |   |   |   |
| I | 452800601       | 06           | A              |    |   |   |   |   |   |   |   |   |   | I |
|   | 452800602       | 06           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452800603       | 06           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452800604       | 06           | D              |    |   |   |   |   |   |   |   |   |   |   |
| H | 452800801       | 08           | A              |    |   |   |   |   |   |   |   |   |   | H |
|   | 452800802       | 08           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452800803       | 08           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452800804       | 08           | D              |    |   |   |   |   |   |   |   |   |   |   |
| G | 452801001       | 10           | A              |    |   |   |   |   |   |   |   |   |   | G |
|   | 452801002       | 10           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452801003       | 10           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452801004       | 10           | D              |    |   |   |   |   |   |   |   |   |   |   |
| F | 452801201       | 12           | A              |    |   |   |   |   |   |   |   |   |   | F |
|   | 452801202       | 12           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452801203       | 12           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452801204       | 12           | D              |    |   |   |   |   |   |   |   |   |   |   |
| E | 452801401       | 14           | A              |    |   |   |   |   |   |   |   |   |   | E |
|   | 452801402       | 14           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452801403       | 14           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452801404       | 14           | D              |    |   |   |   |   |   |   |   |   |   |   |
| D | 452801601       | 16           | A              |    |   |   |   |   |   |   |   |   |   | D |
|   | 452801602       | 16           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452801603       | 16           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452801604       | 16           | D              |    |   |   |   |   |   |   |   |   |   |   |
| C | 452801801       | 18           | A              |    |   |   |   |   |   |   |   |   |   | C |
|   | 452801802       | 18           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452801803       | 18           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452801804       | 18           | D              |    |   |   |   |   |   |   |   |   |   |   |
| B | 452802001       | 20           | A              |    |   |   |   |   |   |   |   |   |   | B |
|   | 452802002       | 20           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452802003       | 20           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452802004       | 20           | D              |    |   |   |   |   |   |   |   |   |   |   |
| A | 452802201       | 22           | A              |    |   |   |   |   |   |   |   |   |   | A |
|   | 452802202       | 22           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452802203       | 22           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452802204       | 22           | D              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452802401       | 24           | A              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452802402       | 24           | B              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452802403       | 24           | C              |    |   |   |   |   |   |   |   |   |   |   |
|   | 452802404       | 24           | D              |    |   |   |   |   |   |   |   |   |   |   |

|  |                               |                                       |  |                 |   |  |              |                        |  |
|--|-------------------------------|---------------------------------------|--|-----------------|---|--|--------------|------------------------|--|
| ADD *D* FINISH<br>FEC NO: UCP2007-2424<br>DRAWN/KIPPER 2007/04/24<br>CHKD:SSOUSEK 2007/04/24<br>APPR:FSM TH 2007/04/26<br>REV J1 | QUALITY SYMBOLS<br>▽=0<br>▽=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) |  | DIMENSION STYLE |   | SCALE  | DESIGN UNITS | THIRD ANGLE PROJECTION |  |
|  |                               | mm                                    | INCH   | IN/MM           |   | 4:1  | METRIC       |                        |  |
|  |                               | 4 PLACES ± --- ± ---                  | DRAWN BY MARGUL IS                                   |                 | DATE 2002/06/11   | TITLE MICRO-FIT (3.0)<br>DUAL ROW VERTICAL<br>BMI CPI HEADER - ASS'Y |              |                        |  |
|  |                               | 3 PLACES ± --- ± .010                 | CHECKED BY MARGUL IS                                 |                 | DATE 2002/06/11   | MOLEX INCORPORATED   |              |                        |  |
|  |                               | 2 PLACES ± 0.25 ± .015                | APPROVED BY R. FRY                                   |                 | DATE 2002/06/11   | DOCUMENT NO. SD-45280-001  |              | SHEET NO. 2 OF 2       |  |
|  |                               | 1 PLACE ± 0.38 ± ---                  | MATERIAL NO. SEE CHART                               |                 | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |  |              |                        |  |
|  |                               | ANGULAR ±1/2°                         | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |                 |   |  |              |                        |  |