

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

**Part Number:** [0874271403](#)  
**Status:** **Active**  
**Overview:** [minifit\\_jr](#)  
**Description:** 4.20mm (.165") Mini-Fit Jr.™ Header, Right Angle, Nylon, without Flange,14 Circuits, Tin (Sn) over Copper (Cu) Plating, Glow Wire Compatible

**Documents:**

[3D Model](#) [Product Specification PS-87427-0001 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

CSA LR19980  
 UL E29179

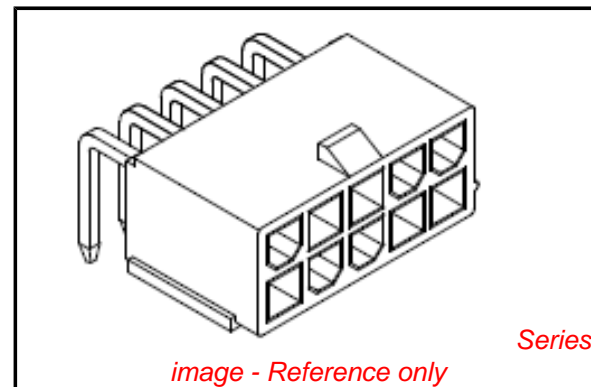
**General**

Product Family PCB Headers  
 Series [87427](#)  
 Application Wire-to-Board  
 Comments Current = 13A max. per circuit when header is mated to a receptacle loaded with [45750](#) Mini-Fit Plus HCS™ Crimp Terminal Crimped to to 16 AWG wire. . See Molex product specification PS-45750-001 for additional current de-rating information.

Overview [minifit\\_jr](#)  
 Product Name Mini-Fit Jr.™

**Physical**

Breakaway No  
 Circuits (Loaded) 14  
 Color - Resin Beige  
 Durability (mating cycles max) 30  
 First Mate / Last Break No  
 Flammability 94V-0  
 Glow-Wire Compliant Yes  
 Lock to Mating Part Yes  
 Material - Metal Brass  
 Material - Plating Mating Tin  
 Material - Plating Termination Tin  
 Material - Resin Nylon  
 Number of Rows 2  
 Orientation Right Angle  
 PC Tail Length (in) 0.130 In  
 PC Tail Length (mm) 3.30 mm  
 PCB Locator No  
 PCB Retention None  
 PCB Thickness Recommended (in) 0.062 In  
 PCB Thickness Recommended (mm) 1.60 mm  
 Packaging Type Tray  
 Pitch - Mating Interface (in) 0.165 In  
 Pitch - Mating Interface (mm) 4.20 mm  
 Pitch - Term. Interface (in) 0.165 In  
 Pitch - Term. Interface (mm) 4.20 mm  
 Plating min: Mating (µin) 203.2  
 Plating min: Mating (µm) 5.08  
 Plating min: Termination (µin) 203.2  
 Plating min: Termination (µm) 5.08



**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC Contains SVHC: No**  
**Halogen-Free**  
**Status Not Reviewed**

**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**

[87427Series](#)

**Mates With**

[5557](#) Mini-Fit Jr.™ Receptacle Housing

|                                |                 |
|--------------------------------|-----------------|
| Polarized to Mating Part       | Yes             |
| Polarized to PCB               | No              |
| Shrouded                       | Fully           |
| Stackable                      | No              |
| Surface Mount Compatible (SMC) | No              |
| Temperature Range - Operating  | -40°C to +105°C |
| Termination Interface: Style   | Through Hole    |

### **Electrical**

|                               |      |
|-------------------------------|------|
| Current - Maximum per Contact | 13A  |
| Voltage - Maximum             | 600V |

### **Solder Process Data**

|  |                              |
|--|------------------------------|
| Duration at Max. Process Temperature (seconds) | 30                           |
| Lead-free Process Capability                   | SMC & Wave Capable (TH only) |
| Max. Cycles at Max. Process Temperature        | 2                            |
| Process Temperature max. C                     | 240                          |

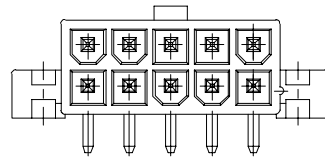
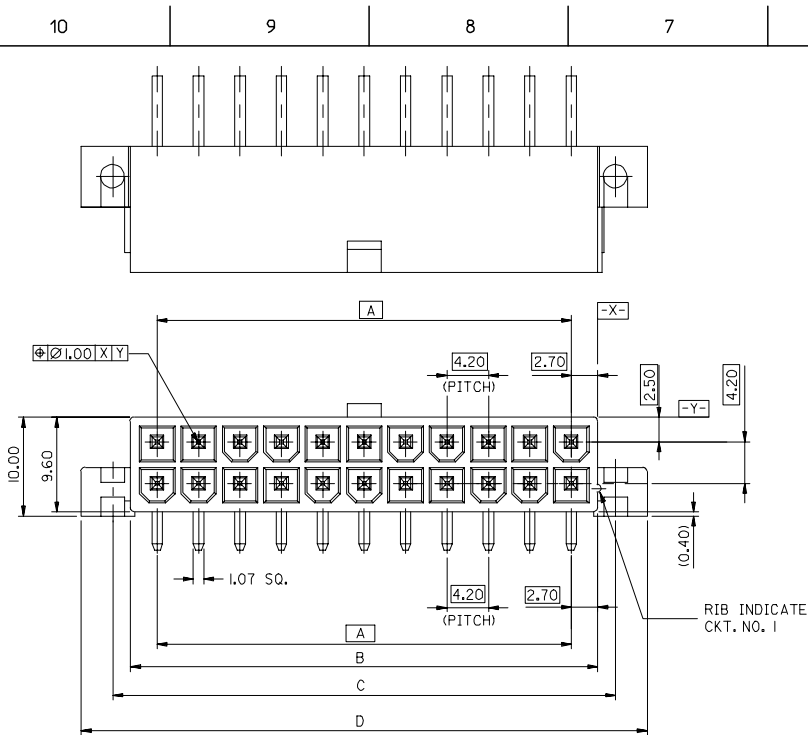
### **Material Info**

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

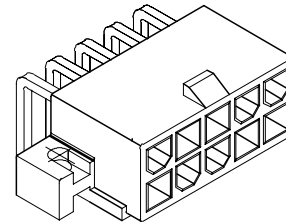
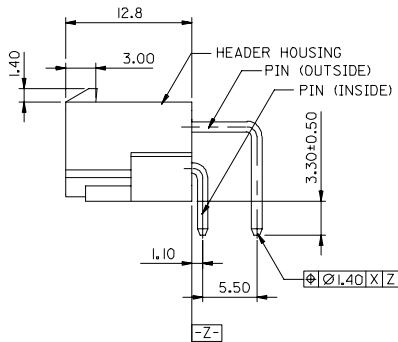
|                         |               |
|-------------------------|---------------|
| Packaging Specification | PK-87427-001  |
| Product Specification   | PS-87427-0001 |
| Sales Drawing           | SD-87427-**0* |

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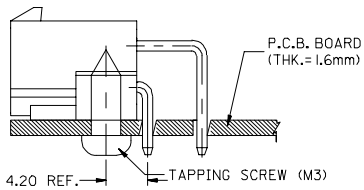
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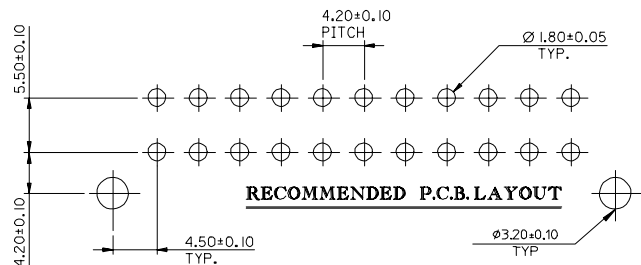
**CKT. SIZE 10**



**ISOMETRIC VIEW**



**RECOMMENDED INSTALLATION PATTERN**



**RECOMMENDED P.C.B. LAYOUT**

**LEGEND**

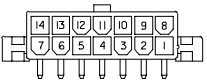
- 87427-\*\*\*\*
- CKT. SIZE (SEE SHEET 2)
- PLATING OPTIONS
  - 2 = NOTE 2
  - 3 = NOTE 3
- PACKAGING OPTIONS
  - 1 = TRAY PACKED

**NOTES**

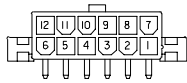
1. MATERIAL - HEADER : NYLON 46, UL94V-0, COLOR BEIGE  
PIN : BRASS (1.07 SQUARE)
2. PLATING OF PIN  
TIN 2.54um MIN. OVER NICKEL 1.27um MIN.
3. PLATING OF PIN  
TIN 4-10um OVER COPPER 2-8um.

| EC NO: 12005-0465<br>2005/05/13<br>DRWN:SSUDHIR<br>2005/05/16<br>CHKD:KPRASAD<br>2005/05/16<br>APPR:KPRASAD<br>2005/05/16 | DESCRIPTION    | QUALITY SYMBOLS   | GENERAL TOLERANCES (UNLESS SPECIFIED)  | DIMENSION STYLE<br>MM ONLY | SCALE<br>2:1  | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
|---|----------------|---|--|----------------------------|---|------------------------|------------------------|------|------|----------|------|------|----------|-------|------|---------|-------|------|--|---------|-------|--|----------|------|-------|--------|------------|---|------------|------|--------|------------|--|-------------|------|--|----------|------------|--|--|--------------|--------------|-----------|--|
|   |                | ▽=0<br>▽=0  | <table border="1"> <tr> <th></th> <th>mm</th> <th>INCH</th> </tr> <tr> <td>4 PLACES</td> <td>±---</td> <td>±---</td> </tr> <tr> <td>3 PLACES</td> <td>±---</td> <td>±---</td> </tr> <tr> <td>2 PLACES</td> <td>±0.20</td> <td>±---</td> </tr> <tr> <td>1 PLACE</td> <td>±0.20</td> <td>±---</td> </tr> <tr> <td></td> <td>ANGULAR</td> <td>±---°</td> </tr> </table> |                            | mm  | INCH                   | 4 PLACES               | ±--- | ±--- | 3 PLACES | ±--- | ±--- | 2 PLACES | ±0.20 | ±--- | 1 PLACE | ±0.20 | ±--- |  | ANGULAR | ±---° | <table border="1"> <tr> <th>DRAWN BY</th> <th>DATE</th> <th>TITLE</th> </tr> <tr> <td>STEVEN</td> <td>1994/06/24</td> <td rowspan="2">4.2MM W-T-B HIGH TEMP.<br/>RIGHT ANGLE HEADER<br/>(WITH MOUNTING FLANGES)</td> </tr> <tr> <th>CHECKED BY</th> <th>DATE</th> </tr> <tr> <td>EDMUND</td> <td>1995/03/01</td> <td></td> </tr> <tr> <th>APPROVED BY</th> <th>DATE</th> <th></th> </tr> <tr> <td>ROY WONG</td> <td>1995/03/01</td> <td></td> </tr> </table> | DRAWN BY | DATE | TITLE | STEVEN | 1994/06/24 | 4.2MM W-T-B HIGH TEMP.<br>RIGHT ANGLE HEADER<br>(WITH MOUNTING FLANGES) | CHECKED BY | DATE | EDMUND | 1995/03/01 |  | APPROVED BY | DATE |  | ROY WONG | 1995/03/01 |  | <table border="1"> <tr> <th>MATERIAL NO.</th> <th>DOCUMENT NO.</th> <th>SHEET NO.</th> </tr> <tr> <td></td> <td>SD-87427-***1*</td> <td>1 OF 2</td> </tr> </table> | MATERIAL NO. | DOCUMENT NO. | SHEET NO. |  |
|   | mm             | INCH  |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| 4 PLACES  | ±---           | ±---  |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| 3 PLACES  | ±---           | ±---  |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| 2 PLACES  | ±0.20          | ±---  |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| 1 PLACE   | ±0.20          | ±---  |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
|   | ANGULAR        | ±---°   |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| DRAWN BY  | DATE           | TITLE   |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| STEVEN  | 1994/06/24     | 4.2MM W-T-B HIGH TEMP.<br>RIGHT ANGLE HEADER<br>(WITH MOUNTING FLANGES) |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| CHECKED BY  | DATE           |   |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| EDMUND  | 1995/03/01     |   |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| APPROVED BY   | DATE           |   |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| ROY WONG  | 1995/03/01     |   |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| MATERIAL NO.  | DOCUMENT NO.   | SHEET NO.   |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
|   | SD-87427-***1* | 1 OF 2  |  |                            |   |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS  |                | SIZE<br>A3  | SEE CHART  |                            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                        |                        |      |      |          |      |      |          |       |      |         |       |      |  |         |       |  |          |      |       |        |            |   |            |      |        |            |  |             |      |  |          |            |  |  |              |              |           |  |

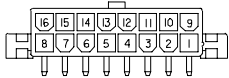
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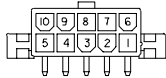
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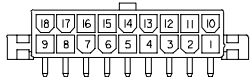
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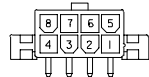
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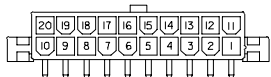
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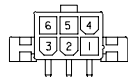
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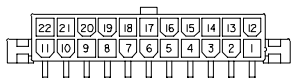
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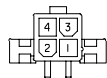
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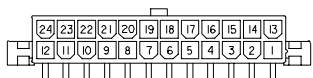
CKT.SIZE 6



CKT.SIZE 22



CKT.SIZE 4



CKT.SIZE 24



CKT.SIZE 2

|       |       |       |       |                        |           |
|-------|-------|-------|-------|------------------------|-----------|
| 61.60 | 55.20 | 51.60 | 46.20 | 87427-241*             | 24        |
| 57.40 | 51.00 | 47.40 | 42.00 | 87427-221*             | 22        |
| 53.20 | 46.80 | 43.20 | 37.80 | 87427-201*             | 20        |
| 49.00 | 42.60 | 39.00 | 33.60 | 87427-181*             | 18        |
| 44.80 | 38.40 | 34.80 | 29.40 | 87427-161*             | 16        |
| 40.60 | 34.20 | 30.60 | 25.20 | 87427-141*             | 14        |
| 36.40 | 30.00 | 26.40 | 21.00 | 87427-121*             | 12        |
| 32.20 | 25.80 | 22.20 | 16.80 | 87427-101*             | 10        |
| 28.00 | 21.60 | 18.00 | 12.60 | 87427-081*             | 8         |
| 23.80 | 17.40 | 13.80 | 8.40  | 87427-061*             | 6         |
| 19.60 | 13.20 | 9.60  | 4.20  | 87427-041*             | 4         |
| 15.40 | 9.00  | 5.40  | --    | 87427-021*             | 2         |
| D     | C     | B     | A     | ENG.NO.<br>TRAY PACKED | CKT. SIZE |

|  |                               |   |                      |                            |                  |                    |   |                                |                     |   |
|--|-------------------------------|---|----------------------|----------------------------|------------------|--------------------|---|--------------------------------|---------------------|---|
| EC NO: I2005-0465<br>DRWN:SSUDHIR 2005/05/13<br>CHKD:KPRASAD 2005/05/16<br>APPR:KPRASAD 2005/05/16 | QUALITY SYMBOLS<br>▽=0<br>▽=0 | GENERAL TOLERANCES (UNLESS SPECIFIED)                   |                      | DIMENSION STYLE<br>MM ONLY |                  | SCALE<br>1:1       | DESIGN UNITS<br>METRIC  | THIRD ANGLE PROJECTION         |                     |   |
|  |                               | 4 PLACES ± --- ± ---                                    | 3 PLACES ± --- ± --- | mm INCH                    | DRAWN BY<br>SAMC | DATE<br>1996/02/05 | TITLE<br>4.2MM W-T-B HIGH TEMP<br>RIGHT ANGLE HEADER<br>(WITH MOUNTING FLANGES) |                                |                     |   |
|  |                               | 2 PLACES ± 0.20 ± ---                                   | 1 PLACE ± 0.20 ± --- | ANGULAR ± ---°             | CHECKED BY       | DATE               | MOLEX INCORPORATED  |                                |                     |   |
|  |                               | DRAFT WHERE APPLICABLE<br>MUST REMAIN WITHIN DIMENSIONS |                      |                            | APPROVED BY      | DATE               | MATERIAL NO.  | DOCUMENT NO.<br>SD-87427-***1* | SHEET NO.<br>2 OF 2 | 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