

Series image - Reference only

EU RoHS

China RoHS

ELV and RoHS Compliant



Lead-free Process Capability SMC & Wave Capable (TH only)  
Process Temperature max. C260

**Search Parts in this Series**

70280 Series

**Part Number:** 0010897202

**Status:** Active

**Description:** 2.54mm (.100") Pitch C-Grid Breakaway Header, Dual Row, Vertical, High Temperature, 20 Circuits, 0.38 $\mu$ m (15 $\mu$ ") Gold (Au) Selective Plating, Tin (Sn) PC Tail Plating, 2.72mm (.107") PC Tail

**Documents:**

- [Drawing \(PDF\)](#)
- [Product Specification PS-70280 \(PDF\)](#)
- [3D Model](#)
- [Related Catalog Page \(PDF\)](#)

**Order Products:**

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**Part Detail:** [\(show all\)](#)

|   |                                    |
|---|------------------------------------|
| ○ | <b>General</b>                     |
| ○ | <b>Physical</b>                    |
| ○ | <b>Electrical</b>                  |
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| ○ | <b>Reference - Drawing Numbers</b> |

### General

|                |                |
|----------------|----------------|
| Product Family | PCB Headers    |
| Series         | <u>70280</u>   |
| Application    | Board-to-Board |
| Application    | Wire-to-Board  |
| Product Name   | C-Grid®        |

### Physical

|                                |                                   |
|--------------------------------|-----------------------------------|
| Breakaway                      | Yes                               |
| Circuits (Loaded)              | 20                                |
| Circuits (maximum)             | 20                                |
| Color - Resin                  | Black                             |
| Durability (mating cycles) min | 50 cycles                         |
| First Mate / Last Break        | No                                |
| Flammability                   | 94V-0                             |
| Guide to Mating Part           | No                                |
| Keying to mating part          | None                              |
| Lock to Mating Part            | None                              |
| Material - Metal               | Brass                             |
| Material - Plating Mating      | Gold                              |
| Material - Plating Termination | Tin                               |
| Material - Resin               | High Temperature<br>Thermoplastic |
| Number of Rows                 | 2                                 |
| Orientation                    | Vertical                          |
| PC Tail Length (in)            | 0.110 In                          |
| PC Tail Length (mm)            | 2.79 mm                           |
| PCB Locator                    | No                                |
| PCB Retention                  | None                              |
| PCB Thickness Recommended (in) | 0.062 In                          |
| PCB Thickness Recommended (mm) | 1.60 mm                           |
| Packaging Type                 | Bag                               |
| Pitch - Mating Interface (in)  | 0.100 In                          |
| Pitch - Mating Interface (mm)  | 2.54 mm                           |
| Plating min: Mating (uin)      | 15.2                              |
| Plating min: Mating (um)       | 0.38                              |
| Plating min: Termination (uin) | 80                                |
| Plating min: Termination (um)  | 2                                 |
| Polarized to Mating Part       | No                                |
| Polarized to PCB               | No                                |

|                               |                 |
|-------------------------------|-----------------|
| Robotic Placement             | None            |
| Shrouded                      | No              |
| Stackable                     | Yes             |
| Temperature Range - Operating | -40°C to +105°C |
| Termination Interface: Style  | Through Hole    |

### **Electrical**

|                   |           |
|-------------------|-----------|
| CSA               | LR19980   |
| Current - Maximum | 3.000 Amp |
| UL                | E29179    |
| Voltage - Maximum | 250V      |

### **Material Info**

|                 |            |
|-----------------|------------|
| Old Part Number | 70280-0050 |
|-----------------|------------|

### **Reference - Drawing Numbers**

|                       |                     |
|-----------------------|---------------------|
| Product Specification | PS-70280            |
| Sales Drawing         | SDA-70280-0001-4000 |

| CKT. SIZE | DIM. A REF. |       | DIM. B REF. |       |
|-----------|-------------|-------|-------------|-------|
|           | (MM)        | INCH  | (MM)        | INCH  |
| 4         | (5.08)      | .200  | (2.54)      | .100  |
| 6         | (7.62)      | .300  | (5.08)      | .200  |
| 8         | (10.16)     | .400  | (7.62)      | .300  |
| 10        | (12.70)     | .500  | (10.16)     | .400  |
| 12        | (15.24)     | .600  | (12.70)     | .500  |
| 14        | (17.78)     | .700  | (15.24)     | .600  |
| 16        | (20.32)     | .800  | (17.78)     | .700  |
| 18        | (22.86)     | .900  | (20.32)     | .800  |
| 20        | (25.40)     | 1.000 | (22.86)     | .900  |
| 22        | (27.94)     | 1.100 | (25.40)     | 1.000 |
| 24        | (30.48)     | 1.200 | (27.94)     | 1.100 |
| 26        | (33.02)     | 1.300 | (30.48)     | 1.200 |
| 28        | (35.56)     | 1.400 | (33.02)     | 1.300 |
| 30        | (38.10)     | 1.500 | (35.56)     | 1.400 |
| 32        | (40.64)     | 1.600 | (38.10)     | 1.500 |
| 34        | (43.18)     | 1.700 | (40.64)     | 1.600 |
| 36        | (45.72)     | 1.800 | (43.18)     | 1.700 |
| 38        | (48.26)     | 1.900 | (45.72)     | 1.800 |
| 40        | (50.80)     | 2.000 | (48.26)     | 1.900 |
| 42        | (53.34)     | 2.100 | (50.80)     | 2.000 |
| 44        | (55.88)     | 2.200 | (53.34)     | 2.100 |
| 46        | (58.42)     | 2.300 | (55.88)     | 2.200 |
| 48        | (60.96)     | 2.400 | (58.42)     | 2.300 |
| 50        | (63.50)     | 2.500 | (60.96)     | 2.400 |
| 52        | (66.04)     | 2.600 | (63.50)     | 2.500 |
| 54        | (68.58)     | 2.700 | (66.04)     | 2.600 |
| 56        | (71.12)     | 2.800 | (68.58)     | 2.700 |
| 58        | (73.66)     | 2.900 | (71.12)     | 2.800 |
| 60        | (76.20)     | 3.000 | (73.66)     | 2.900 |
| 62        | (78.74)     | 3.100 | (76.20)     | 3.000 |
| 64        | (81.28)     | 3.200 | (78.74)     | 3.100 |
| 66        | (83.82)     | 3.300 | (81.28)     | 3.200 |
| 68        | (86.36)     | 3.400 | (83.82)     | 3.300 |
| 70        | (88.90)     | 3.500 | (86.36)     | 3.400 |
| 72        | (91.44)     | 3.600 | (88.90)     | 3.500 |
| 74        | (93.98)     | 3.700 | (91.44)     | 3.600 |
| 76        | (96.52)     | 3.800 | (93.98)     | 3.700 |
| 78        | (99.06)     | 3.900 | (96.52)     | 3.800 |
| 80        | (101.06)    | 4.000 | (99.06)     | 3.900 |
| 82        | (104.14)    | 4.100 | (101.06)    | 4.000 |
| 84        | (106.68)    | 4.200 | (104.14)    | 4.100 |
| 86        | (109.22)    | 4.300 | (106.68)    | 4.200 |
| 88        | (111.76)    | 4.400 | (109.22)    | 4.300 |
| 90        | (114.30)    | 4.500 | (111.76)    | 4.400 |
| 92        | (116.84)    | 4.600 | (114.30)    | 4.500 |
| 94        | (119.38)    | 4.700 | (116.84)    | 4.600 |
| 96        | (121.92)    | 4.800 | (119.38)    | 4.700 |
| 98        | (124.46)    | 4.900 | (121.92)    | 4.800 |
| 100       | (127.00)    | 5.000 | (124.46)    | 4.900 |

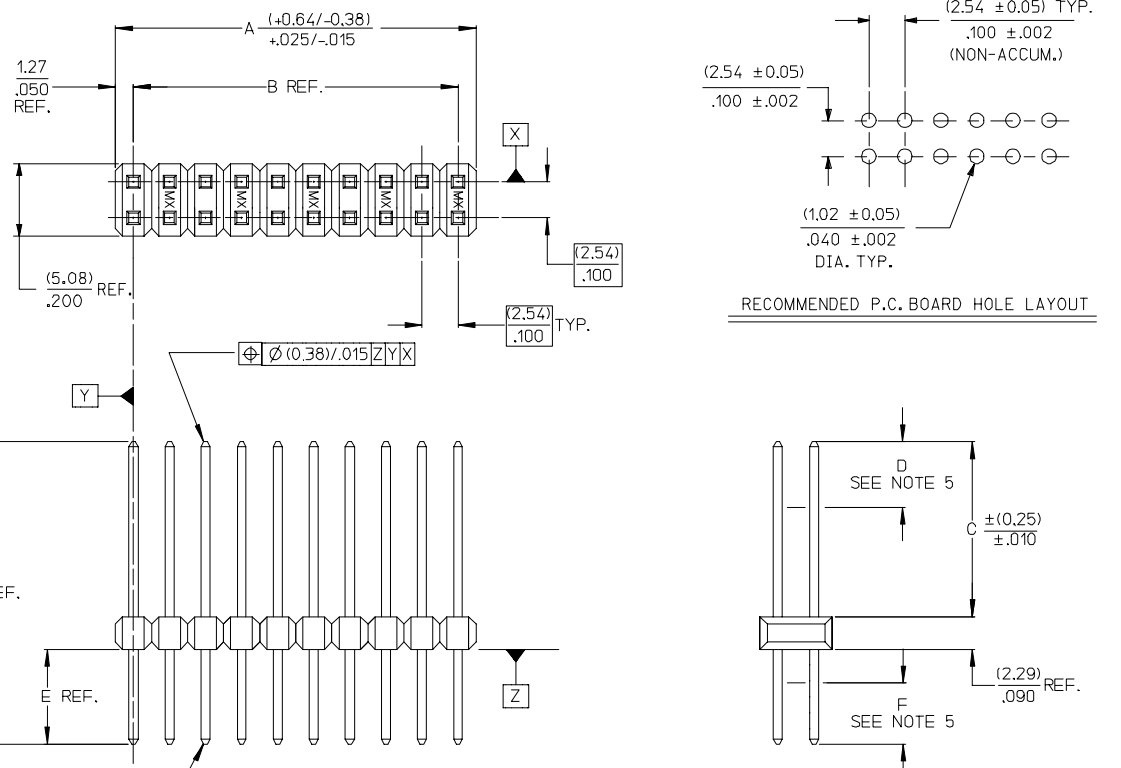
**NOTES:**

- MATERIAL:  
PIN: COPPER ALLOY  
WAFER: GLASS FILLED LCP (LIQUID CRYSTAL POLYMER, UL 94V-0, COLOR: BLACK.
- FINISH:  
TIN = (0.00380)/.000150 MINIMUM TIN PLATE OVER (0.00127)/.000050 MINIMUM NICKEL PLATE.  
15 GOLD = (0.00038)/.000015 MINIMUM GOLD PLATE IN SELECT AREA, (0.00190)/.000075 MINIMUM TIN PLATE IN SELECT AREA, OVER (0.00127)/.000050 MINIMUM NICKEL PLATE OVERALL.  
30 GOLD = (0.00076)/.000030 MINIMUM GOLD PLATE IN SELECT AREA, (0.00190)/.000075 MINIMUM TIN PLATE IN SELECT AREA, OVER (0.00127)/.000050 MINIMUM NICKEL PLATE OVERALL.  
GT15 = (0.00038)/.000015 MINIMUM GOLD PLATE IN SELECT AREA, (0.00254)/.000100 MINIMUM TIN PLATE IN SELECT AREA, OVER (0.00127)/.000050 MINIMUM NICKEL PLATE OVERALL.

- PRODUCT SPECIFICATION: NONE
- PACKAGING INFORMATION: (UNLESS OTHERWISE NOTED IN TABLES) BULK PACK PER PK-70873-0353.
- MEASURE POINT FOR PLATING THICKNESS.
- FOR ASSEMBLIES WITH VOIDED PINS, REFER TO DRAWING NO. SDA-70280-5001-9999.
- PIN PUSHOUT FORCE: 3 POUNDS MINIMUM IN EITHER DIRECTION.
- FOR ILLUSTRATION PURPOSES, 20 (DUAL 10) CIRCUIT SIZE IS SHOWN.
- PINS MEET SOLDERABILITY SPEC SMES-152. ABSENCE OF PLATING PERMISSIBLE AT BANDOLIER PIN FAYING SURFACE. (APPROXIMATELY (0.64)/.025 INCH LONG BY (0.15)/.006 INCH WIDE AT 2 LOCATIONS)
- PARTS CONFORM TO CLASS B OF COSMETIC SPECIFICATION PS-45499-002

\* 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 LEAD PLATING.

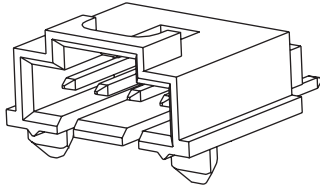
|  |                               |   |            |                                     |            |  |              |                        |  |  |
|--|-------------------------------|---|------------|-------------------------------------|------------|--|--------------|------------------------|--|--|
| ADD P/N 70280-1218<br>EC NO: UCP2008-0305<br>DRAWN:ADER 2007/08/13<br>CHFKD:IBELL 2007/08/14<br>APPR:FSM TH 2007/08/15<br>G5 | QUALITY SYMBOLS<br>▽=0<br>▽=0 | GENERAL TOLERANCES (UNLESS SPECIFIED)   |            | DIMENSION STYLE                     |            | SCALE  | DESIGN UNITS | THIRD ANGLE PROJECTION |  |  |
|  |                               | mm  | INCH       | MM/IN                               |            | 4:1  | INCH         |                        |  |  |
|  |                               | 4 PLACES ±---   | ±---       | DRAWN BY                            | DATE       | TITLE  |              |                        |  |  |
|  |                               | 3 PLACES ±---   | ±.005      | SMR                                 | 04/19/1993 | SALES ASSY-HIGH TEMP. DUAL ROW WAFER W/BREAK-OFF OPT. .025 SQ PINS |              |                        |  |  |
| 2 PLACES ±0.13   | ±.01                          | CHECKED BY  | DATE       | MOLEX INCORPORATED                  |            |  |              |                        |  |  |
| 1 PLACE ±0.25  | ±---                          | APPROVED BY   | DATE       | MATERIAL NO. DOCUMENT NO. SHEET NO. |            |  |              |                        |  |  |
| ANGULAR ±1/2°  |                               | SMR   | 04/19/1993 | SEE TABLE                           |            | SDA-70280-0001-4000  |              | 1 OF 8                 |  |  |
| 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 |            |                                     |            |  |              |                        |  |  |





# 2.54mm (.100") Pitch SL™ Wire-to-Board Shrouded Header

**70634**  
Single Row, .120" Pocket  
Right Angle, Low Profile  
SMT with Tri Peg



### Features and Benefits

- Sizes 2 to 25 circuits
- Press-fit peg maximizes retention to PCB during soldering process
- Locking crown secures positive latch to header
- Standoffs minimize flux interference

### Reference Information

Product Specification: PS-70541  
Packaging: Tube  
UL File No.: E29179  
CSA File No.: LR19980  
Mates with: 70066G, 70066N, 70400G and 70430G  
Designed in: Inches

### Electrical

Voltage: 250V  
Current: 3.0A  
Contact Resistance: 15 milliohms max.  
Dielectric Withstanding Voltage: 1500V  
Insulation Resistance: 10,000 Megohms min.

### Mechanical

Insertion force to PCB: 44.48N (10 lbs.)  
Durability: Tin — 25 cycles; Gold — 50 cycles

### Physical

Housing: Black polyester, UL 94V-0  
Contact: Copper Alloy  
Operating Temperature: -40 to +105°C

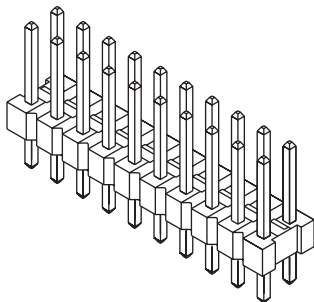
| Circuits | Order No.                  |                            |                            | Lead-free |
|----------|----------------------------|----------------------------|----------------------------|-----------|
|          | Tin                        | 15µm Gold                  | 30µm Gold                  |           |
| 2        | <a href="#">15-91-3024</a> | <a href="#">15-91-2025</a> | <a href="#">15-91-3023</a> | Yes       |
| 3        | <a href="#">15-91-3034</a> | <a href="#">15-91-2035</a> | <a href="#">15-91-3033</a> |           |
| 4        | <a href="#">15-91-3044</a> | <a href="#">15-91-2045</a> | <a href="#">15-91-3043</a> |           |
| 5        | <a href="#">15-91-3054</a> | <a href="#">15-91-2055</a> | <a href="#">15-91-3053</a> |           |
| 6        | <a href="#">15-91-3064</a> | <a href="#">15-91-2065</a> | <a href="#">15-91-3063</a> |           |
| 7        | <a href="#">15-91-3074</a> | <a href="#">15-91-2075</a> | <a href="#">15-91-3073</a> |           |
| 8        | <a href="#">15-91-3084</a> | <a href="#">15-91-2085</a> | <a href="#">15-91-3083</a> |           |
| 9        | <a href="#">15-91-3094</a> | <a href="#">15-91-2095</a> | <a href="#">15-91-3093</a> |           |
| 10       | <a href="#">15-91-3104</a> | <a href="#">15-91-2105</a> | <a href="#">15-91-3103</a> |           |
| 11       | <a href="#">15-91-3114</a> | <a href="#">15-91-2115</a> | <a href="#">15-91-3113</a> |           |
| 12       | <a href="#">15-91-3124</a> | <a href="#">15-91-2125</a> | <a href="#">15-91-3123</a> |           |
| 13       | <a href="#">15-91-3134</a> | <a href="#">15-91-2135</a> | <a href="#">15-91-3133</a> |           |

| Circuits | Order No.                  |                            |                            | Lead-free |
|----------|----------------------------|----------------------------|----------------------------|-----------|
|          | Tin                        | 15µm Gold                  | 30µm Gold                  |           |
| 14       | <a href="#">15-91-3144</a> | <a href="#">15-91-2145</a> | <a href="#">15-91-3143</a> | Yes       |
| 15       | <a href="#">15-91-3154</a> | <a href="#">15-91-2155</a> | <a href="#">15-91-3153</a> |           |
| 16       | <a href="#">15-91-3164</a> | <a href="#">15-91-2165</a> | <a href="#">15-91-3163</a> |           |
| 17       | <a href="#">15-91-3174</a> | <a href="#">15-91-2175</a> | <a href="#">15-91-3173</a> |           |
| 18       | <a href="#">15-91-3184</a> | <a href="#">15-91-2185</a> | <a href="#">15-91-3183</a> |           |
| 19       | <a href="#">15-91-3194</a> | <a href="#">15-91-2195</a> | <a href="#">15-91-3193</a> |           |
| 20       | <a href="#">15-91-3204</a> | <a href="#">15-91-2205</a> | <a href="#">15-91-3203</a> |           |
| 21       | <a href="#">15-91-3214</a> | <a href="#">15-91-2215</a> | <a href="#">15-91-3213</a> |           |
| 22       | <a href="#">15-91-3224</a> | <a href="#">15-91-2225</a> | <a href="#">15-91-3223</a> |           |
| 23       | <a href="#">15-91-3234</a> | <a href="#">15-91-2235</a> | <a href="#">15-91-3233</a> |           |
| 24       | <a href="#">15-91-3244</a> | <a href="#">15-91-2245</a> | <a href="#">15-91-3243</a> |           |
| 25       | <a href="#">15-91-3254</a> | <a href="#">15-91-2255</a> | <a href="#">15-91-3253</a> |           |

[www.molex.com/product/sl\\_products.html](http://www.molex.com/product/sl_products.html)

# 2.54mm (.100") Pitch C-Grid® Breakaway Header

**70280**  
Dual Row, Vertical  
High-Temperature



### Features and Benefits

- Sizes 4 to 100 circuits
- Stackable side-to-side and end-to-end (on unbroken edges)
- Easy breakaway to smaller sizes
- Drawn .025" square wire provides 4-sided smooth surface for quality interface

### Reference Information

Product Specifications: PS-70280  
Packaging: Bag  
UL File No.: E29179  
CSA File No.: LR19980  
Mates With: 7859 Shunts, C-Grid Receptacles, SL Crimp, FFC and IDT Housings  
Designed In: Inches

### Electrical

Voltage: 250V  
Current: 3.0A  
Contact Resistance: 15 milliohms max.  
Dielectric Withstanding Voltage: 1500V  
Insulation Resistance: 1000 Megohms min.

### Mechanical

Pin Retention to Header: 17.79N (4 lb)  
Durability: Tin—25 cycles; Gold—50 cycles

### Physical

Housing: Black high-temperature thermal plastic, UL 94V-0  
Contact: Copper Alloy  
Plating: See Table  
Operating Temperature: -40 to +105°C

**Not For Use With Molex C-Grid III™ Components**

| Plating Option | Order No.  | Lead-free |
|----------------|------------|-----------|
| 150µm Tin      | 10-89-7XX1 | Yes       |
| 15µm Gold      | 10-89-7XX2 |           |
| 30µm Gold      | 10-89-7XX0 |           |

Replace XX with no. of circuits, 04-80 (even only). See sales drawing for 82-100.