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**Part Number:** [0702800489](#)  
**Status:** **Active**  
**Description:** 2.54mm (.100") Pitch C-Grid® Breakaway Header, Dual Row, Vertical, High Temperature, 82 Circuits, 0.76µm (30µ") Gold (Au) Selective Plating, Tin (Sn) PC Tail Plating, 2.79mm (.110") PC Tail

**Documents:**

|                                               |                                                      |
|-----------------------------------------------|------------------------------------------------------|
| <a href="#">3D Model</a>                      | <a href="#">Product Specification PS-70280 (PDF)</a> |
| <a href="#">Packaging Specification (PDF)</a> | <a href="#">RoHS Certificate of Compliance (PDF)</a> |
| <a href="#">Drawing (PDF)</a>                 |                                                      |

**Agency Certification**

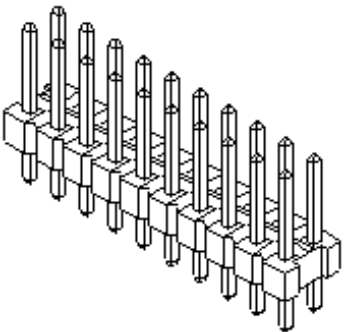
|     |         |
|-----|---------|
| CSA | LR19980 |
| UL  | E29179  |

**General**

|                |                               |
|----------------|-------------------------------|
| Product Family | PCB Headers                   |
| Series         | <a href="#">70280</a>         |
| Application    | Board-to-Board, Wire-to-Board |
| Product Name   | C-Grid®                       |

**Physical**

|                                |                                |
|--------------------------------|--------------------------------|
| Breakaway                      | Yes                            |
| Circuits (Loaded)              | 82                             |
| Circuits (maximum)             | 82                             |
| Color - Resin                  | Black                          |
| Durability (mating cycles max) | 50                             |
| 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            | None                           |
| Material - Metal               | Copper Alloy                   |
| Material - Plating Mating      | Gold                           |
| Material - Plating Termination | Tin                            |
| Material - Resin               | High Temperature 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 (µin)      | 32                             |
| Plating min: Mating (µm)       | 0.8                            |
| Plating min: Termination (µin) | 80                             |
| Plating min: Termination (µm)  | 2                              |
| Polarized to Mating Part       | No                             |
| Shrouded                       | No                             |
| Stackable                      | Yes                            |
| Temperature Range - Operating  | -40°C to +105°C                |



Series

image - Reference only

**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](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**

[70280Series](#)

|                                    |                              |
|------------------------------------|------------------------------|
| Termination Interface: Style       | Through Hole                 |
| <b>Electrical</b>                  |                              |
| Current - Maximum per Contact      | 3A                           |
| Voltage - Maximum                  | 250V                         |
| <b>Solder Process Data</b>         |                              |
| Lead-free Process Capability       | SMC & Wave Capable (TH only) |
| Process Temperature max. C         | 260                          |
| <b>Material Info</b>               |                              |
| <b>Reference - Drawing Numbers</b> |                              |
| Product Specification              | PS-70280                     |
| Sales Drawing                      | SDA-70280-0001-4000          |

This document was generated on 03/31/2010

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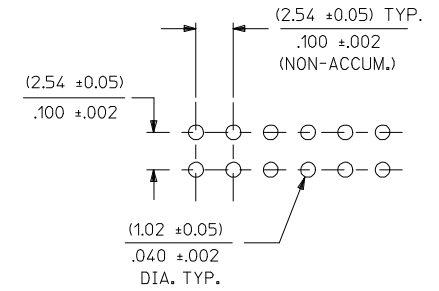
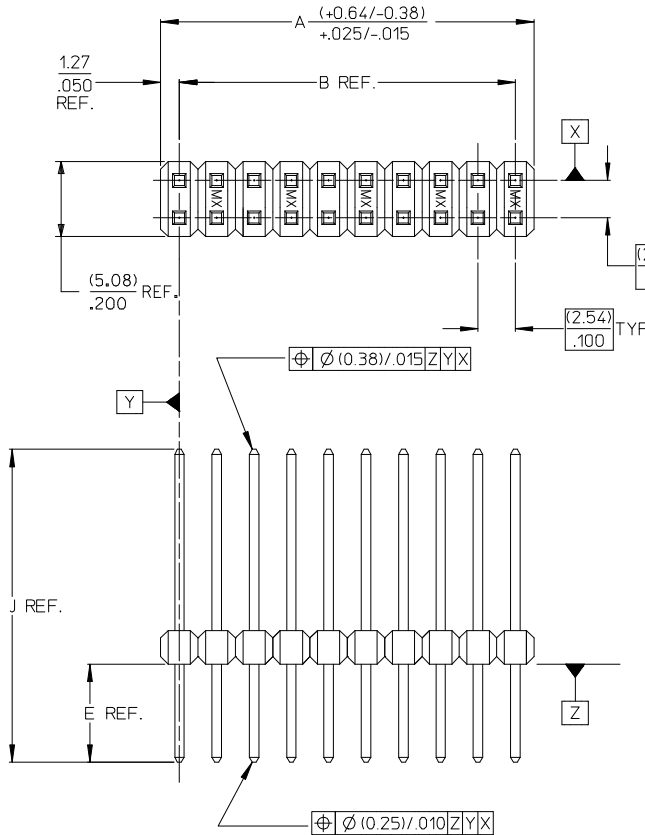
|   | 13        |             | 12    |             | 11    |  |
|---|-----------|-------------|-------|-------------|-------|--|
|   | CKT. SIZE | DIM. A REF. |       | DIM. B REF. |       |  |
|   |           | (MM)        | INCH  | (MM)        | INCH  |  |
| J | 4         | (5.08)      | .200  | (2.54)      | .100  |  |
|   | 6         | (7.62)      | .300  | (5.08)      | .200  |  |
|   | 8         | (10.16)     | .400  | (7.62)      | .300  |  |
|   | 10        | (12.70)     | .500  | (10.16)     | .400  |  |
| I | 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 |  |
| H | 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 |  |
| G | 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 |  |
| F | 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 |  |
| E | 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 |  |
| D | 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 |  |
| C | 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:

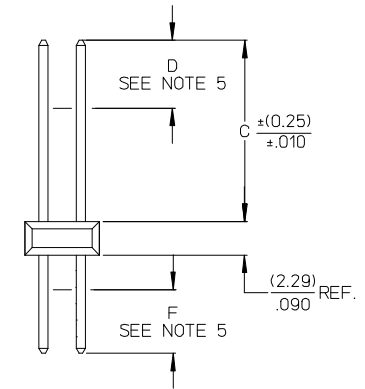
1. MATERIAL:  
PIN: COPPER ALLOY  
WAFER: GLASS FILLED LCP (LIQUID CRYSTAL POLYMER,  
UL 94V-0, COLOR: BLACK.
2. FINISH:

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.

\* 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.



RECOMMENDED P.C. BOARD HOLE LAYOUT



3. PRODUCT SPECIFICATION NONE
4. PACKAGING INFORMATION: (UNLESS OTHERWISE NOTED IN TABLES)  
BULK PACK PER PK-70873-0353.
5. MEASURE POINT FOR PLATING THICKNESS.
6. FOR ASSEMBLIES WITH VOIDED PINS, REFER TO DRAWING NO.  
SDA-70280-5001-9999.
7. PIN PUSHOUT FORCE 3 POUNDS MINIMUM IN EITHER DIRECTION.
8. FOR ILLUSTRATION PURPOSES, 20 (DUAL 10) CIRCUIT SIZE IS SHOWN.
9. 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)
10. PARTS CONFORM TO CLASS B OF COSMETIC SPECIFICATION  
PS-45499-002

|           |    |
|-----------|----|
| 9         | G6 |
| 8         | G5 |
| 7         | G3 |
| 6         | G3 |
| 5         | G3 |
| 4         | G3 |
| 3         | G3 |
| 2         | G3 |
| 1         | G6 |
| SHT. REV. |    |

|                                                                                                                                     |                               |                                                                                                         |                                                                                                                                  |                                          |                                                                                |                        |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------------------------|------------------------|
| ADD P/N 70280-1254<br>EC NO: UCP2008-2306<br>DRWN: J.BELL<br>CHKD: LSCMIDT<br>APPR: FSLTH<br>2008/03/31<br>2008/04/07<br>2008/04/24 | QUALITY SYMBOLS<br>▽=0<br>▽=0 | GENERAL TOLERANCES (UNLESS SPECIFIED)                                                                   | DIMENSION STYLE<br>MM/IN                                                                                                         | SCALE<br>4:1                             | DESIGN UNITS<br>INCH                                                           | THIRD ANGLE PROJECTION |
|                                                                                                                                     |                               | 4 PLACES ±--- ±---<br>3 PLACES ±--- ±.005<br>2 PLACES ±0.13 ±.01<br>1 PLACE ±0.25 ±---<br>ANGULAR ±1/2° | DRAWN BY<br>SMR<br>DATE<br>04/19/1993                                                                                            | DATE<br>04/19/1993                       | TITLE<br>SALES ASSY-HIGH TEMP.<br>DUAL ROW WAFER W/BREAK-OFF OPT. .025 SQ PINS |                        |
| G6                                                                                                                                  | REV                           | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                              | MATERIAL NO.<br>SEE TABLE                                                                                                        | APPROVED BY<br>SMR<br>DATE<br>04/19/1993 | MOLEX INCORPORATED                                                             | SHEET NO.<br>1 OF 9    |
|                                                                                                                                     |                               |                                                                                                         | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                          |                                                                                |                        |

