

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

**Part Number:** [0901471216](#)  
**Status:** **Active**  
**Overview:** [cgrid\\_sl\\_products](#)  
**Description:** 2.54mm (.100") Pitch C-Grid® PC Board Connector, Single Row, Vertical, 16 Circuits, Tin (Sn) Plating

**Documents:**

[3D Model](#) [RoHS Certificate of Compliance \(PDF\)](#)  
[Drawing \(PDF\)](#)

**Agency Certification**

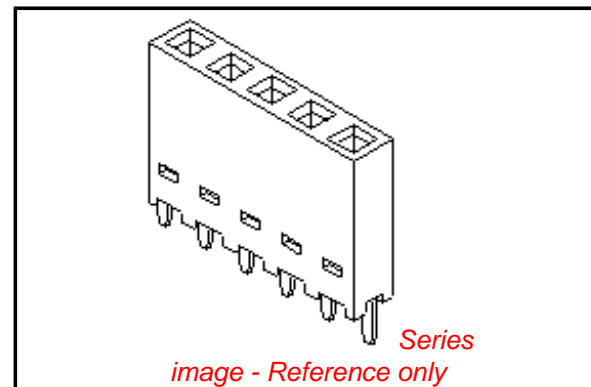
CSA LR19980  
 UL E29179

**General**

Product Family PCB Receptacles  
 Series [90147](#)  
 Application Board-to-Board  
 Overview [cgrid\\_sl\\_products](#)  
 Product Name C-Grid®

**Physical**

Circuits (Loaded) 16  
 Circuits (maximum) 16  
 Color - Resin Black  
 Durability (mating cycles max) 100  
 Flammability 94V-0  
 Glow-Wire Compliant No  
 Guide to Mating Part No  
 Keying to Mating Part None  
 Lock to Mating Part No  
 Material - Metal Phosphor Bronze  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 Material - Resin Polyester  
 Number of Rows 1  
 Orientation Vertical  
 PC Tail Length (in) 0.114 In  
 PC Tail Length (mm) 2.90 mm  
 PCB Locator No  
 PCB Retention Yes  
 PCB Thickness Recommended (in) 0.063 In  
 PCB Thickness Recommended (mm) 1.60 mm  
 Packaging Type Tube  
 Pitch - Mating Interface (in) 0.100 In  
 Pitch - Mating Interface (mm) 2.54 mm  
 Pitch - Term. Interface (in) 0.100 In  
 Pitch - Term. Interface (mm) 2.54 mm  
 Plating min: Mating (µin) 15.2  
 Plating min: Mating (µm) 0.38  
 Plating min: Termination (µin) 120  
 Plating min: Termination (µm) 3  
 Polarized to Mating Part No  
 Polarized to PCB No  
 Stackable No  
 Surface Mount Compatible (SMC) No



**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**

[90147Series](#)

**Mates With**

[90120](#) , [90121](#)

**Use With**

[90120](#) , [90121](#)

Temperature Range - Operating -55°C to +125°C  
Termination Interface: Style Through Hole

**Electrical**

Current - Maximum per Contact 3A  
Grounding to PCB No  
Voltage - Maximum 350V AC/DC

**Solder Process Data**

Lead-free Process Capability Wave Capable (TH only)

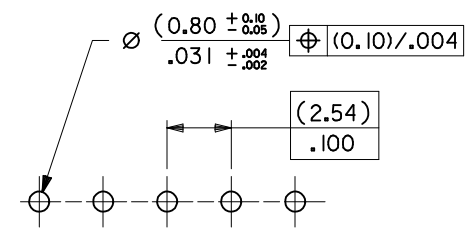
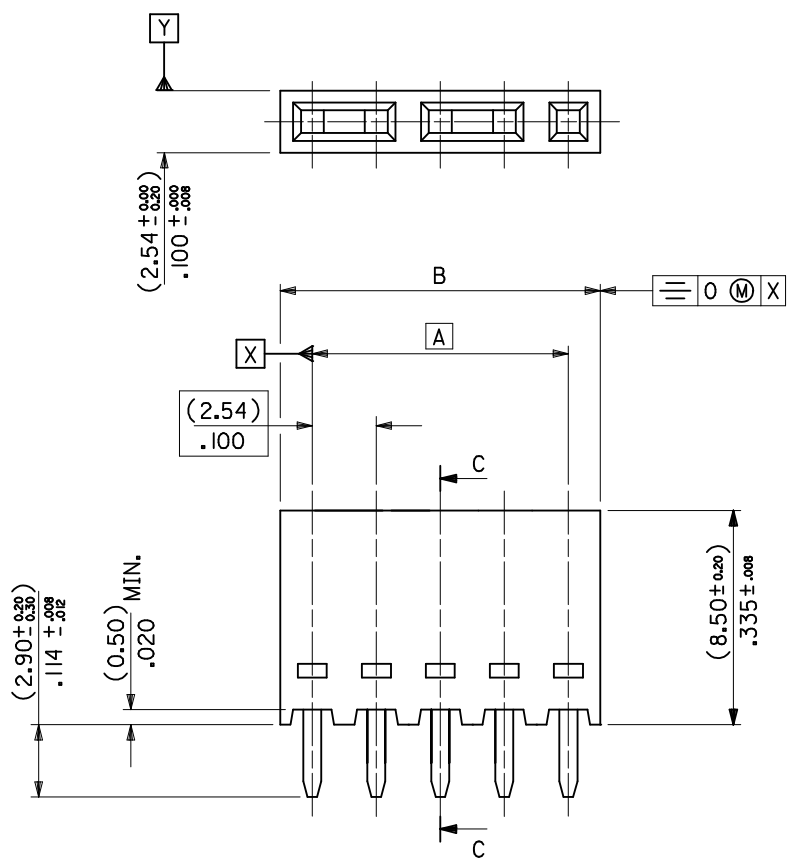
**Material Info**

**Reference - Drawing Numbers**

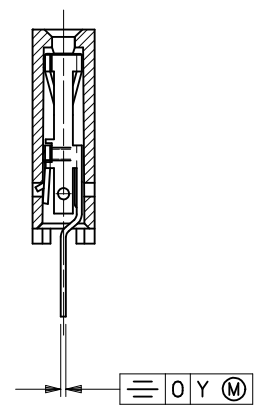
Sales Drawing SDA-90147

This document was generated on 05/22/2010

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RECOMMENDED P.C. BOARD HOLE PATTERN FOR STRAIGHT PINS.



SECTION C-C SHOWING STRAIGHT PINS.

NOTES:

- 1) CONTACT-PLATED PHOSPHOR BRONZE.
- 2) HOUSING-15% GLASS FILLED POLYESTER. COLOUR: BLACK.
- 3) FOR (0.635)/.025 SQ. MALE PINS THE LENGTH MUST BE (5.65)/.222 MIN & (7.00)/.276 MAX. TO ENSURE GOOD CONNECTION WITH CONTACT.
- 4) PRODUCT SPECIFICATION: PS-99020-0001
- 5) PCB THICKNESS 1.6MM

|   |   |   |  |                    |  |              |                        |
|---|---|---|--|--------------------|--|--------------|------------------------|
| ADDED GATE AREA<br>EC NO: E2009-0250<br>DRWN: BMAGUIRE<br>CHKD:<br>APPR: BMAGUIRE | DESCRIPTION<br>2008/12/08<br>2008/12/08 | QUALITY SYMBOLS   | GENERAL TOLERANCES (UNLESS SPECIFIED)  | DIMENSION STYLE    | SCALE  | DESIGN UNITS | THIRD ANGLE PROJECTION |
|   |   | $\nabla = 0$<br>$\nabla C = 0$                                | mm      INCH<br>4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± --- ± ---<br>1 PLACE ± --- ± ---<br>ANGULAR ± 2 ° | MM/IN              | 1:1  | METRIC       |                        |
|   |   | DRAWN BY: DB<br>CHECKED BY: JDENNEHY<br>APPROVED BY: JDENNEHY | DATE: 1987/07/14<br>DATE: 2005/07/07<br>DATE: 2005/07/07   | TITLE              | C-GRID III, SINGLE ROW VERTICAL P.C. BOARD CONNECTOR ASSEMBLY. |              |                        |
|   |   | MATERIAL NO.: SEE SHEET 2<br>SIZE: A3                         | DOCUMENT NO.: SDA-90147<br>SHEET NO.: 1 OF 2   | MOLEX INCORPORATED |  |              |                        |

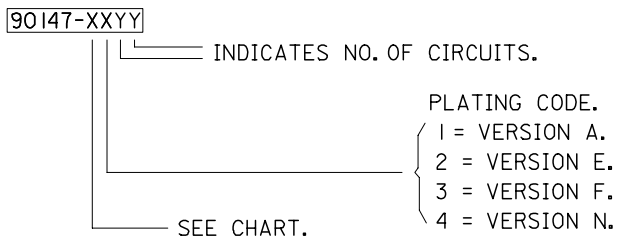
| PART NO'S - STRAIGHT PINS | NO. OF CKTS | DIM. "A"        | DIM. "B"<br>(±.000)±.002 | QTY. PER TUBE |
|---------------------------|-------------|-----------------|--------------------------|---------------|
|                           |             |                 |                          |               |
| 90147-1X02                | 2           | ( 2.54 ) .100   | ( 5.08 ) .200            | 105           |
| ↑ 03                      | 3           | ( 5.08 ) .200   | ( 7.62 ) .300            | 72            |
| 04                        | 4           | ( 7.62 ) .300   | ( 10.16 ) .400           | 52            |
| 05                        | 5           | ( 10.16 ) .400  | ( 12.70 ) .500           | 44            |
| 06                        | 6           | ( 12.70 ) .500  | ( 15.24 ) .600           | 36            |
| 07                        | 7           | ( 15.24 ) .600  | ( 17.78 ) .700           | 30            |
| 08                        | 8           | ( 17.78 ) .700  | ( 20.32 ) .800           | 26            |
| 09                        | 9           | ( 20.32 ) .800  | ( 22.86 ) .900           | 22            |
| 10                        | 10          | ( 22.86 ) .900  | ( 25.40 ) 1.000          | 22            |
| 11                        | 11          | ( 25.40 ) 1.000 | ( 27.94 ) 1.100          | 20            |
| 12                        | 12          | ( 27.94 ) 1.100 | ( 30.48 ) 1.200          | 18            |
| 13                        | 13          | ( 30.48 ) 1.200 | ( 33.02 ) 1.300          | 16            |
| 14                        | 14          | ( 33.02 ) 1.300 | ( 35.56 ) 1.400          | 14            |
| 15                        | 15          | ( 35.56 ) 1.400 | ( 38.10 ) 1.500          | 14            |
| 16                        | 16          | ( 38.10 ) 1.500 | ( 40.64 ) 1.600          | 13            |
| 17                        | 17          | ( 40.64 ) 1.600 | ( 43.18 ) 1.700          | 13            |
| 18                        | 18          | ( 43.18 ) 1.700 | ( 45.72 ) 1.800          | 12            |
| 19                        | 19          | ( 45.72 ) 1.800 | ( 48.26 ) 1.900          | 12            |
| 20                        | 20          | ( 48.26 ) 1.900 | ( 50.80 ) 2.000          | 11            |
| 21                        | 21          | ( 50.80 ) 2.000 | ( 53.34 ) 2.100          | 11            |
| 22                        | 22          | ( 53.34 ) 2.100 | ( 55.88 ) 2.200          | 10            |
| 23                        | 23          | ( 55.88 ) 2.200 | ( 58.42 ) 2.300          | 9             |
| 24                        | 24          | ( 58.42 ) 2.300 | ( 60.96 ) 2.400          | 9             |
| 25                        | 25          | ( 60.96 ) 2.400 | ( 63.50 ) 2.500          | 8             |
| 26                        | 26          | ( 63.50 ) 2.500 | ( 66.04 ) 2.600          | 8             |
| 27                        | 27          | ( 66.04 ) 2.600 | ( 68.58 ) 2.700          | 8             |
| 28                        | 28          | ( 68.58 ) 2.700 | ( 71.12 ) 2.800          | 7             |
| 29                        | 29          | ( 71.12 ) 2.800 | ( 73.66 ) 2.900          | 7             |
| 30                        | 30          | ( 73.66 ) 2.900 | ( 76.20 ) 3.000          | 7             |
| ↓ 31                      | 31          | ( 76.20 ) 3.000 | ( 78.74 ) 3.100          | 7             |
| 90147-1X 32               | 32          | ( 78.74 ) 3.100 | ( 81.28 ) 3.200          | 6             |

PLATING VERSION A  
PRE-PLATED HOT DIP TIN  
1.0 TO 2.5 um (.000040" TO .000100").

PLATING VERSION E  
1.27 TO 1.78 um (.000050" TO .000070") NICKEL  
OVERALL, 0.38 TO 0.64 um (.000015" TO .000025")  
GOLD ON CONTACT AREA (OVER NICKEL),  
3 TO 5 um (.000120" TO .000200") TIN  
ON SOLDER TAILS (OVER NICKEL).

PLATING VERSION F.  
1.27 TO 1.78 um (.000050" TO .000070") NICKEL  
OVERALL, 0.76 TO 1.0 um (.000030" TO .000040")  
GOLD ON CONTACT AREA (OVER NICKEL),  
3 TO 5 um (.000120" TO .000200") TIN  
ON SOLDER TAILS (OVER NICKEL).

PLATING VERSION N.  
1.27 TO 1.78 um (.000050" TO .000070") NICKEL  
OVERALL, 0.76 TO 2.6 um (.000030" TO .000100")  
GOLD ON CONTACT AREA (OVER NICKEL),  
4 um (.000120") MINIMUM TIN  
ON SOLDER TAILS (OVER NICKEL).



STANDARD PRODUCTS

REMOVE KINK OPT  
EC NO: E2007-0787  
DRWN: WASZKI EWI CZ 2007/04/25  
CHKD: DORJARTY 2007/04/25  
APPR: DENNEHY 2007/04/27

QUALITY SYMBOLS  
▽=0  
▽=0

GENERAL TOLERANCES (UNLESS SPECIFIED)

|          | mm     | INCH    |
|----------|--------|---------|
| 4 PLACES | ± .005 | ± .0002 |
| 3 PLACES | ± .005 | ± .0002 |
| 2 PLACES | ± .005 | ± .0002 |
| 1 PLACE  | ± .005 | ± .0002 |

ANGULAR ± 2 °

DRAFT WHERE APPLICABLE  
MUST REMAIN WITHIN DIMENSIONS

DIMENSION STYLE  
MM/IN

DRAWN BY DATE  
DB 1986/12/28

CHECKED BY DATE  
JDENNEHY 2005/07/07

APPROVED BY DATE  
JDENNEHY 2005/07/07

MATERIAL NO.

SIZE  
A3

SCALE  
5:1

DESIGN UNITS  
METRIC

THIRD ANGLE PROJECTION

TITLE  
C-GRID III SINGLE ROW  
VERTICAL P.C. BOARD  
CONNECTOR

MOLEX INCORPORATED

DOCUMENT NO.  
SDA-90147

SHEET NO.  
2 OF 2

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