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**Part Number:** [0702871147](#)  
**Status:** **Active**  
**Description:** 2.54mm (.100") Pitch C-Grid® Header, Breakaway, Dual Row, Vertical, with Retention Pin, 4 Circuits, 8.13mm (.320") Mating Pin Length, 0.38µm (15µ") Gold (Au) Selective Plating

**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**

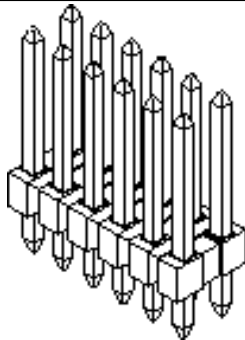
|     |         |
|-----|---------|
| CSA | LR19980 |
| UL  | E29179  |

**General**

|                |                               |
|----------------|-------------------------------|
| Product Family | PCB Headers                   |
| Series         | <a href="#">70287</a>         |
| Application    | Board-to-Board, Wire-to-Board |
| Product Name   | C-Grid®                       |

**Physical**

|                                |                                |
|--------------------------------|--------------------------------|
| Breakaway                      | Yes                            |
| Circuits (Loaded)              | 4                              |
| Circuits (maximum)             | 4                              |
| Color - Resin                  | Black                          |
| Durability (mating cycles max) | 25                             |
| First Mate / Last Break        | No                             |
| Flammability                   | 94V-0                          |
| Glow-Wire Compliant            | No                             |
| Guide to Mating Part           | No                             |
| Keying to Mating Part          | N/A                            |
| Lock to Mating Part            | None                           |
| Material - Metal               | Brass                          |
| Material - Plating Mating      | Gold                           |
| Material - Plating Termination | Tin                            |
| Material - Resin               | High Temperature Thermoplastic |
| Number of Rows                 | 2                              |
| Orientation                    | Vertical                       |
| PC Tail Length (in)            | 0.125 In                       |
| PC Tail Length (mm)            | 3.18 mm                        |
| PCB Locator                    | No                             |
| PCB Retention                  | None                           |
| PCB Thickness Recommended (in) | 0.062 In                       |
| PCB Thickness Recommended (mm) | 1.57 mm                        |
| Packaging Type                 | Bag                            |
| 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)      | 15.200                         |
| Plating min: Mating (µm)       | 0.38                           |
| Plating min: Termination (µin) | 80.000                         |
| Plating min: Termination (µm)  | 2.00                           |
| Polarized to Mating Part       | No                             |
| Polarized to PCB               | No                             |



*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**  
[70287Series](#)

**Mates With**  
7859 Shunt, C-Grid Receptacles, SL™  
Crimp, FFC and IDT Housing

|                                |                 |
|--------------------------------|-----------------|
| Shrouded                       | No              |
| Stackable                      | Yes             |
| Surface Mount Compatible (SMC) | Yes             |
| Temperature Range - Operating  | -40°C to +120°C |
| Termination Interface: Style   | Through Hole    |

**Electrical**

|                               |         |
|-------------------------------|---------|
| Current - Maximum per Contact | 3A      |
| Voltage - Maximum             | 250V DC |

**Solder Process Data**

|                                                |                        |
|------------------------------------------------|------------------------|
| Duration at Max. Process Temperature (seconds) | 5                      |
| Lead-free Process Capability                   | Wave Capable (TH only) |
| Max. Cycles at Max. Process Temperature        | 1                      |
| Process Temperature max. C                     | 260                    |

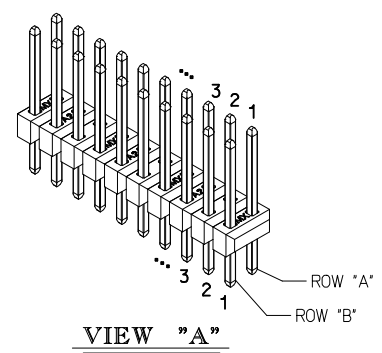
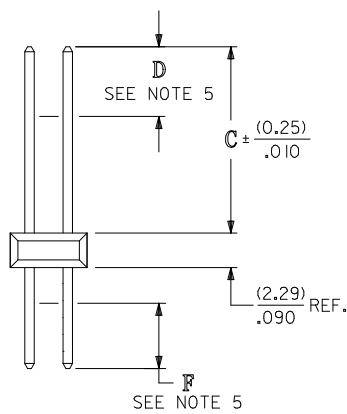
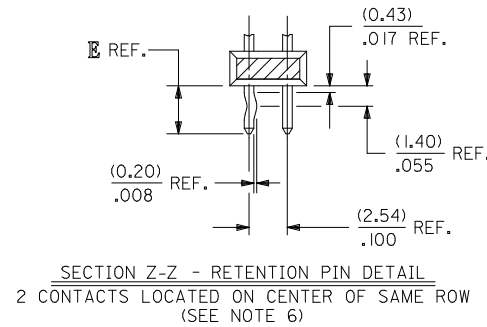
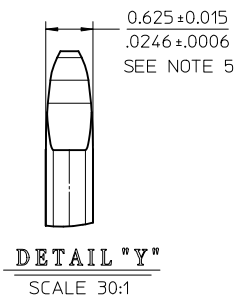
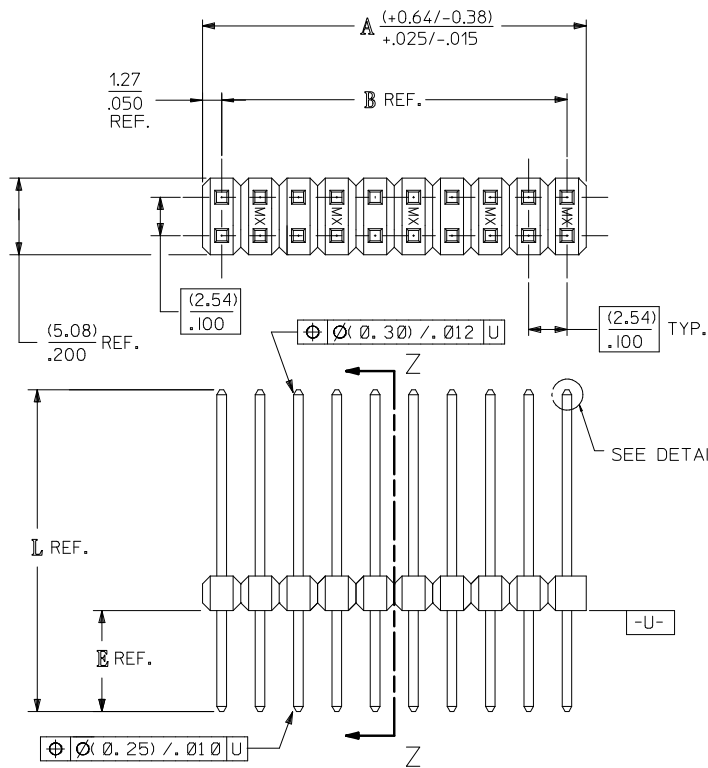
**Material Info**

**Reference - Drawing Numbers**

|                       |              |
|-----------------------|--------------|
| Product Specification | PS-70280     |
| Sales Drawing         | SD-70287-003 |

This document was generated on 04/12/2010

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# NOTES:

- MATERIAL: WAFER - GLASS FILLED LIQUID CRYSTAL POLYMER, UL94V-0, COLOR: BLACK  
PIN - COPPER ALLOY
- FINISH: (TIN) OVERALL TIN: (0.00381)/.000150 MIN., OVERALL NICKEL UNDERPLATE: (0.00127)/.000050 MIN.  
(15 GOLD) SELECT GOLD: (0.00038)/.000015 MIN., SELECT TIN: (0.00191)/.000075 MIN., OVERALL NICKEL UNDERPLATE: (0.00127)/.000050 MIN.  
(30 GOLD) SELECT GOLD: (0.00076)/.000030 MIN., SELECT TIN: (0.00191)/.000075 MIN., OVERALL NICKEL UNDERPLATE: (0.00127)/.000050 MIN.
- PRODUCT SPECIFICATION: PS-70280
- PACKAGING INFORMATION: (UNLESS OTHERWISE NOTED IN TABLES)  
PARTS TO BE PACKAGED PER PK-70873-0353.
- MEASURE POINT FOR PLATING THICKNESS, DIMENSION D IS ALSO THE MEASURE POINT FOR PIN WIDTH.
- RETENTIVE TAIL LOCATIONS (SEE VIEW "A")

| NUMBER OF CIRCUITS<br>IN ROW B | RETENTIVE TAIL LOCATIONS                                                                     |
|--------------------------------|----------------------------------------------------------------------------------------------|
| EVEN NUMBER                    | 2 PINS IN THE MIDDLE OF ROW B                                                                |
| ODD NUMBER                     | PIN IN THE CENTER OF ROW B AND<br>ONE OTHER PIN IN ROW B ON<br>EITHER SIDE OF THE CENTER PIN |

- PIN PUSHOUT FORCE: 3 LBS. MIN. (IN EITHER DIRECTION)
- FOR ILLUSTRATION PURPOSES, 20 (DUAL 10) CIRCUIT SIZE IS SHOWN.
- PINS MUST MEET SOLDERABILITY SPEC. SMES-152, EXCEPT VOIDS ARE PERMISSIBLE AT BANDOLIER PIN FAYING SURFACE.  
(APPROXIMATELY 0.64/.025 LRG X 0.15/.006 WIDE AT 2 LOCATIONS)
- PARTS CONFORM TO CLASS B REQUIREMENTS OF COSMETIC SPECIFICATION PS-45499-002.

PARTS LISTED ON THIS DRAWING REPLACE PARTS LISTED ON  
DRAWING SDA-70287-0001-5000 WHICH WILL BECOME OBSOLETE.

|      |      |
|------|------|
| 2-*  | B1   |
| 1    | B1   |
| SHT. | REV. |

|                                                                                    |                                                       |                                  |
|------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------|
| REMOVE PART #S<br>EC NO: UCP2010-0011<br>DRAWN/KIPPER<br>CHKD: JELL<br>APPR: FSLTH | DESCRIPTION<br>2010/02/12<br>2010/02/15<br>2010/03/02 | QUALITY<br>SYMBOLS<br>▽=0<br>▽=0 |
|------------------------------------------------------------------------------------|-------------------------------------------------------|----------------------------------|

| GENERAL TOLERANCES<br>(UNLESS SPECIFIED)                   |        |
|------------------------------------------------------------|--------|
| mm                                                         | INCH   |
| 4 PLACES ± ---                                             | ± ---  |
| 3 PLACES ± ---                                             | ± .005 |
| 2 PLACES ± 0.13                                            | ± .01  |
| 1 PLACE ± 0.25                                             | ± ---  |
| ANGULAR ± 1/2°                                             |        |
| DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS |        |

| DIMENSION STYLE<br>MM/IN |            |
|--------------------------|------------|
| DRAWN BY                 | DATE       |
| ADERR                    | 2006/09/01 |
| CHECKED BY               | DATE       |
| LSCHMIDT                 | 2006/09/01 |
| APPROVED BY              | DATE       |
| FSLTH                    | 2006/09/05 |
| MATERIAL NO.             | SEE CHART  |
| SIZE                     | C          |

|                                                                                                                                  |                                                                             |                           |  |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|---------------------------|--|
| SCALE                                                                                                                            | DESIGN UNITS                                                                | THIRD ANGLE<br>PROJECTION |  |
| 1:1                                                                                                                              | INCH                                                                        |                           |  |
| TITLE                                                                                                                            | SALES ASSY-HIGH TEMP.<br>DUAL ROW, .025" SQ PINS<br>.100" GRID W/ RET. PINS |                           |  |
|                                                                                                                                  | MOLEX INCORPORATED                                                          |                           |  |
| DOCUMENT NO.                                                                                                                     |                                                                             | SHEET NO.                 |  |
| SD-70287-003                                                                                                                     |                                                                             | 1 OF *                    |  |
| THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX<br>INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                                                             |                           |  |

| CKT.<br>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           | (101.60)    | 4.000 | (99.06)     | 3.900 |
| 82           | (104.14)    | 4.100 | (101.60)    | 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 |

ENG. NO: A-70287-1049 / 1097

|                         |                 |                      |                 |
|-------------------------|-----------------|----------------------|-----------------|
| DIM. C                  |                 | (8.13) / .320        |                 |
| DIM. E (REF.)           |                 | (3.18) / .125        |                 |
| DIM. L (REF.)           |                 | (13.59) / .535       |                 |
| MATING SIDE PLATING     |                 | TIN                  |                 |
| DIM. D (MEASURE PT.)    |                 | (4.57) / .180        |                 |
| P.C. BOARD SIDE PLATING |                 | TIN                  |                 |
| DIM. F (MEASURE PT.)    |                 | (1.27) / .050        |                 |
| RETENTIVE PIN LOCATION  |                 | SEE NOTE 6, SHEET 1  |                 |
| PACKAGING               |                 | BULK - PK-70873-0353 |                 |
| CKTS                    | MATERIAL NUMBER | CKTS                 | MATERIAL NUMBER |
| 04                      | 70287-1049      | 54                   | 70287-1074      |
| 06                      | 70287-1050      | 56                   | 70287-1075      |
| 08                      | 70287-1051      | 58                   | 70287-1076      |
| 10                      | 70287-1052      | 60                   | 70287-1077      |
| 12                      | 70287-1053      | 62                   | 70287-1078      |
| 14                      | 70287-1054      | 64                   | 70287-1079      |
| 16                      | 70287-1055      | 66                   | 70287-1080      |
| 18                      | 70287-1056      | 68                   | 70287-1081      |
| 20                      | 70287-1057      | 70                   | 70287-1082      |
| 22                      | 70287-1058      | 72                   | 70287-1083      |
| 24                      | 70287-1059      | 74                   | 70287-1084      |
| 26                      | 70287-1060      | 76                   | 70287-1085      |
| 28                      | 70287-1061      | 78                   | 70287-1086      |
| 30                      | 70287-1062      | 80                   | 70287-1087      |
| 32                      | 70287-1063      | 82                   | 70287-1088      |
| 34                      | 70287-1064      | 84                   | 70287-1089      |
| 36                      | 70287-1065      | 86                   | 70287-1090      |
| 38                      | 70287-1066      | 88                   | 70287-1091      |
| 40                      | 70287-1067      | 90                   | 70287-1092      |
| 42                      | 70287-1068      | 92                   | 70287-1093      |
| 44                      | 70287-1069      | 94                   | 70287-1094      |
| 46                      | 70287-1070      | 96                   | 70287-1095      |
| 48                      | 70287-1071      | 98                   | 70287-1096      |
| 50                      | 70287-1072      | 100                  | 70287-1097      |
| 52                      | 70287-1073      |                      |                 |

ENG. NO: A-70287-1147 / 1195

|                         |                 |                      |                 |
|-------------------------|-----------------|----------------------|-----------------|
| DIM. C                  |                 | (8.13) / .320        |                 |
| DIM. E (REF.)           |                 | (3.18) / .125        |                 |
| DIM. L (REF.)           |                 | (13.59) / .535       |                 |
| MATING SIDE PLATING     |                 | 15 GOLD              |                 |
| DIM. D (MEASURE PT.)    |                 | (4.57) / .180        |                 |
| P.C. BOARD SIDE PLATING |                 | TIN                  |                 |
| DIM. F (MEASURE PT.)    |                 | (1.27) / .050        |                 |
| RETENTIVE PIN LOCATION  |                 | SEE NOTE 6, SHEET 1  |                 |
| PACKAGING               |                 | BULK - PK-70873-0353 |                 |
| CKTS                    | MATERIAL NUMBER | CKTS                 | MATERIAL NUMBER |
| 04                      | 70287-1147      | 54                   | 70287-1172      |
| 06                      | 70287-1148      | 56                   | 70287-1173      |
| 08                      | 70287-1149      | 58                   | 70287-1174      |
| 10                      | 70287-1150      | 60                   | 70287-1175      |
| 12                      | 70287-1151      | 62                   | 70287-1176      |
| 14                      | 70287-1152      | 64                   | 70287-1177      |
| 16                      | 70287-1153      | 66                   | 70287-1178      |
| 18                      | 70287-1154      | 68                   | 70287-1179      |
| 20                      | 70287-1155      | 70                   | 70287-1180      |
| 22                      | 70287-1156      | 72                   | 70287-1181      |
| 24                      | 70287-1157      | 74                   | 70287-1182      |
| 26                      | 70287-1158      | 76                   | 70287-1183      |
| 28                      | 70287-1159      | 78                   | 70287-1184      |
| 30                      | 70287-1160      | 80                   | 70287-1185      |
| 32                      | 70287-1161      | 82                   | 70287-1186      |
| 34                      | 70287-1162      | 84                   | 70287-1187      |
| 36                      | 70287-1163      | 86                   | 70287-1188      |
| 38                      | 70287-1164      | 88                   | 70287-1189      |
| 40                      | 70287-1165      | 90                   | 70287-1190      |
| 42                      | 70287-1166      | 92                   | 70287-1191      |
| 44                      | 70287-1167      | 94                   | 70287-1192      |
| 46                      | 70287-1168      | 96                   | 70287-1193      |
| 48                      | 70287-1169      | 98                   | 70287-1194      |
| 50                      | 70287-1170      | 100                  | 70287-1195      |
| 52                      | 70287-1171      |                      |                 |

REV:

B1

ECR/ECN INFORMATION

EC No: UCP2010-0011

DATE: 3/2/2010

TITLE:

SALES ASS'Y – HIGH TEMP.  
DUAL ROW, .025" SQ PINS  
.100" GRID W/ RET. PINS

SHEET No.

- 2 -

DOCUMENT NUMBER:

SD-70287-003

CREATED / REVISED BY:

MKIPPER

CHECKED BY:

JBELL

APPROVED BY:

FSMITH

ENG. NO: A-70287-1245 / 1293

|                         |                 |                      |                 |
|-------------------------|-----------------|----------------------|-----------------|
| DIM. C                  |                 | (8.13) / .320        |                 |
| DIM. E (REF.)           |                 | (3.18) / .125        |                 |
| DIM. L (REF.)           |                 | (13.59) / .535       |                 |
| MATING SIDE PLATING     |                 | 30 GOLD              |                 |
| DIM. D (MEASURE PT.)    |                 | (4.57) / .180        |                 |
| P.C. BOARD SIDE PLATING |                 | TIN                  |                 |
| DIM. F (MEASURE PT.)    |                 | (1.27) / .050        |                 |
| RETENTIVE PIN LOCATION  |                 | SEE NOTE 6, SHEET 1  |                 |
| PACKAGING               |                 | BULK - PK-70873-0353 |                 |
| CKTS                    | MATERIAL NUMBER | CKTS                 | MATERIAL NUMBER |
| 04                      | 70287-1245      | 54                   | 70287-1270      |
| 06                      | 70287-1246      | 56                   | 70287-1271      |
| 08                      | 70287-1247      | 58                   | 70287-1272      |
| 10                      | 70287-1248      | 60                   | 70287-1273      |
| 12                      | 70287-1249      | 62                   | 70287-1274      |
| 14                      | 70287-1250      | 64                   | 70287-1275      |
| 16                      | 70287-1251      | 66                   | 70287-1276      |
| 18                      | 70287-1252      | 68                   | 70287-1277      |
| 20                      | 70287-1253      | 70                   | 70287-1278      |
| 22                      | 70287-1254      | 72                   | 70287-1279      |
| 24                      | 70287-1255      | 74                   | 70287-1280      |
| 26                      | 70287-1256      | 76                   | 70287-1281      |
| 28                      | 70287-1257      | 78                   | 70287-1282      |
| 30                      | 70287-1258      | 80                   | 70287-1283      |
| 32                      | 70287-1259      | 82                   | 70287-1284      |
| 34                      | 70287-1260      | 84                   | 70287-1285      |
| 36                      | 70287-1261      | 86                   | 70287-1286      |
| 38                      | 70287-1262      | 88                   | 70287-1287      |
| 40                      | 70287-1263      | 90                   | 70287-1288      |
| 42                      | 70287-1264      | 92                   | 70287-1289      |
| 44                      | 70287-1265      | 94                   | 70287-1290      |
| 46                      | 70287-1266      | 96                   | 70287-1291      |
| 48                      | 70287-1267      | 98                   | 70287-1292      |
| 50                      | 70287-1268      | 100                  | 70287-1293      |
| 52                      | 70287-1269      |                      |                 |

|                                         |      |                            |                                         |                                                                                |                               |
|-----------------------------------------|------|----------------------------|-----------------------------------------|--------------------------------------------------------------------------------|-------------------------------|
| <b>B1</b>                               | REV: | ECR/ECN INFORMATION        | TITLE:                                  | SALES ASS'Y – HIGH TEMP.<br>DUAL ROW, .025" SQ PINS<br>.100" GRID W/ RET. PINS | SHEET No.<br><br><b>- 3 -</b> |
|                                         |      | EC No: <b>UCP2010-0011</b> |                                         |                                                                                |                               |
|                                         |      | DATE: <b>3/2/2010</b>      |                                         |                                                                                |                               |
| DOCUMENT NUMBER:<br><b>SD-70287-003</b> |      |                            | CREATED / REVISED BY:<br><b>MKIPPER</b> | CHECKED BY:<br><b>JBELL</b>                                                    | APPROVED BY:<br><b>FSMITH</b> |