

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

**Part Number:** **0877591415**  
**Status:** **Active**  
**Overview:** Milli-Grid™  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Surface Mount, Vertical, 14 Circuits, 0.76µm (30µ") Gold (Au) Selective Plating, without Press-fit Plastic Pegs, Lead-free

**Documents:**

[3D Model](#) [Product Specification PS-87761-100 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

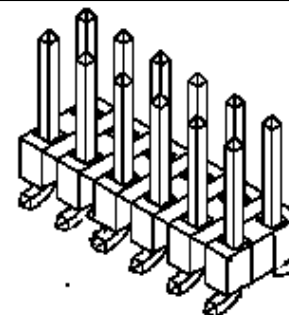
UL E29179

**General**

Product Family PCB Headers  
 Series 87759  
 Application Board-to-Board  
 Overview Milli-Grid™  
 Product Name Milli-Grid™

**Physical**

Breakaway Yes  
 Circuits (Loaded) 14  
 Circuits (maximum) 14  
 Color - Resin Black  
 Durability (mating cycles max) 100  
 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  
 Mated Height (in) 0.150 In  
 Mated Height (mm) 3.80 mm  
 Material - Metal Phosphor Bronze  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 Material - Resin High Temperature Thermoplastic  
 Number of Rows 2  
 Orientation Vertical  
 PCB Locator No  
 PCB Retention None  
 Packaging Type Tube  
 Pitch - Mating Interface (in) 0.079 In  
 Pitch - Mating Interface (mm) 2.00 mm  
 Pitch - Term. Interface (in) 0.079 In  
 Pitch - Term. Interface (mm) 2.00 mm  
 Plating min: Mating (µin) 30  
 Plating min: Mating (µm) 0.76  
 Polarized to Mating Part No  
 Polarized to PCB No  
 Shrouded No  
 Stackable Yes  
 Temperature Range - Operating -55°C to +105°C  
 Termination Interface: Style Surface Mount



Series

*image - Reference only*

**EU RoHS**

**ELV and RoHS Compliant**  
**REACH SVHC Contains SVHC: No**  
**Halogen-Free Status**

**China RoHS**



**Not Halogen-Free**

**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**

[87759Series](#)

**Mates With**

[79107](#) Milli-Grid™ Receptacle, Vertical, Through Hole. [79108](#) Milli-Grid™ Flex-to-Board, Vertical Receptacle. Milli-Grid™ Receptacle, Surface Mount. [79109](#). [87381](#)

**Electrical**

|                               |      |
|-------------------------------|------|
| Current - Maximum per Contact | 2A   |
| Voltage - Maximum             | 125V |

**Solder Process Data**

|  |                           |
|--|---------------------------|
| Duration at Max. Process Temperature (seconds) | 10                        |
| Lead-free Process Capability                   | Reflow Capable (SMT only) |
| Max. Cycles at Max. Process Temperature        | 3                         |
| Process Temperature max. C                     | 260                       |

**Material Info****Reference - Drawing Numbers**

|                       |              |
|-----------------------|--------------|
| Product Specification | PS-87761-100 |
| Sales Drawing         | SD-87759-118 |

This document was generated on 04/21/2010

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10 9 8 7 6 5 4 3 2 1

F

E

D

C

B

A

F

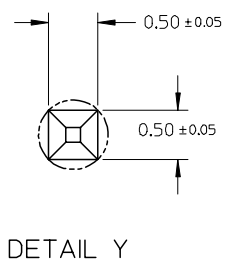
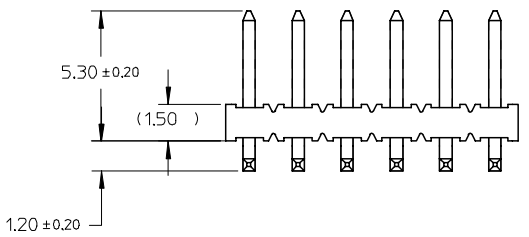
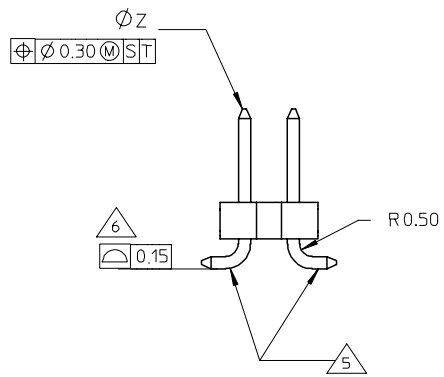
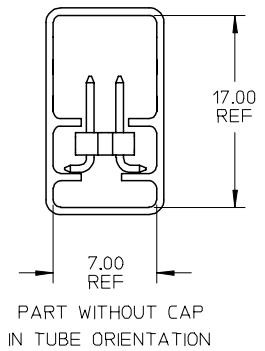
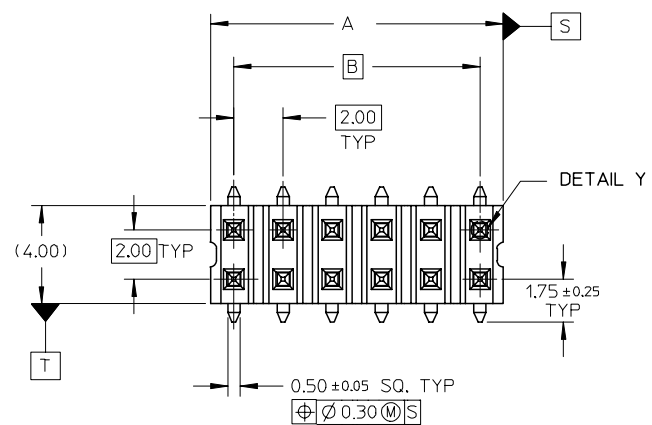
E

D

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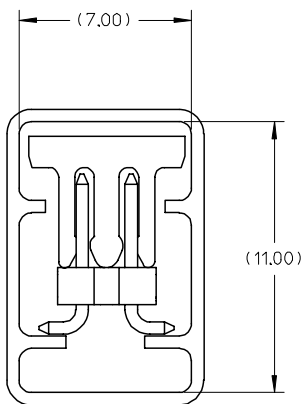
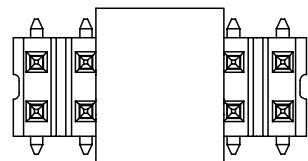
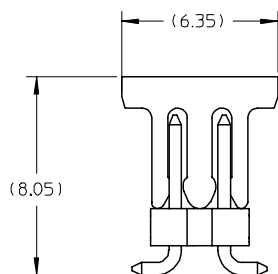
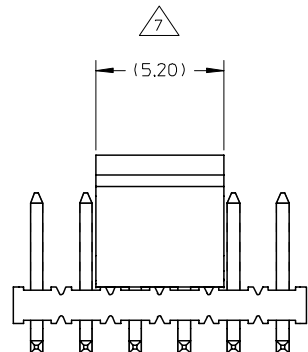


NOTE:

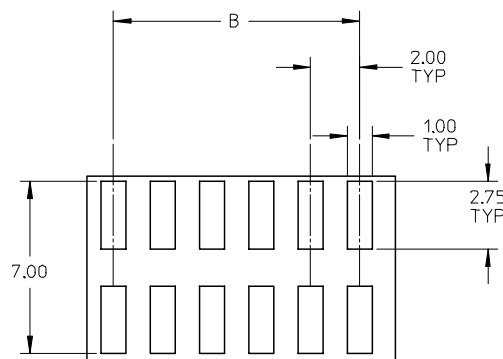
1. MATERIAL:  
HSG & CAP - LCP,  
UL 94V-0, COLOUR BLACK
- PIN - 0.50 SQ PHOSPHOR BRONZE
2. PLATING:  
0.76µm MIN GOLD PLATE AT CONTACT AREA,  
TIN PLATE AT SOLDER AREA,  
BOTH OVER NICKEL UNDERPLATE
3. PIN PUSHOUT FORCE: 1KG MIN IN EITHER DIRECTION
4. PRODUCT SPEC PS-87761-100 APPLIES.
5. BEND DEPRESSION IS ACCEPTABLE SO LONG AS IT DOES NOT AFFECT THE OVERALL COPLANARITY OF TAIL.
6. COPLANARITY IS TO BE MEASURED BY RESTING THE SOLDER TAIL ON A FLAT SURFACE.
7. CAP TO BE LOCATED AS CENTRAL OF PART AS POSSIBLE  
TOP SURFACE OF CAP TO BE FLAT FOR THE PURPOSE OF PICK & PLACE BY VACUUM SUCTION NOZZLE.
8. FOR ILLUSTRATION PURPOSES, 12CKT IS SHOWN.
9. CKT 4 & 6 IS CUT FROM CKT 8 & 12 RESPECTIVELY  
ROUGH EDGES ARE EXPECTED ALONG THE CUTTING EDGES.
10. PART TO BE PACKED IN TRAY 10 ONLY.
11. TUBE LENGTH IS 560MM REF STANDARD.

|  |   |                 |  |       |                            |                    |   |                        |                        |  |  |
|--|---|-----------------|--|-------|----------------------------|--------------------|---|------------------------|------------------------|--|--|
| REVISED TUBE SPEC<br>EC NO: S2007-0829<br>DRWNS:SKLIM01<br>CHKD:CLAM<br>APPR:KWLEE | DESCRIPTION<br>2007/04/10<br>2007/04/12<br>2007/04/17 | QUALITY SYMBOLS | GENERAL TOLERANCES (UNLESS SPECIFIED)                |       | DIMENSION STYLE<br>MM ONLY |                    | SCALE<br>NTS  | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION |  |  |
|  |   | ▽=0<br>∇=0      | mm   | INCH  | DRAWN BY<br>KSEE           | DATE<br>2003/12/17 | TITLE<br>MGRID, 2MM DUAL ROW HEADER, SMT  |                        |                        |  |  |
|  |   |                 | 4 PLACES ± ---                                       | ± --- | CHECKED BY<br>KCLING       | DATE<br>2004/01/12 |   |                        |                        |  |  |
|  |   |                 | 3 PLACES ± ---                                       | ± --- | APPROVED BY<br>SKTOH       | DATE<br>2004/01/12 |   |                        |                        |  |  |
|  | 2 PLACES ± 0.2  | ± ---           | ANGULAR ± 3 °  |       | MATERIAL NO.               |                    | DOCUMENT NO.  | SHEET NO.              |                        |  |  |
|  | 1 PLACE ± ---   | ± ---           | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |       | SEE TABLE                  |                    | SD-87759-118  |                        | 1 OF 4                 |  |  |
|  |   |                 |  |       | SIZE<br>A3                 |                    | 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



PART WITH CAP IN TUBE ORIENTATION



RECOMMENDED SOLDER PAD LAYOUT

|                   |             |
|-------------------|-------------|
| REVISED TUBE SPEC | DESCRIPTION |
| EC NO: S2007-0829 | 2007/04/10  |
| DRWN:SKL/M01      | 2007/04/12  |
| CHKD:C/LAM        | 2007/04/17  |
| APPR:K/LEE        |             |
| REV               | REV         |

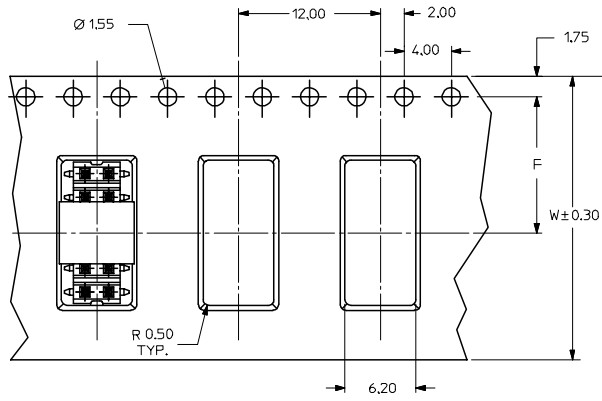
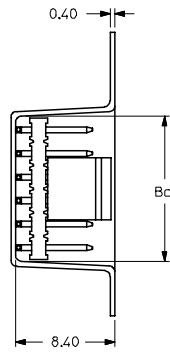
|                 |             |
|-----------------|-------------|
| QUALITY SYMBOLS | DESCRIPTION |
| ▽=0             |             |
| ∇=0             |             |

|  |        |         |
|--|--------|---------|
| GENERAL TOLERANCES (UNLESS SPECIFIED)                |        |         |
|  | mm     | INCH    |
| 4 PLACES   | ± .005 | ± .0004 |
| 3 PLACES   | ± .002 | ± .0001 |
| 2 PLACES   | ± 0.2  | ± .0078 |
| 1 PLACE  | ± .005 | ± .0004 |
| ANGULAR ± 3 °  |        |         |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |        |         |

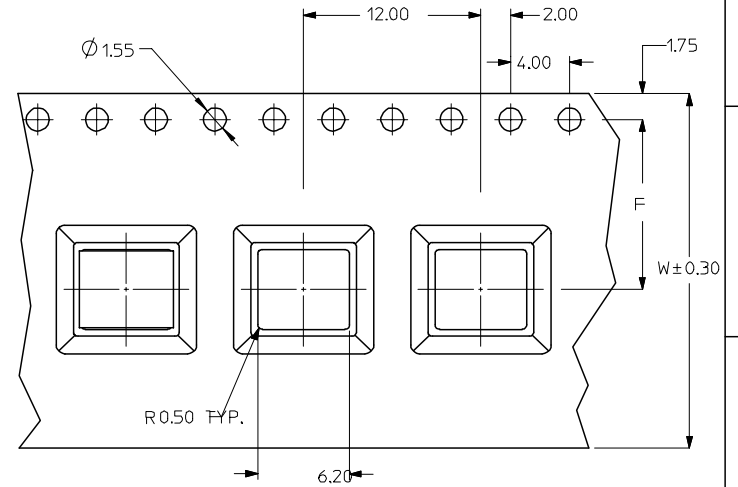
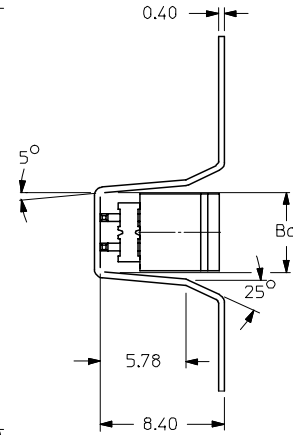
|                 |   |                                 |              |                        |
|-----------------|---|---------------------------------|--------------|------------------------|
| DIMENSION STYLE |   | SCALE                           | DESIGN UNITS | THIRD ANGLE PROJECTION |
| MM ONLY         |   | NTS                             | METRIC       |                        |
| DRAWN BY        | DATE  | TITLE                           |              |                        |
| KSEE            | 2003/12/17  | MGRID, 2MM DUAL ROW HEADER, SMT |              |                        |
| CHECKED BY      | DATE  |                                 |              |                        |
| KCLING          | 2004/01/12  |                                 |              |                        |
| APPROVED BY     | DATE  |                                 |              |                        |
| SKTOH           | 2004/01/12  |                                 |              |                        |
| MATERIAL NO.    |   | DOCUMENT NO.                    |              | SHEET NO.              |
|                 |   | SD-87759-118                    |              | 2 OF 4                 |
| SIZE            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                 |              |                        |
| A3              |   |                                 |              |                        |

|              |  |                                 |                        |
|--------------|--|---------------------------------|------------------------|
| SCALE        |  | DESIGN UNITS                    | THIRD ANGLE PROJECTION |
| NTS          |  | METRIC                          |                        |
| DRAWN BY     |  | TITLE                           |                        |
| KSEE         |  | MGRID, 2MM DUAL ROW HEADER, SMT |                        |
| CHECKED BY   |  |                                 |                        |
| KCLING       |  |                                 |                        |
| APPROVED BY  |  |                                 |                        |
| SKTOH        |  |                                 |                        |
| MATERIAL NO. |  | DOCUMENT NO.                    |                        |
|              |  | SD-87759-118                    |                        |
| SIZE         |  | SHEET NO.                       |                        |
| A3           |  | 2 OF 4                          |                        |

EMBOSSED CARRIER TAPE TYPE "A"

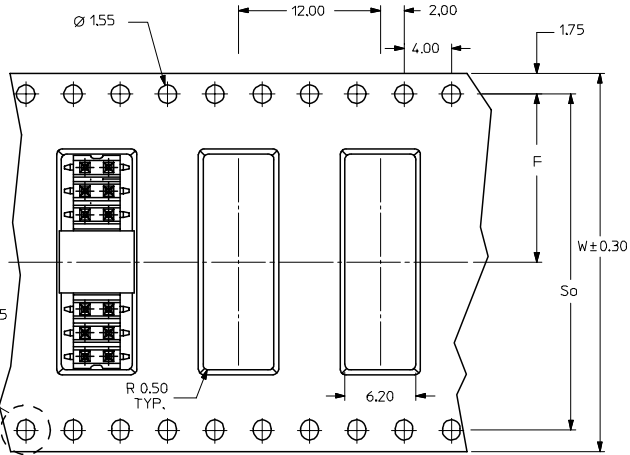
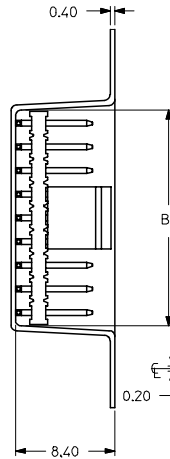


EMBOSSED CARRIER TAPE TYPE "C"



THIS TYPE OF CARRIER IS FOR CKT SIZE 8 AND BELOW.

EMBOSSED CARRIER TAPE TYPE "B"








|                   |                 |
|-------------------|-----------------|
| REVISED TUBE SPEC | QUALITY SYMBOLS |
| EC NO: S2007-0829 | ▽=0             |
| DRWN:SKL/M01      | ▽C=0            |
| CHKD:CLAM         |                 |
| APPR:KWLEE        |                 |
| REV               | DESCRIPTION     |
| B                 |                 |

|  |         |
|--|---------|
| GENERAL TOLERANCES (UNLESS SPECIFIED)                |         |
|  | MM ONLY |
| 4 PLACES   | ± ---   |
| 3 PLACES   | ± ---   |
| 2 PLACES   | ± 0.2   |
| 1 PLACE  | ± ---   |
| ANGULAR ± 3 °  |         |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS |         |

|                 |            |
|-----------------|------------|
| DIMENSION STYLE |            |
| MM ONLY         |            |
| DRAWN BY        | DATE       |
| KSEE            | 2003/12/17 |
| CHECKED BY      | DATE       |
| KCLING          | 2004/01/12 |
| APPROVED BY     | DATE       |
| SKTOH           | 2004/01/12 |
| MATERIAL NO.    |            |
| SEE TABLE       |            |
| SIZE            |            |
| A3              |            |

|                                 |              |                        |
|---------------------------------|--------------|------------------------|
| SCALE                           | DESIGN UNITS | THIRD ANGLE PROJECTION |
| NTS                             | METRIC       |                        |
| TITLE                           |              |                        |
| MGRID, 2MM DUAL ROW HEADER, SMT |              |                        |
| MOLEX INCORPORATED              |              |                        |
| DOCUMENT NO.                    | SHEET NO.    |                        |
| SD-87759-118                    | 3 OF 4       |                        |

|   | 10   | 9                            | 8                                      | 7        | 6     | 5     | 4     | 3     | 2     | 1     |               |
|---|--|------------------------------|--|----------|-------|-------|-------|-------|-------|-------|---------------|
| F | PART NUMBER WITHOUT CAP IN TUBE  | PART NUMBER WITH CAP IN TUBE | PART NUMBER WITH CAP IN TAPE AND REEL. | CKT SIZE | A     | B     | Bo    | F     | So    | W     | EMBOSSED TYPE |
|   | 87759-0415   | 87759-0465                   | 87759-0475                             | 4        | NA    | 2.00  | 5.40  | 11.50 | -     | 24.00 | C             |
|   | 87759-0615    | 87759-0665                   | 87759-0675                             | 6        | NA    | 4.00  | 7.20  | 11.50 | -     | 24.00 | C             |
|   | 87759-0815   | 87759-0865                   | 87759-0875                             | 8        | 7.90  | 6.00  | 8.20  | 11.50 | -     | 24.00 | C             |
|   | 87759-1015   | 87759-1065                   | 87759-1075                             | 10       | 9.90  | 8.00  | 10.20 | 11.50 | -     | 24.00 | A             |
|   | 87759-1215   | 87759-1265                   | 87759-1275                             | 12       | 11.90 | 10.00 | 12.20 | 11.50 | -     | 24.00 | A             |
| E | 87759-1415   | 87759-1465                   | 87759-1475                             | 14       | 13.90 | 12.00 | 14.20 | 11.50 | -     | 24.00 | A             |
|   | 87759-1615   | 87759-1665                   | 87759-1675                             | 16       | 15.90 | 14.00 | 16.20 | 14.20 | 28.40 | 32.00 | B             |
|   | 87759-1815   | 87759-1865                   | 87759-1875                             | 18       | 17.90 | 16.00 | 18.20 | 14.20 | 28.40 | 32.00 | B             |
|   | 87759-2015   | 87759-2065                   | 87759-2075                             | 20       | 19.90 | 18.00 | 20.20 | 14.20 | 28.40 | 32.00 | B             |
|   | 87759-2215   | 87759-2265                   | 87759-2275                             | 22       | 21.90 | 20.00 | 22.20 | 20.20 | 40.40 | 44.00 | B             |
|   | 87759-2415   | 87759-2465                   | 87759-2475                             | 24       | 23.90 | 22.00 | 24.20 | 20.20 | 40.40 | 44.00 | B             |
| D | 87759-2615   | 87759-2665                   | 87759-2675                             | 26       | 25.90 | 24.00 | 26.20 | 20.20 | 40.40 | 44.00 | B             |
|   | 87759-2815   | 87759-2865                   | 87759-2875                             | 28       | 27.90 | 26.00 | 28.20 | 20.20 | 40.40 | 44.00 | B             |
|   | 87759-3015   | 87759-3065                   | 87759-3075                             | 30       | 29.90 | 28.00 | 30.20 | 20.20 | 40.40 | 44.00 | B             |
|   | 87759-3215   | 87759-3265                   | 87759-3275                             | 32       | 31.90 | 30.00 | 32.20 | 20.20 | 40.40 | 44.00 | B             |
|   | 87759-3415   | 87759-3465                   | 87759-3475                             | 34       | 33.90 | 32.00 | 34.20 | 26.20 | 52.40 | 56.00 | B             |
|   | 87759-3615   | 87759-3665                   | 87759-3675                             | 36       | 35.90 | 34.00 | 36.20 | 26.20 | 52.40 | 56.00 | B             |
|   | 87759-3815   | 87759-3865                   | 87759-3875                             | 38       | 37.90 | 36.00 | 38.20 | 26.20 | 52.40 | 56.00 | B             |
| C | 87759-4015   | 87759-4065                   | 87759-4075                             | 40       | 39.90 | 38.00 | 40.20 | 26.20 | 52.40 | 56.00 | B             |
|   | 87759-4215   | 87759-4265                   | 87759-4275                             | 42       | 41.90 | 40.00 | 42.20 | 26.20 | 52.40 | 56.00 | B             |
|   | 87759-4415   | 87759-4465                   | 87759-4475                             | 44       | 43.90 | 42.00 | 44.20 | 26.20 | 52.40 | 56.00 | B             |
|   | 87759-4615   | 87759-4665                   | 87759-4675                             | 46       | 45.90 | 44.00 | 46.20 | 26.20 | 52.40 | 56.00 | B             |
|   | 87759-4815   | 87759-4865                   | 87759-4875                             | 48       | 47.90 | 46.00 | 48.20 | 26.20 | 52.40 | 56.00 | B             |
| B | 87759-5015   | 87759-5065                   | 87759-5075                             | 50       | 49.90 | 48.00 | 50.20 | 34.20 | 68.40 | 72.00 | B             |

| REVISED TUBE SPEC<br>EC NO: S2007-0829<br>DRWNS:KLI M01 2007/04/10<br>CHKD:CWAM 2007/04/12<br>APPR:KWLEE 2007/04/17 | DESCRIPTION<br>REV  | QUALITY SYMBOLS   | GENERAL TOLERANCES (UNLESS SPECIFIED)   | DIMENSION STYLE | SCALE | DESIGN UNITS                       | THIRD ANGLE PROJECTION          |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
|---|---|---|---|-----------------|-------|------------------------------------|---------------------------------|------------|-------|----------|--------|------------|----------|-------------|-------|---------|-------|------------|---------|-----|--------|---|---|
|   |   | $\nabla = 0$<br>$\nabla \square = 0$                    | <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>± 0.2</td> <td>± ---</td> </tr> <tr> <td>1 PLACE</td> <td>± ---</td> <td>± ---</td> </tr> </table> |                 | mm    | INCH                               | 4 PLACES                        | ± ---      | ± --- | 3 PLACES | ± ---  | ± ---      | 2 PLACES | ± 0.2       | ± --- | 1 PLACE | ± --- | ± ---      | MM ONLY | NTS | METRIC |  |   |
|   |   |   | mm  | INCH            |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
|   |   | 4 PLACES  | ± ---   | ± ---           |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
| 3 PLACES  | ± ---   | ± ---   |   |                 |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
| 2 PLACES  | ± 0.2   | ± ---   |   |                 |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
| 1 PLACE   | ± ---   | ± ---   |   |                 |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
|   | <table border="1"> <tr> <td>DRAWN BY</td> <td>DATE</td> <td>TITLE</td> </tr> <tr> <td>KSEE</td> <td>2003/12/17</td> <td>MGRID, 2MM DUAL ROW HEADER, SMT</td> </tr> <tr> <td>CHECKED BY</td> <td>DATE</td> <td></td> </tr> <tr> <td>KCLING</td> <td>2004/01/12</td> <td></td> </tr> <tr> <td>APPROVED BY</td> <td>DATE</td> <td></td> </tr> <tr> <td>SKTOH</td> <td>2004/01/12</td> <td></td> </tr> </table> | DRAWN BY  | DATE  | TITLE           | KSEE  | 2003/12/17                         | MGRID, 2MM DUAL ROW HEADER, SMT | CHECKED BY | DATE  |          | KCLING | 2004/01/12 |          | APPROVED BY | DATE  |         | SKTOH | 2004/01/12 |         |     |        |   |  |
| DRAWN BY  | DATE  | TITLE   |   |                 |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
| KSEE  | 2003/12/17  | MGRID, 2MM DUAL ROW HEADER, SMT                         |   |                 |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
| CHECKED BY  | DATE  |   |   |                 |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
| KCLING  | 2004/01/12  |   |   |                 |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
| APPROVED BY   | DATE  |   |   |                 |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
| SKTOH   | 2004/01/12  |   |   |                 |       |                                    |                                 |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |
|   |   | DRAFT WHERE APPLICABLE<br>MUST REMAIN WITHIN DIMENSIONS | SEE TABLE   |                 |       | MOLEX INCORPORATED<br>SD-87759-118 | SHEET NO.<br>4 OF 4             |            |       |          |        |            |          |             |       |         |       |            |         |     |        |   |   |