

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

**Part Number:** [0878320621](#)  
**Status:** **Active**  
**Overview:** milligrid  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Surface Mount, Vertical, Shrouded, Lead-free, 6 Circuits, 0.76µm (30µ") Gold (Au) Plating, without Locking Window and Centre Polarization Slot, PCB Locator, Tube

**Documents:**

[3D Model](#) [Product Specification PS-87831-027 \(PDF\)](#)  
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

**Agency Certification**

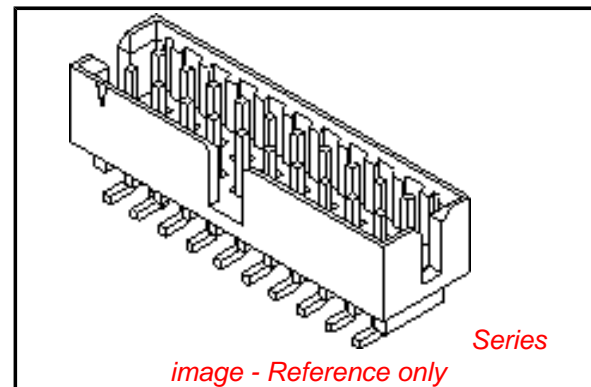
CSA LR19980  
 UL E29179

**General**

Product Family PCB Headers  
 Series [87832](#)  
 Application Wire-to-Board  
 Comments Without Cap; Contact Molex for application in automotive industry  
 Overview [milligrid](#)  
 Product Name Milli-Grid™

**Physical**

Breakaway No  
 Circuits (Loaded) 6  
 Circuits (maximum) 6  
 Color - Resin Black  
 First Mate / Last Break No  
 Flammability 94V-0  
 Glow-Wire Compliant No  
 Guide to Mating Part No  
 Keying to Mating Part Yes  
 Lock to Mating Part No  
 Material - Metal Phosphor Bronze  
 Material - Plating Mating Gold  
 Material - Plating Termination Tin  
 Material - Resin Nylon  
 Number of Rows 2  
 Orientation Vertical  
 PCB Locator Yes  
 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  
 Plating min: Termination (µin) 75  
 Plating min: Termination (µm) 1.88  
 Polarized to Mating Part Side Slots (2)  
 Polarized to PCB No  
 Shrouded Fully  
 Stackable No



**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**

[87832Series](#)

**Mates With**

[50394](#) Wire-to-Board Terminals. [51110](#) Wire-to-Board Crimp Housing. [87568](#) Wire-to-Board IDT Housings. [79107](#) Board-to-Board Top Entry Through Hole Receptacle. [79108](#) Board-to-Board FFC/FPC Top Entry Through Hole Receptacle. L

|                               |                 |
|-------------------------------|-----------------|
| Temperature Range - Operating | -55°C to +105°C |
| Termination Interface: Style  | Surface Mount   |

### **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        | 1                         |
| Process Temperature max. C                     | 260                       |

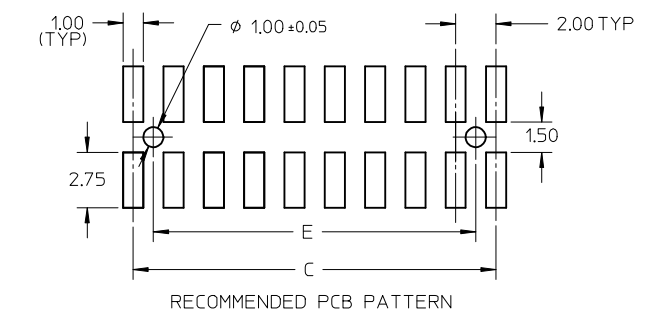
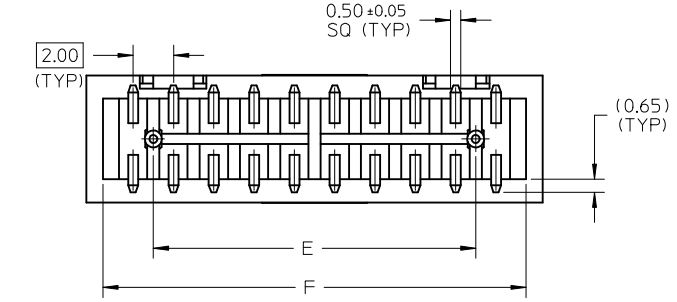
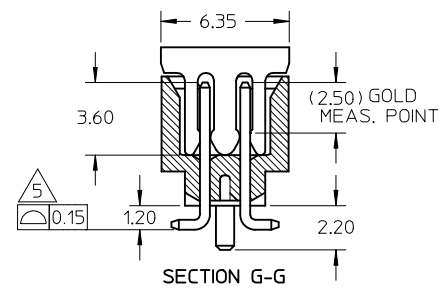
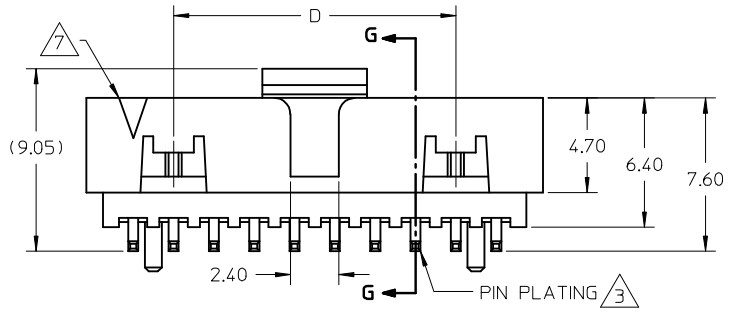
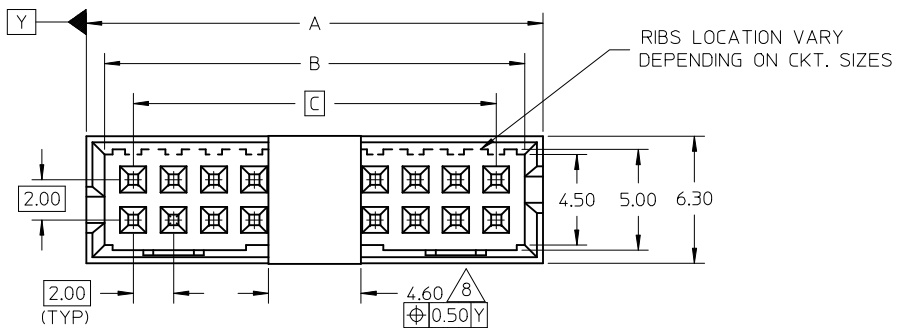
### **Material Info**

### **Reference - Drawing Numbers**

|                       |              |
|-----------------------|--------------|
| Product Specification | PS-87831-027 |
| Sales Drawing         | SD-87832-007 |

This document was generated on 05/25/2010

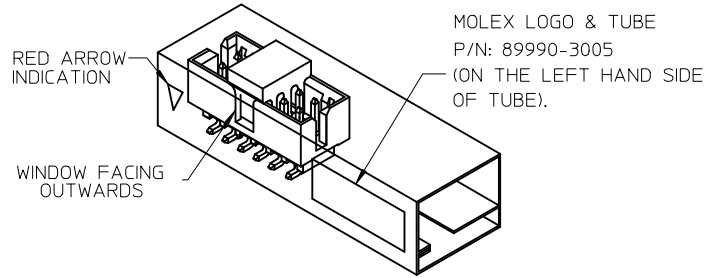
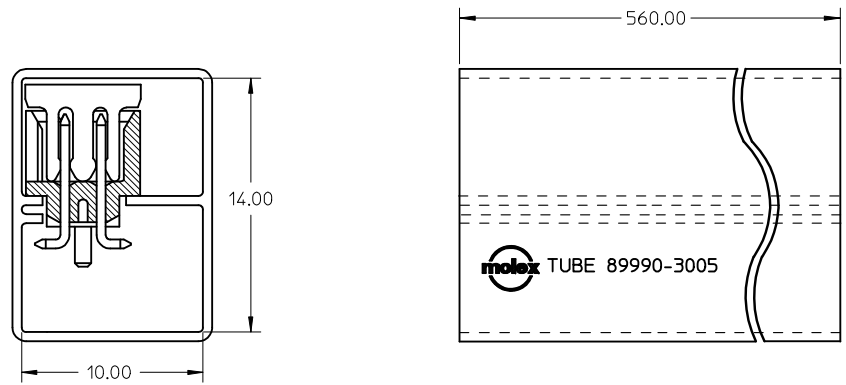
**PLEASE CHECK [WWW.MOLEX.COM](http://WWW.MOLEX.COM) FOR LATEST PART INFORMATION**



| CKT SIZE | DIMENSION |       |       |       |       |       |
|----------|-----------|-------|-------|-------|-------|-------|
|          | A         | B     | C     | D     | E     | F     |
| 4        | 6.65      | 4.85  | 2.00  | ---   | ---   | 5.00  |
| 6        | 8.65      | 6.85  | 4.00  | ---   | 2.00  | 7.00  |
| 8        | 10.65     | 8.85  | 6.00  | ---   | 4.00  | 9.00  |
| 10       | 12.65     | 10.85 | 8.00  | ---   | 6.00  | 11.00 |
| 12       | 14.65     | 12.85 | 10.00 | ---   | 8.00  | 13.00 |
| 14       | 16.65     | 14.85 | 12.00 | 8.00  | 10.00 | 15.00 |
| 16       | 18.65     | 16.85 | 14.00 | 10.00 | 12.00 | 17.00 |
| 18       | 20.65     | 18.85 | 16.00 | 12.00 | 14.00 | 19.00 |
| 20       | 22.65     | 20.85 | 18.00 | 14.00 | 16.00 | 21.00 |
| 22       | 24.65     | 22.85 | 20.00 | 16.00 | 18.00 | 23.00 |
| 24       | 26.65     | 24.85 | 22.00 | 18.00 | 20.00 | 25.00 |
| 26       | 28.65     | 26.85 | 24.00 | 20.00 | 22.00 | 27.00 |
| 28       | 30.65     | 28.85 | 26.00 | 22.00 | 24.00 | 29.00 |
| 30       | 32.65     | 30.85 | 28.00 | 24.00 | 26.00 | 31.00 |
| 32       | 34.65     | 32.85 | 30.00 | 26.00 | 28.00 | 33.00 |
| 34       | 36.65     | 34.85 | 32.00 | 28.00 | 30.00 | 35.00 |
| 36       | 38.65     | 36.85 | 34.00 | 30.00 | 32.00 | 37.00 |
| 38       | 40.65     | 38.85 | 36.00 | 32.00 | 34.00 | 39.00 |
| 40       | 42.65     | 40.85 | 38.00 | 34.00 | 36.00 | 41.00 |
| 42       | 44.65     | 42.85 | 40.00 | 36.00 | 38.00 | 43.00 |
| 44       | 46.65     | 44.85 | 42.00 | 38.00 | 40.00 | 45.00 |
| 46       | 48.65     | 46.85 | 44.00 | 40.00 | 42.00 | 47.00 |
| 48       | 50.65     | 48.85 | 46.00 | 42.00 | 44.00 | 49.00 |
| 50       | 52.65     | 50.85 | 48.00 | 44.00 | 46.00 | 51.00 |

|   |                               |                                       |               |   |                                 |              |   |                        |  |  |
|---|-------------------------------|---------------------------------------|---------------|---|---------------------------------|--------------|---|------------------------|--|--|
| ADD 34CKT T&R P/N<br>EC NO: S2009-0642<br>DRWN:SKANG 2009/03/11<br>CHKD:ATSEE 2009/03/11<br>APPR:MLONG 2009/03/18 | QUALITY SYMBOLS<br>▽=0<br>◻=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) |               | DIMENSION STYLE<br>MM ONLY  |                                 | SCALE<br>NTS | DESIGN UNITS<br>METRIC  | THIRD ANGLE PROJECTION |  |  |
|   |                               |                                       | mm            | INCH  | DRAWN BY                        | DATE         | TITLE   |                        |  |  |
|   |                               | 4 PLACES                              | ± ---         | ± ---   | ATSEE                           | 2003/10/14   | MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R<br>MOLEX INCORPORATED |                        |  |  |
|   |                               | 3 PLACES                              | ± ---         | ± ---   | CHECKED BY                      | DATE         |   |                        |  |  |
| 2 PLACES  | ± 0.2                         | ± ---                                 | KCL ING       | 2003/11/07  | APPROVED BY<br>SKTOH 2003/11/07 |              |   |                        |  |  |
| 1 PLACE   | ± ---                         | ± ---                                 | ANGULAR ± 3 ° |   | MATERIAL NO.<br>SEE TABLE       |              | DOCUMENT NO.<br>SD-87832-007  |                        |  |  |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS  |                               | SIZE<br>A3                            |               | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |                                 |              |   |                        |  |  |

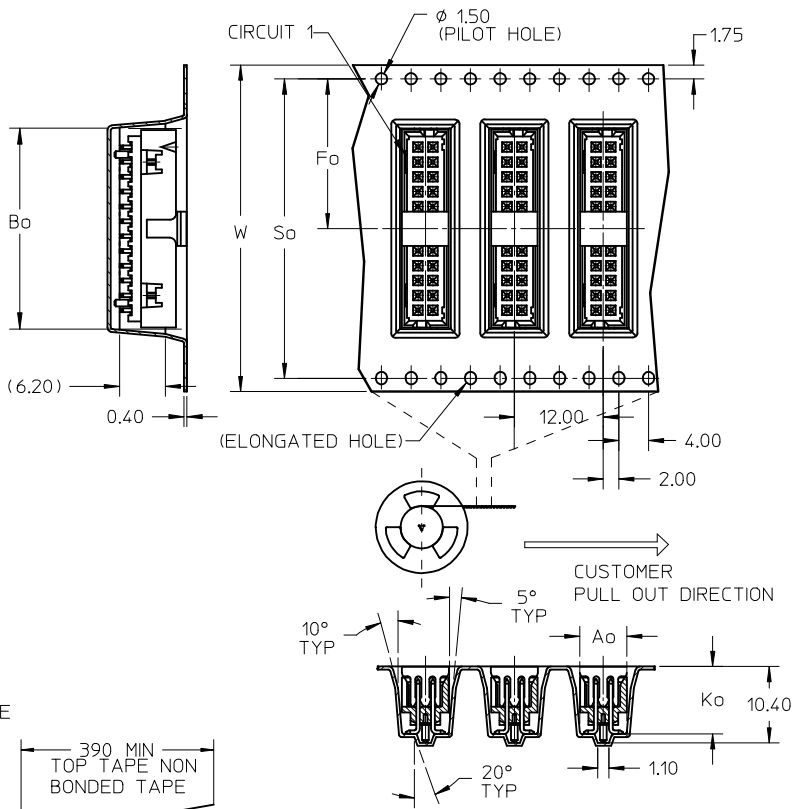
WITH CAP  
TUBE PACKAGING



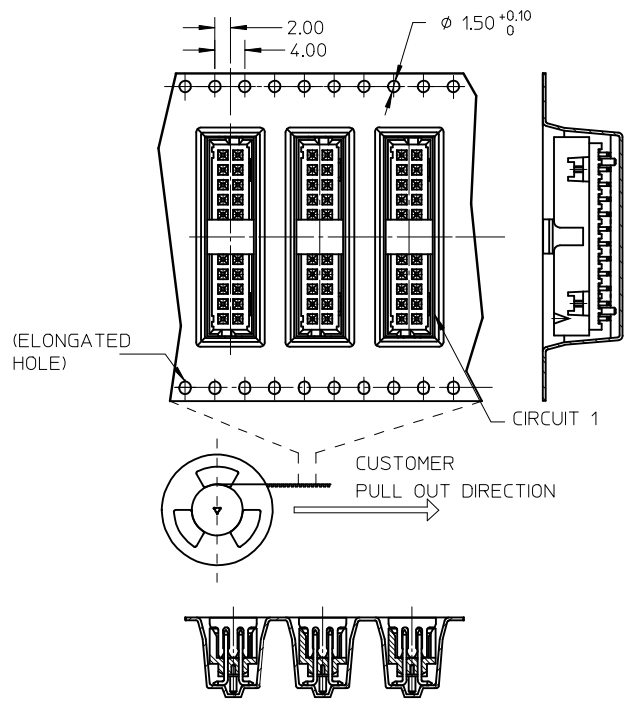
REF : ORIENTATION OF PART IN TUBE,  
(FOR THE REFERENCE OF PART/TUBE ASSEMBLY.)

|   |                    |                               |                                       |            |   |            |   |                        |                        |           |  |
|---|--------------------|-------------------------------|---------------------------------------|------------|---|------------|---|------------------------|------------------------|-----------|--|
| ADD 34CKT T&R P/N<br>EC NO: S2009-0642<br>DRWN:SKANG 2009/03/11<br>CHKD:ATSEE 2009/03/11<br>APPR:MLONG 2009/03/18 | DESCRIPTION<br>REV | QUALITY SYMBOLS<br>▽=0<br>◻=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) |            | DIMENSION STYLE<br>MM ONLY  |            | SCALE<br>NTS  | DESIGN UNITS<br>METRIC | THIRD ANGLE PROJECTION |           |  |
|   |                    |                               | mm                                    | INCH       | DRAWN BY  | DATE       | TITLE   |                        |                        |           |  |
|   |                    | 4 PLACES                      | ± ---                                 | ± ---      | ATSEE   | 2003/10/14 | MGRID, SHROUDED HEADER<br>SMT, W/PEGS/CAP FOR PICK<br>& PLACE IN TUBE AND T&R |                        |                        |           |  |
|   |                    | 3 PLACES                      | ± ---                                 | ± ---      | CHECKED BY  | DATE       |   |                        |                        |           |  |
|   | ± 0.2              | ± ---                         | KCLING                                | 2003/11/07 | MOLEX INCORPORATED  |            |   |                        |                        |           |  |
| 2 PLACES  | ± ---              | ± ---                         | APPROVED BY                           | DATE       |   |            |   |                        |                        |           |  |
| 1 PLACE   | ± ---              | ± ---                         | SKTOH                                 | 2003/11/07 | DOCUMENT NO. SD-87832-007<br>SHEET NO. 2 OF 4   |            |   |                        |                        |           |  |
| ANGULAR ± 3 °   |                    |                               | MATERIAL NO.                          |            |   |            |   |                        |                        | SEE TABLE |  |
| DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS  |                    |                               | SIZE                                  |            | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |            |   |                        |                        |           |  |

EMBOSSED CARRIER TAPE LAYOUT OPTION A  
24 CKT USE FOR ILLUSTRATION ONLY

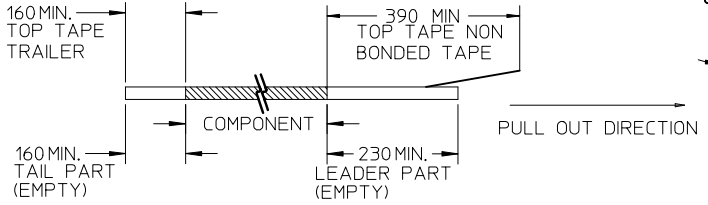


EMBOSSED CARRIER TAPE LAYOUT OPTION B  
24 CKT USE FOR ILLUSTRATION ONLY

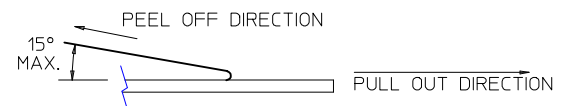


NOTES:

1. LEADER AND TRAILER TAPE



2. PEELING OFF FORCE OF THE TOP TAPE: 20-80gf.  
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)



3. PACKAGING STANDARD IS AS PER EIA-481.

|                   |             |            |            |
|-------------------|-------------|------------|------------|
| ADD 34CKT T&R P/N | 2009/03/11  | 2009/03/11 | 2009/03/18 |
| EC NO: S2009-0642 | DRWN:SKANG  | CHKD:ATSEE | APPR:MLONG |
| REV               | DESCRIPTION |            |            |
| A9                |             |            |            |

|  |                      |
|--|----------------------|
| QUALITY SYMBOLS                                      | ▽=0                  |
|  | ∇=0                  |
| GENERAL TOLERANCES (UNLESS SPECIFIED)                | mm                   |
|  | INCH                 |
|  | 4 PLACES ± --- ± --- |
|  | 3 PLACES ± --- ± --- |
|  | 2 PLACES ± 0.2 ± --- |
| 1 PLACE ± --- ± ---                                  |                      |
| 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   |              |                        |
| ATSEE           | 2003/10/14 | MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R   |              |                        |
| CHECKED BY      | DATE       | MOLEX INCORPORATED  |              |                        |
| KCL ING         | 2003/11/07 | SD-87832-007  |              |                        |
| APPROVED BY     | DATE       | SHEET NO.   |              |                        |
| SKTOH           | 2003/11/07 | 3 OF 4  |              |                        |
| MATERIAL NO.    | SEE TABLE  | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |              |                        |

| REG<br>OPTION | P/N<br>W/O CAP<br>IN TUBE | P/N W/CAP<br>IN TUBE<br>(SHEET 2) | P/N W/CAP<br>TAPE & REEL<br>(SHEET 3) | CKT<br>SIZE | DIMENSION |       |       |       |      |      | PACKAGING<br>OPTION<br>(SHEET 3) |
|---------------|---------------------------|-----------------------------------|---------------------------------------|-------------|-----------|-------|-------|-------|------|------|----------------------------------|
|               |                           |                                   |                                       |             | W         | Fo    | Bo    | So    | Ao   | Ko   |                                  |
| NO            | 87832-0421                | 87832-0423                        | 87832-5123                            | 04          | 16.00     | 7.50  | 7.15  | -     | 6.40 | 9.30 | A                                |
| YES           | 87832-0621                | 87832-0623                        | 87832-5223                            | 06          | 24.00     | 11.50 | 9.15  | -     | 6.40 | 9.30 | A                                |
| YES           | 87832-0821                | 87832-0823                        | 87832-5323                            | 08          | 24.00     | 11.50 | 11.05 | -     | 6.40 | 9.30 | A                                |
| YES           | 87832-1021                | 87832-1023                        | 87832-5423                            | 10          | 24.00     | 11.50 | 13.05 | -     | 6.40 | 9.30 | A                                |
| YES           | 87832-1221                | 87832-1223                        | 87832-5523                            | 12          | 32.00     | 14.20 | 15.15 | 28.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-1421                | 87832-1423                        | 87832-5623                            | 14          | 32.00     | 14.20 | 17.05 | 28.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-1621                | 87832-1623                        | 87832-5723                            | 16          | 32.00     | 14.20 | 19.05 | 28.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-1821                | 87832-1823                        | 87832-5823                            | 18          | 44.00     | 20.20 | 21.05 | 40.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-2021                | 87832-2023                        | 87832-5923                            | 20          | 44.00     | 20.20 | 23.05 | 40.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-2221                | 87832-2223                        | 87832-6023                            | 22          | 44.00     | 20.20 | 25.05 | 40.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-2421                | 87832-2423                        | 87832-6123                            | 24          | 44.00     | 20.20 | 27.05 | 40.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-2621                | 87832-2623                        | 87832-6223                            | 26          | 44.00     | 20.20 | 29.05 | 40.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-2821                | 87832-2823                        | 87832-6323                            | 28          | 56.00     | 26.20 | 31.05 | 52.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-3021                | 87832-3023                        | 87832-6423                            | 30          | 56.00     | 26.20 | 33.05 | 52.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-3221                | 87832-3223                        | --                                    | 32          | --        | --    | --    | --    | --   | --   | -                                |
| YES           | 87832-3421                | 87832-3423                        | 87832-6623                            | 34          | 56.00     | 26.20 | 37.05 | 52.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-3621                | 87832-3623                        | --                                    | 36          | --        | --    | --    | --    | --   | --   | -                                |
| YES           | 87832-3821                | 87832-3823                        | --                                    | 38          | --        | --    | --    | --    | --   | --   | -                                |
| YES           | 87832-4021                | 87832-4023                        | 87832-6923                            | 40          | 56.00     | 26.20 | 43.05 | 52.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-4221                | 87832-4223                        | --                                    | 42          | --        | --    | --    | --    | --   | --   | -                                |
| YES           | 87832-4421                | 87832-4423                        | 87832-7123                            | 44          | 56.00     | 26.20 | 46.80 | 52.40 | 6.40 | 9.30 | A                                |
| YES           | 87832-4621                | 87832-4623                        | --                                    | 46          | --        | --    | --    | --    | --   | --   | -                                |
| YES           | 87832-4821                | 87832-4823                        | --                                    | 48          | --        | --    | --    | --    | --   | --   | -                                |
| YES           | 87832-5021                | 87832-5023                        | 87832-7423                            | 50          | 72.00     | 34.20 | 53.05 | 68.40 | 6.40 | 9.30 | A                                |
| YES           | --                        | --                                | 87832-9423                            | 10          | 24.00     | 11.50 | 13.05 | -     | 6.40 | 9.30 | B                                |

PLS REFER TO PART  
87832-\*\*\*09 FOR CENTER  
LOCKING SLOT OPTION.

- NOTES:
- FOR ILLUSTRATION PURPOSES, 20 CIRCUIT SIZE WAFER IS SHOWN.
  - MATERIAL :  
HOUSING & CAP : 30% G.F., NYLON 46, UL94V-0, COLOR BLACK.  
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
  - PLATING : 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN  
IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
  - PRODUCT SPECIFICATION PS-87831-027 APPLIES.
  - COPLANARITY IS TO BE MEASURED BY RESTING THE SOLDER TAIL  
ON A GAUGE SURFACE.
  - NO SIDE LOCKING SLOT FROM 4 TO 12 CKT SIZE.
  - CKT 4 & 6 HAS NO IDENTIFICATION TAG.
  - POSITION OF CAP TO BE LOCATED AT CENTER OF DIMENSION 'A'  
REGARDLESS OF CIRCUIT SIZE.
  - TOP SURFACE OF CAP TO BE FLAT FOR THE PURPOSE OF PICK-&-PLACE  
BY VACUUM SUCTION NOZZLE.
  - THIS HEADER MATES WITH MOLEX:  
a) CRIMP RECEPTACLE HOUSING, 51110 SERIES  
WITH CRIMP TERMINAL, 50394 SERIES.  
b) 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
  - NO CENTRE POLARIZATION SLOT FOR CKT SIZE 4 AND 6.
  - PARTS SHALL BE PACKED IN MOISTURE BARRIER BAG.

|   |                                  |   |              |                            |                    |  |                              |                           |  |  |  |
|---|----------------------------------|---|--------------|----------------------------|--------------------|--|------------------------------|---------------------------|--|--|--|
| ADD 34CKT T&R P/N<br>EC NO: S2009-0642<br>DRWN:SKANG 2009/03/11<br>CHKD:ATSEE 2009/03/11<br>APPR:MLONG 2009/03/18 | QUALITY<br>SYMBOLS<br>▽=0<br>◻=0 | GENERAL TOLERANCES<br>(UNLESS SPECIFIED)  |              | DIMENSION STYLE<br>MM ONLY |                    | SCALE<br>NTS   | DESIGN UNITS<br>METRIC       | THIRD ANGLE<br>PROJECTION |  |  |  |
|   |                                  | 4 PLACES ± --- ± ---<br>3 PLACES ± --- ± ---<br>2 PLACES ± 0.2 ± ---<br>1 PLACE ± --- ± --- | mm      INCH | DRAWN BY<br>ATSEE          | DATE<br>2003/10/14 | TITLE<br>MGRID, SHROUDED HEADER<br>SMT, W/PEGS/CAP FOR PICK<br>& PLACE IN TUBE AND T&R |                              |                           |  |  |  |
|   |                                  | ANGULAR ± 3 °   |              | CHECKED BY<br>KCLING       | DATE<br>2003/11/07 | MOLEX INCORPORATED   |                              |                           |  |  |  |
|   |                                  | DRAFT WHERE APPLICABLE<br>MUST REMAIN<br>WITHIN DIMENSIONS                                  |              | APPROVED BY<br>SKTOH       | DATE<br>2003/11/07 | MATERIAL NO.<br>SEE TABLE  | DOCUMENT NO.<br>SD-87832-007 | SHEET NO.<br>4 OF 4       |  |  |  |

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