

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0878322023](#)
Status: **Active**
Overview: milligrid
Description: 2.00mm (.079") Pitch Milli-Grid™ Header, Surface Mount, Vertical, Shrouded, Lead-free, 20 Circuits, 0.76µm (30µ") Gold (Au) Plating, Pick-and-Place Cap, with Locking Windows and Center 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 With Cap|Contact Molex for application in automotive industry
 Overview [milligrid](#)
 Product Name Milli-Grid™

Physical

Breakaway No
 Circuits (Loaded) 20
 Circuits (maximum) 20
 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 Yes
 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
 Robotic Placement Pick and Place Cap
 Shrouded Fully



image - Reference only

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
 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

| | |
|-------------------------------|-----------------|
| Stackable | No |
| 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

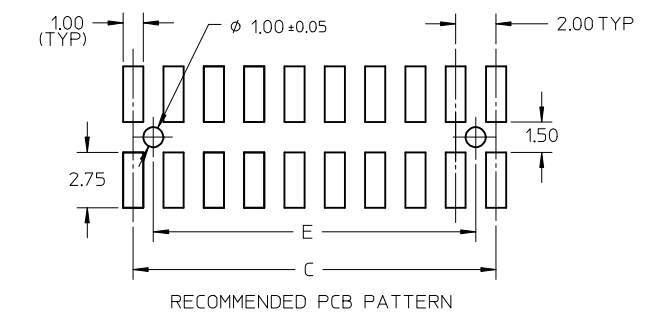
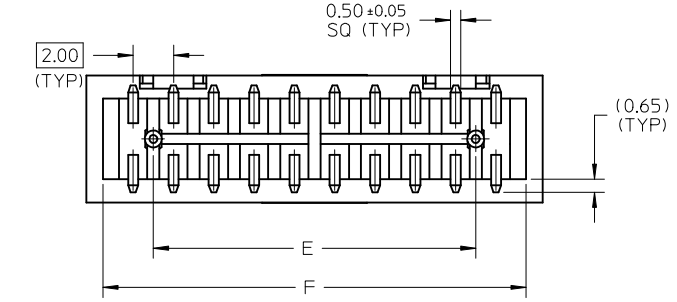
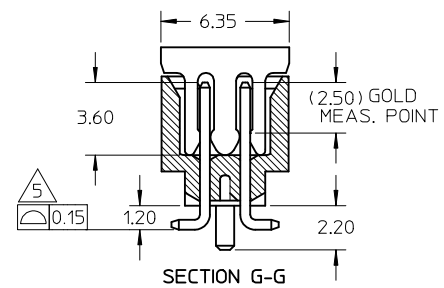
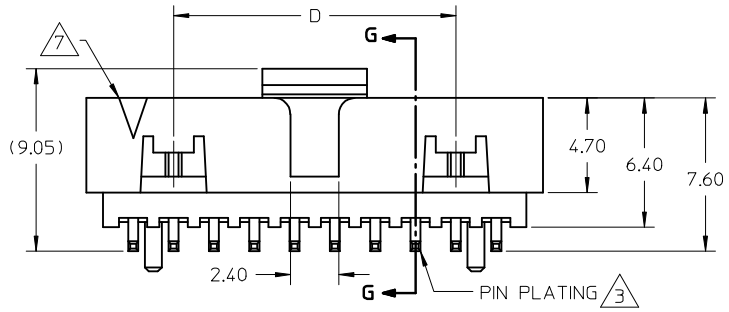
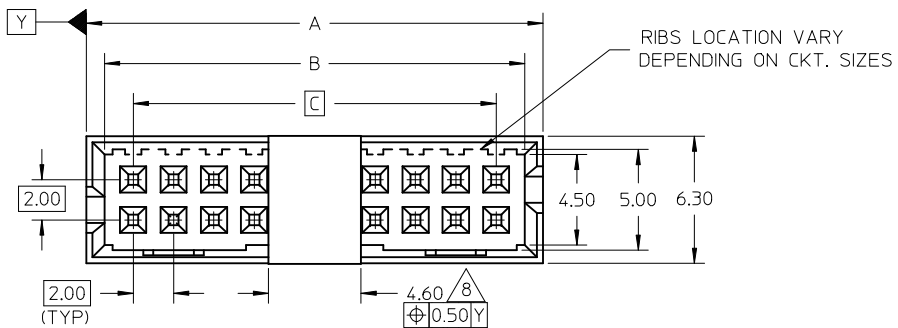
| | |
|--|---------------------------|
| Duration at Max. Process Temperature (seconds) | 10 |
| Lead-free Process Capability | Reflow Capable (SMT only) |
| Max. Cycles at Max. Process Temperature | 1 |
| Process Temperature max. C | 260 |

Material Info**Reference - Drawing Numbers**

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

This document was generated on 05/25/2010

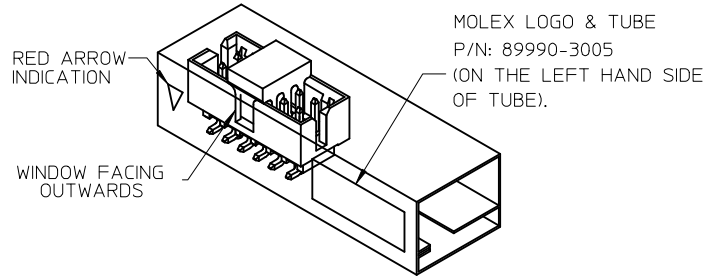
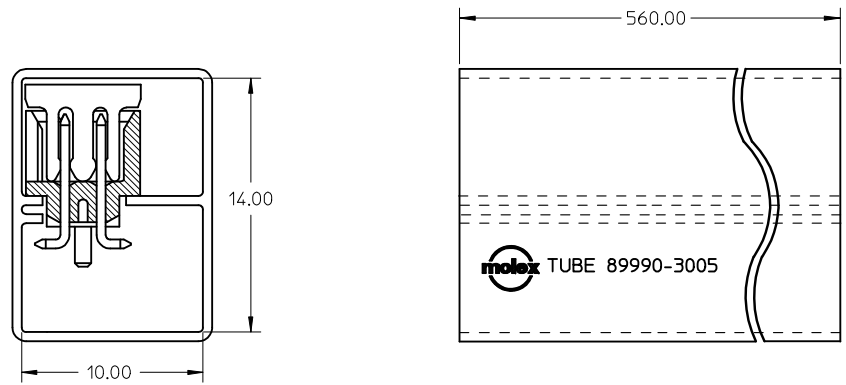
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| CKT SIZE | DIMENSION | | | | | |
|----------|-----------|-------|-------|-------|-------|-------|
| | A | B | C | D | E | F |
| 4 | 6.65 | 4.85 | 2.00 | --- | --- | 5.00 |
| 6 | 8.65 | 6.85 | 4.00 | --- | 2.00 | 7.00 |
| 8 | 10.65 | 8.85 | 6.00 | --- | 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 EC NO: S2009-0642 DRWN:SKANG 2009/03/11 CHKD:ATSEE 2009/03/11 APPR:MLONG 2009/03/18 | QUALITY SYMBOLS ▽=0 ◻=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE MM ONLY | | SCALE NTS | DESIGN UNITS METRIC | THIRD ANGLE PROJECTION | | |
| | | | | DRAWN BY ATSEE | DATE 2003/10/14 | TITLE MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R | | | | |
| | | | | CHECKED BY KCL ING | DATE 2003/11/07 | MOLEX INCORPORATED | | | | |
| | | | | APPROVED BY SKTOH | DATE 2003/11/07 | DOCUMENT NO. SD-87832-007 | | | | |
| A9 | REV | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | SIZE A3 | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | | | | |

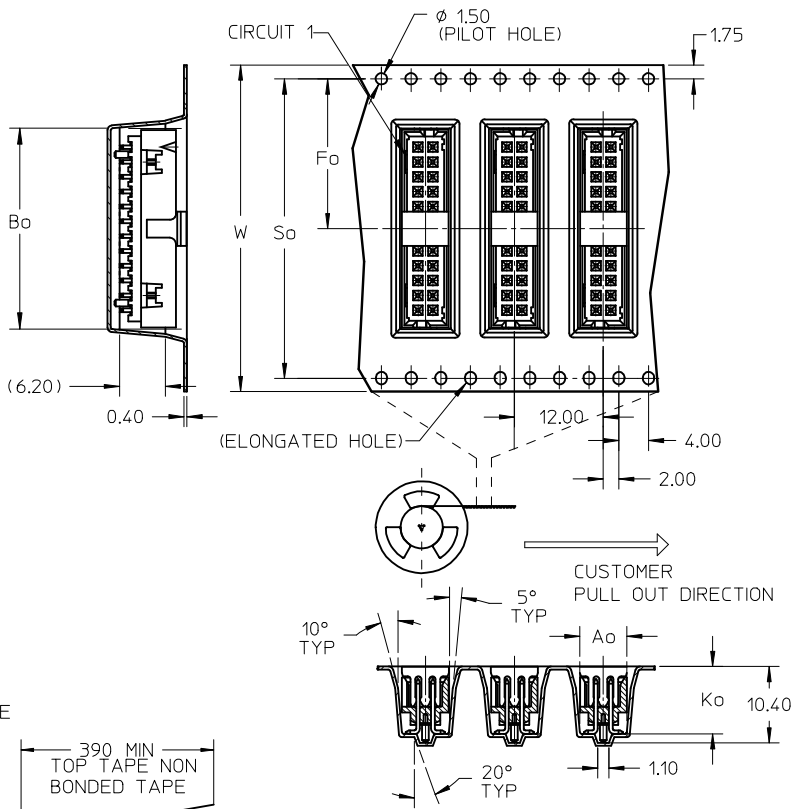
WITH CAP
TUBE PACKAGING



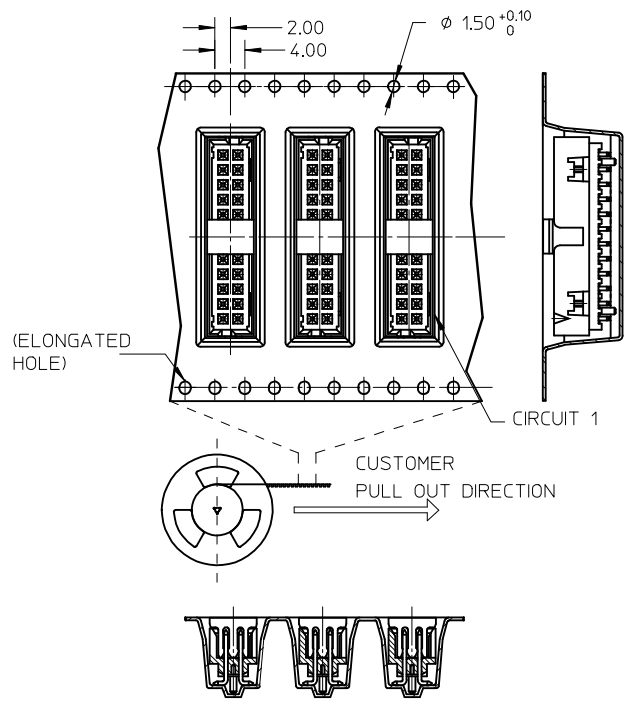
REF : ORIENTATION OF PART IN TUBE,
(FOR THE REFERENCE OF PART/TUBE ASSEMBLY.)

| | | | | | | | | | | | |
|---|--------------------|-------------------------------|---|--|----------------------------|----------------------|--|------------------------|------------------------|-----------|--------|
| ADD 34CKT T&R P/N EC NO: S2009-0642 DRWN:SKANG 2009/03/11 CHKD:ATSEE 2009/03/11 APPR:MLONG 2009/03/18 | DESCRIPTION REV | QUALITY SYMBOLS ▽=0 ◻=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE MM ONLY | | SCALE NTS | DESIGN UNITS METRIC | THIRD ANGLE PROJECTION | | |
| | | | 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- | mm INCH ± --- ± --- ± 0.2 ± --- ± --- ± --- | DRAWN BY ATSEE | DATE 2003/10/14 | TITLE MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R | | | | |
| | | | ANGULAR ± 3 ° | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | CHECKED BY KCLING | DATE 2003/11/07 | MOLEX INCORPORATED | | | | |
| | | A9 | | | SEE TABLE | APPROVED BY SKTOH | DATE 2003/11/07 | MATERIAL NO. | DOCUMENT NO. | SHEET NO. | 2 OF 4 |

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

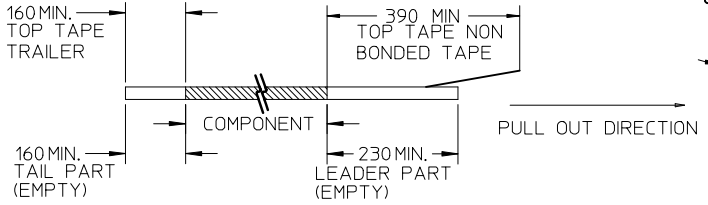


EMBOSSED CARRIER TAPE LAYOUT OPTION B
24 CKT USE FOR ILLUSTRATION ONLY

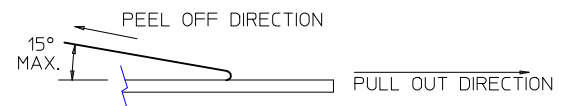


NOTES:

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 | DOCUMENT NO. SD-87832-007 | | |
| APPROVED BY | DATE | SHEET NO. 3 OF 4 | | |
| SKTOH | 2003/11/07 | THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION | | |
| MATERIAL NO. | SEE TABLE | | | |

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