

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0878314228](#)
Status: **Active**
Overview: Milli-Grid™
Description: 2.00mm (.079") Pitch Milli-Grid™ Header, Vertical, Through Hole, Shrouded, Lead-free, 42 Circuits, 0.38µm (15µ") Gold (Au) Plating, Center Polarization Slot, with Locking Windows, 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 [87831](#)
 Application Wire-to-Board
 Comments Contact Molex for application in automotive industry
 Overview Milli-Grid™
 Product Name Milli-Grid™

Physical

Breakaway No
 Circuits (Loaded) 42
 Circuits (maximum) 42
 Color - Resin Black
 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 Yes
 Material - Metal Brass
 Material - Plating Mating Gold
 Material - Plating Termination Tin
 Material - Resin Nylon
 Number of Rows 2
 Orientation Vertical
 PC Tail Length (in) 0.098 In
 PC Tail Length (mm) 2.50 mm
 PCB Locator Yes
 PCB Retention None
 PCB Thickness Recommended (in) 0.062 In
 PCB Thickness Recommended (mm) 1.60 mm
 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) 15
 Plating min: Mating (µm) 0.38
 Plating min: Termination (µin) 76
 Plating min: Termination (µm) 1.88
 Polarized to Mating Part Side Slots (2)



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

[87831Series](#)

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

| | |
|--------------------------------|-----------------|
| Polarized to PCB | Yes |
| Shrouded | Fully |
| Stackable | No |
| Surface Mount Compatible (SMC) | Yes |
| Temperature Range - Operating | -55°C to +105°C |
| Termination Interface: Style | Through Hole |

Electrical

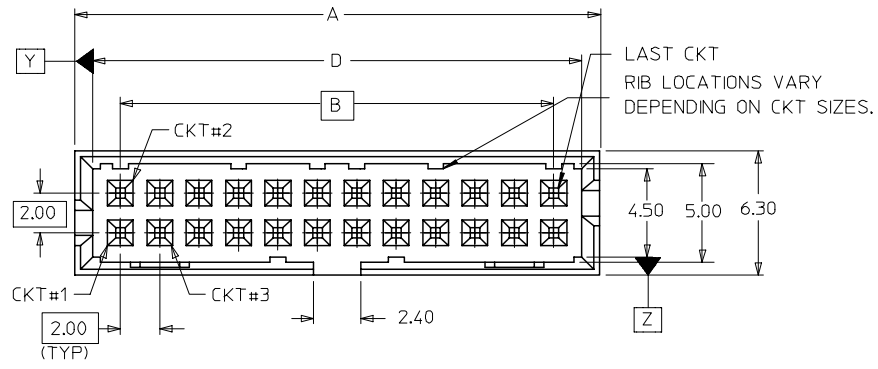
| | |
|-------------------------------|------|
| Current - Maximum per Contact | 2A |
| Voltage - Maximum | 125V |

Material Info**Reference - Drawing Numbers**

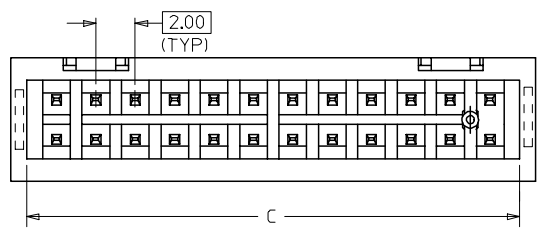
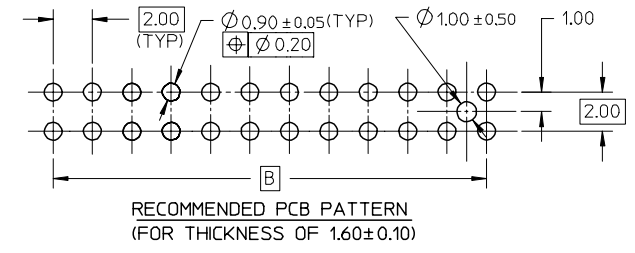
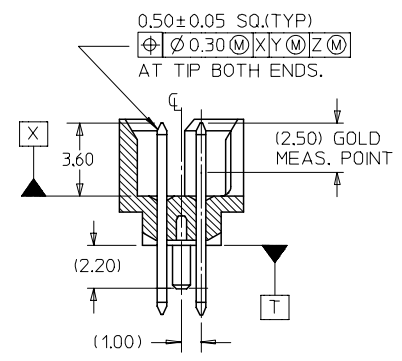
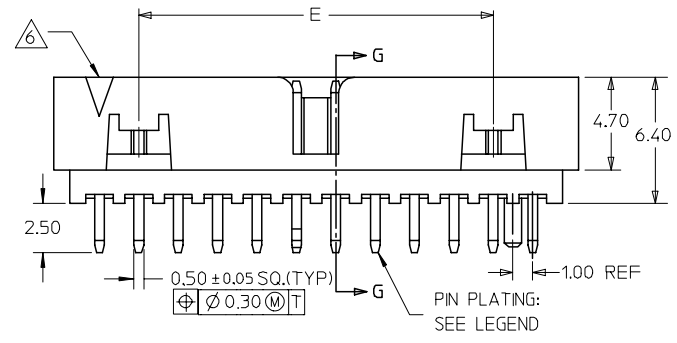
| | |
|-----------------------|--------------|
| Product Specification | PS-87831-027 |
| Sales Drawing | SD-87831-020 |

This document was generated on 04/21/2010

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION



- NOTES:**
- FOR ILLUSTRATION PURPOSES, 24 CKT SIZE WAFER IS SHOWN.
 - MATERIAL :
HOUSING : 30% G.F., NYLON 46, UL94V-0, COLOR BLACK.
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
 - PRODUCT SPECIFICATION PS-87831-027 APPLIES.
 - NO CENTRE POLARIZATION SLOT FOR CKT SIZE 6.
 - NO SIDE LOCKING SLOT FROM 6 TO 12 CKT SIZE.
 - CKT 6 HAS NO IDENTIFICATION TAG.
 - THIS HEADER MATES WITH MOLEX :
a) CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES.
b) 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
 - PARTS TO BE PACKED IN TUBE WITH MOISTURE BARRIER BAG



| | | | | | | | | | | | |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------|---------------------------------------|-------|----------------------------|------|-------------------------------------------------------------------------------------------------------------------------------|------------------------|-------------------------------------------|--|--|--|
| CORRECT TYPO ERROR EC NO: S2007-1097 DRWN:ATSEE 2007/06/20 CHKD:SKANG 2007/06/21 APPR:MLONG 2007/06/22 | QUALITY SYMBOLS ▽=0 ▽C=0 | GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE MM ONLY | | SCALE NTS | DESIGN UNITS METRIC | THIRD ANGLE PROJECTION | | | |
| | | 4 PLACES ± --- | ± --- | mm | INCH | DRAWN BY ATSEE | DATE 2003/10/08 | MGRID, SHROUDED HEADER VERTICAL, W/PEG | | | |
| | | 3 PLACES ± --- | ± --- | | | CHECKED BY KCLING | DATE 2003/11/07 | | | | |
| | | 2 PLACES ± 0.2 | ± --- | | | APPROVED BY SKTOH | DATE 2003/11/07 | MOLEX INCORPORATED | | | |
| 1 PLACE ± --- | ± --- | | | MATERIAL NO. SEE TABLE | | DOCUMENT NO. SD-87831-020 | SHEET NO. 1 OF 2 | | | | |
| 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 | | | | | |

10 9 8 7 6 5 4 3 2 1

F

E

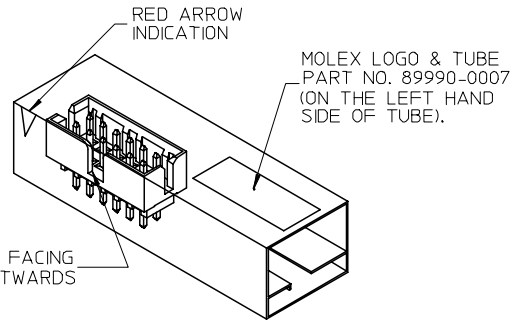
D

C

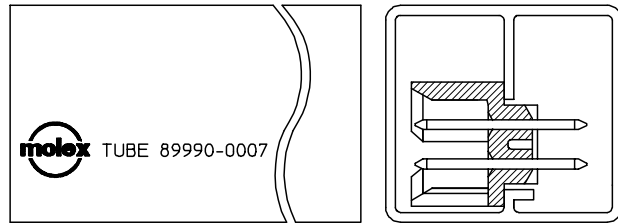
B

A

id_frame_A3_P_AM_T Rev. E 2006/04/15



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



ORIENTATION OF PART IN TUBE

| P/N IN TUBE | CKT SIZE | VOID PIN LOCATION | DIMENSION | | | | |
|-------------|----------|-------------------|-----------|-------|-------|-------|-------|
| | | | A | B | C | D | E |
| 87831-06** | 6 | --- | 8.65 | 4.00 | 7.00 | 6.85 | --- |
| 87831-08** | 8 | --- | 10.65 | 6.00 | 9.00 | 8.85 | --- |
| 87831-10** | 10 | --- | 12.65 | 8.00 | 11.00 | 10.85 | --- |
| 87831-12** | 12 | --- | 14.65 | 10.00 | 13.00 | 12.85 | --- |
| 87831-14** | 14 | --- | 16.65 | 12.00 | 15.00 | 14.85 | 8.00 |
| 87831-16** | 16 | --- | 18.65 | 14.00 | 17.00 | 16.85 | 10.00 |
| 87831-18** | 18 | --- | 20.65 | 16.00 | 19.00 | 18.85 | 12.00 |
| 87831-20** | 20 | --- | 22.65 | 18.00 | 21.00 | 20.85 | 14.00 |
| 87831-22** | 22 | --- | 24.65 | 20.00 | 23.00 | 22.85 | 16.00 |
| 87831-24** | 24 | --- | 26.65 | 22.00 | 25.00 | 24.85 | 18.00 |
| 87831-26** | 26 | --- | 28.65 | 24.00 | 27.00 | 26.85 | 20.00 |
| 87831-28** | 28 | --- | 30.65 | 26.00 | 29.00 | 28.85 | 22.00 |
| 87831-30** | 30 | --- | 32.65 | 28.00 | 31.00 | 30.85 | 24.00 |
| 87831-32** | 32 | --- | 34.65 | 30.00 | 33.00 | 32.85 | 26.00 |
| 87831-34** | 34 | --- | 36.65 | 32.00 | 35.00 | 34.85 | 28.00 |
| 87831-36** | 36 | --- | 38.65 | 34.00 | 37.00 | 36.85 | 30.00 |
| 87831-38** | 38 | --- | 40.65 | 36.00 | 39.00 | 38.85 | 32.00 |
| 87831-40** | 40 | --- | 42.65 | 38.00 | 41.00 | 40.85 | 34.00 |
| 87831-42** | 42 | --- | 44.65 | 40.00 | 43.00 | 42.85 | 36.00 |
| 87831-44** | 44 | --- | 46.65 | 42.00 | 45.00 | 44.85 | 38.00 |
| 87831-46** | 46 | --- | 48.65 | 44.00 | 47.00 | 46.85 | 40.00 |
| 87831-48** | 48 | --- | 50.65 | 46.00 | 49.00 | 48.85 | 42.00 |
| 87831-50** | 50 | --- | 52.65 | 48.00 | 51.00 | 50.85 | 44.00 |
| 87831-5128 | 24 | 12 | 26.65 | 22.00 | 25.00 | 24.85 | 18.00 |

PART NUMBER LEGEND :

87831 - * * * *

PLATING OPTIONS

- 28 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 29 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.

| | | | | | | | | | | | | |
|-----------------------------------------------------------------------------------------------------|-------------------------------------------------|----------------------------------------|---------------------------------------------------------|-------|----------------------------|-----------------------|--------------------|----------------------------------------------------|------------------------------|---------------------|--|--|
| <p>CORRECT TYPO ERROR EC NO: S2007-1097 DRWN:ATSEE CHKD:SKANG APPR:MLONG</p> | <p>2007/06/20 2007/06/21 2007/06/22</p> | <p>QUALITY SYMBOLS ▽=0 △=0</p> | GENERAL TOLERANCES (UNLESS SPECIFIED) | | DIMENSION STYLE MM ONLY | | SCALE NTS | DESIGN UNITS METRIC | THIRD ANGLE PROJECTION | | | |
| | | | | mm | INCH | DRAWN BY ATSEE | DATE 2003/10/08 | TITLE MGRID, SHROUDED HEADER VERTICAL, W/PEG | MOLEX INCORPORATED | | | |
| | | | 4 PLACES | ± --- | ± --- | CHECKED BY KCL ING | DATE 2003/11/07 | | | | | |
| | | | 3 PLACES | ± --- | ± --- | APPROVED BY SKTOH | DATE 2003/11/07 | MATERIAL NO. | DOCUMENT NO. SD-87831-020 | SHEET NO. 2 OF 2 | | |
| 2 PLACES | ± 0.2 | ± --- | DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS | | SEE TABLE | | | | | | | |
| 1 PLACE | ± --- | ± --- | | | | | | | | | | |
| | | ANGULAR ± 3 ° | | | | | | | | | | |

F

E

D

C

B

A

9 8 7 6 5 4 3 2 1