

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0878314828](#)
Status: **Active**
Overview: [milligrd](#)
Description: 2.00mm (.079") Pitch Milli-Grid™ Header, Vertical, Through Hole, Shrouded, Lead-free, 48 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 [milligrd](#)
 Product Name Milli-Grid™

Physical

Breakaway No
 Circuits (Loaded) 48
 Circuits (maximum) 48
 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

**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.

China RoHS



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

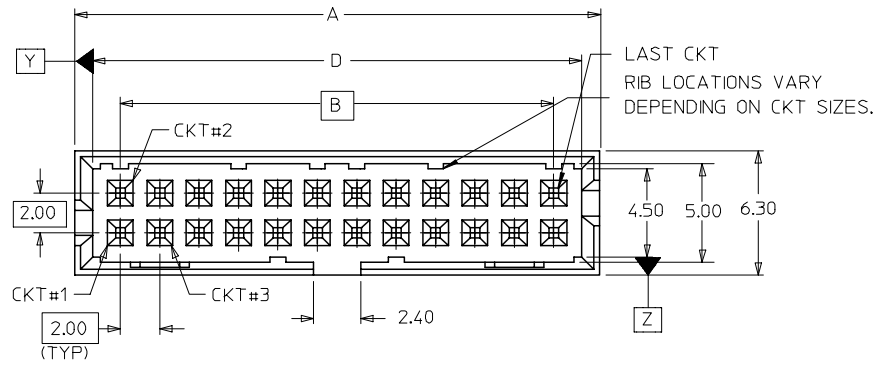
Current - Maximum per Contact	2A
Voltage - Maximum	125V

Material Info**Reference - Drawing Numbers**

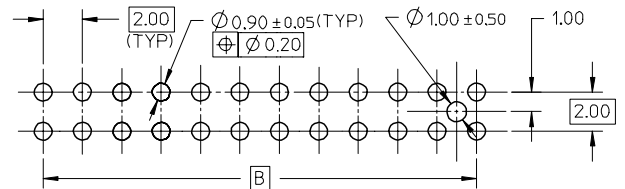
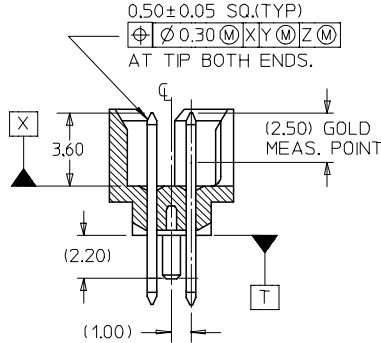
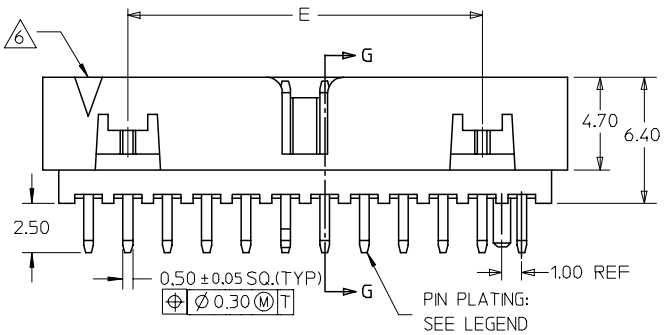
Product Specification	PS-87831-027
Sales Drawing	SD-87831-020

This document was generated on 05/25/2010

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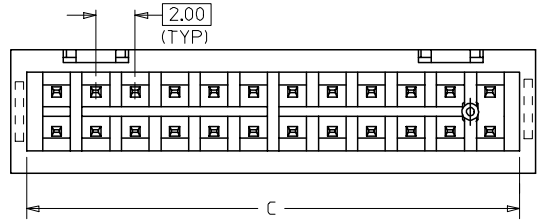


- NOTES:**
- FOR ILLUSTRATION PURPOSES, 24 CKT SIZE WAFER IS SHOWN.
 - MATERIAL :
HOUSING : 30% G.F., NYLON 46, UL94V-0, COLOR BLACK.
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
 - PRODUCT SPECIFICATION PS-87831-027 APPLIES.
 - NO CENTRE POLARIZATION SLOT FOR CKT SIZE 6.
 - NO SIDE LOCKING SLOT FROM 6 TO 12 CKT 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



SECTION G-G

RECOMMENDED PCB PATTERN
(FOR THICKNESS OF 1.60±0.10)



CORRECT TYPO ERROR EC NO: S2007-1097 DRWN:ATSEE CHKD:SKANG APPR:MLONG	DESCRIPTION 2007/06/20 2007/06/21 2007/06/22	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 2003/10/08	TITLE MGRID, SHROUDED HEADER VERTICAL, W/PEG				
			ANGULAR ± 3 °		CHECKED BY KCLING	DATE 2003/11/07	MOLEX INCORPORATED				
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE	APPROVED BY SKTOH	DATE 2003/11/07	MATERIAL NO. SD-87831-020	DOCUMENT NO.	SHEET NO. 1 OF 2		

10 9 8 7 6 5 4 3 2 1

F

E

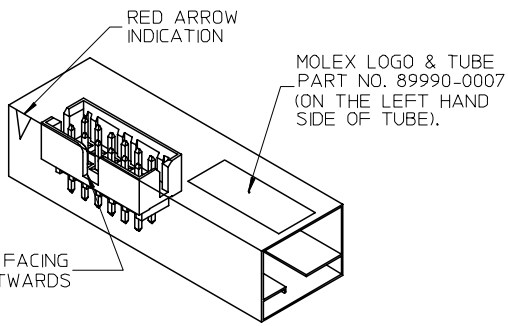
D

C

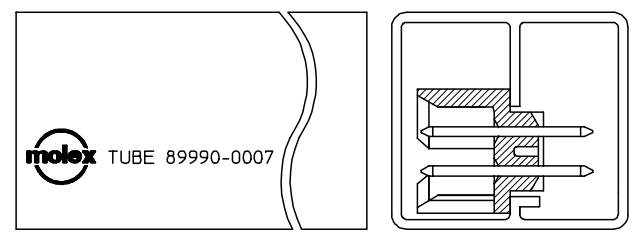
B

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.

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			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		APPROVED BY SKTOH		DATE 2003/11/07	MOLEX INCORPORATED	
			SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		MATERIAL NO.		DOCUMENT NO. SD-87831-020	SHEET NO. 2 OF 2	

9 8 7 6 5 4 3 2 1