

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

**Part Number:** [0878312828](#)  
**Status:** **Active**  
**Overview:** milligrid  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Vertical, Through Hole, Shrouded, Lead-free, 28 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**

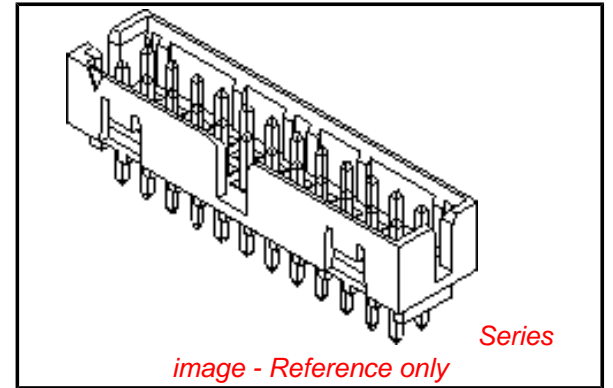
CSA LR19980  
 UL E29179

**General**

Product Family PCB Headers  
 Series [87831](#)  
 Application Wire-to-Board  
 Comments Contact Molex for application in automotive industry  
 Overview [milligrid](#)  
 Product Name Milli-Grid™

**Physical**

Breakaway No  
 Circuits (Loaded) 28  
 Circuits (maximum) 28  
 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, Phosphor Bronze  
 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](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.

**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**

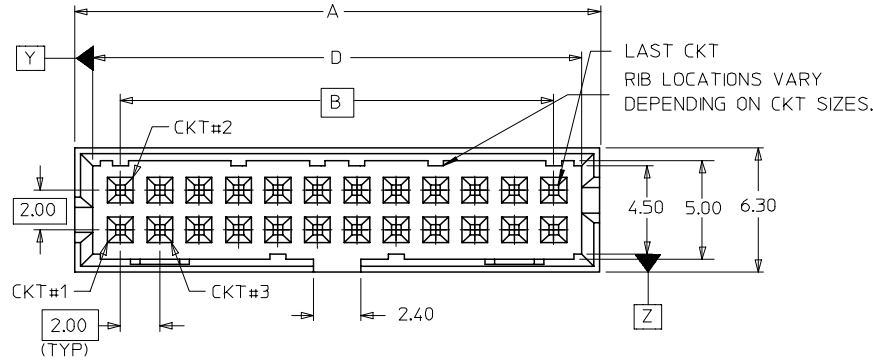
Current - Maximum per Contact	2A
Voltage - Maximum	125V

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

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

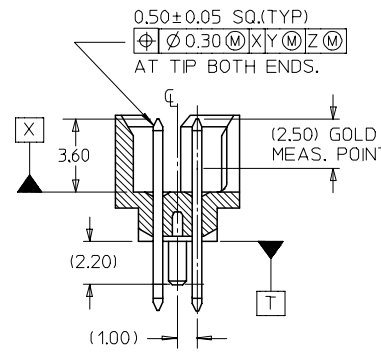
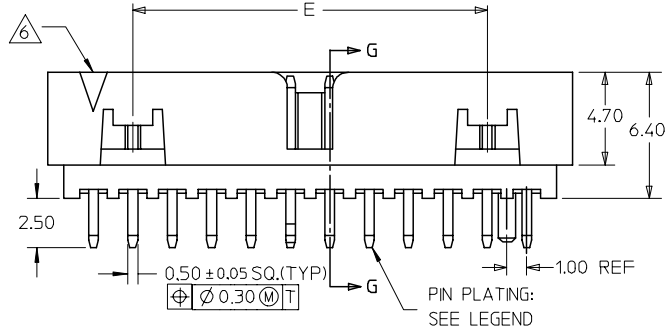
This document was generated on 05/26/2010

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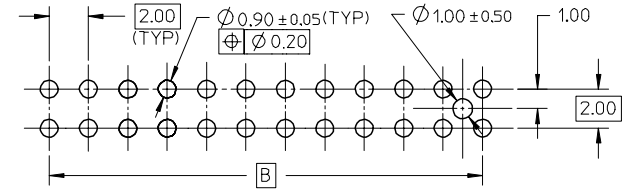


NOTES:

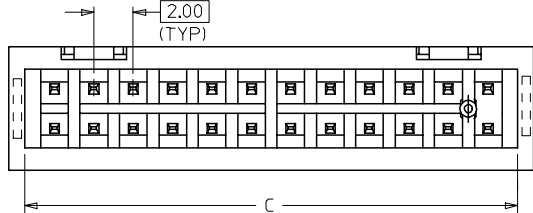
1. FOR ILLUSTRATION PURPOSES, 24 CKT SIZE WAFER IS SHOWN.
2. MATERIAL :  
HOUSING : 30% G.F., NYLON 46, UL94V-0, COLOR BLACK.  
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
3. PRODUCT SPECIFICATION PS-87831-027 APPLIES.
4. NO CENTRE POLARIZATION SLOT FOR CKT SIZE 6.
5. NO SIDE LOCKING SLOT FROM 6 TO 12 CKT SIZE.
6. CKT 6 HAS NO IDENTIFICATION TAG.
7. THIS HEADER MATES WITH MOLEX :  
a) CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES.  
b) 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
8. 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	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
		$\nabla = 0$ $\nabla C = 0$	mm    INCH	MM ONLY	NTS	METRIC	
			4 PLACES ± --- 3 PLACES ± --- 2 PLACES ± 0.2 1 PLACE ± ---	DRAWN BY DATE ATSEE 2003/10/08 CHECKED BY DATE KCLING 2003/11/07 APPROVED BY DATE SKTOH 2003/11/07	TITLE	MGRID, SHROUDED HEADER VERTICAL, W/PEG	
			ANGULAR ± 3 °	MATERIAL NO. SEE TABLE	MOLEX INCORPORATED	DOCUMENT NO.	SD-87831-020
		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		
A8	REV						SHEET NO. 1 OF 2

10 9 8 7 6 5 4 3 2 1

F

E

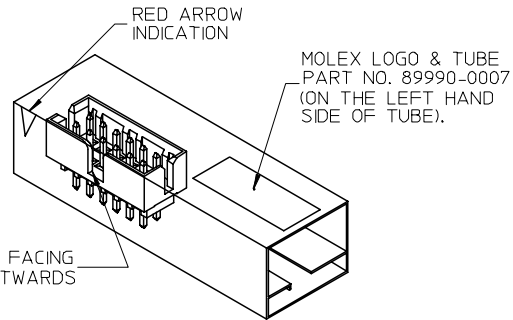
D

C

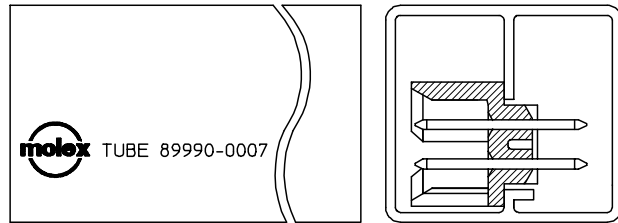
B

A

A



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.

CORRECT TYPO ERROR EC NO: S2007-1097 DRWN:ATSEE CHKD:SKANG APPR:MLONG	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		
				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	
A8	REV		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		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