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Part Number: [0878312420](#)
Status: **Active**
Overview: [milligrid](#)
Description: 2.00mm (.079") Pitch Milli-Grid™ Header, Vertical, Through Hole, Shrouded, Lead-free, 24 Circuits, 0.38µm (15µ") Gold (Au) Plating, Center Polarization Slot, with Locking Windows, without 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
MolexKits Yes
Overview [milligrid](#)
Product Name Milli-Grid™

Physical

Breakaway No
Circuits (Loaded) 24
Circuits (maximum) 24
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 No
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

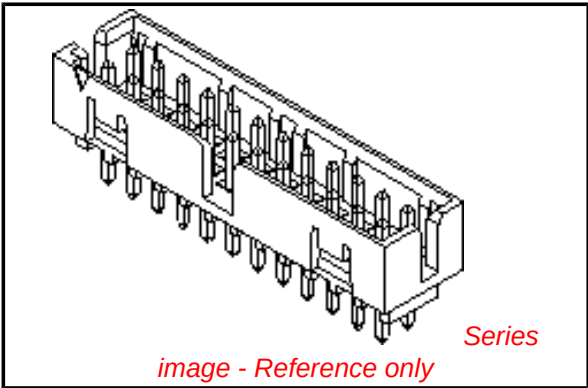


image - Reference only

EU RoHS
ELV and RoHS
Compliant
REACH SVHC
Contains SVHC: No
Halogen-Free
Status

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 Mating Part	Side Slots (2)
Polarized to PCB	No
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

Solder Process Data

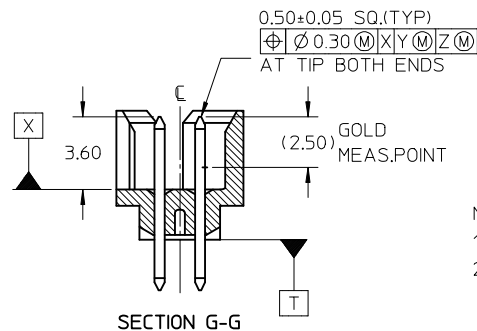
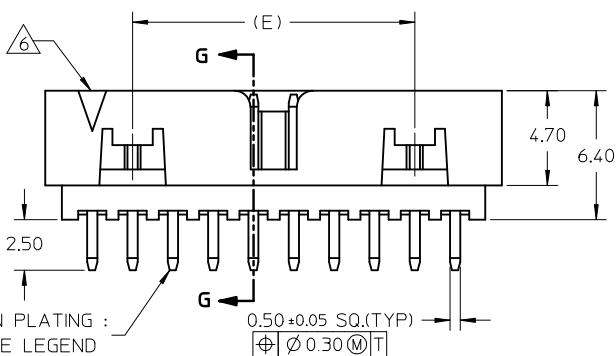
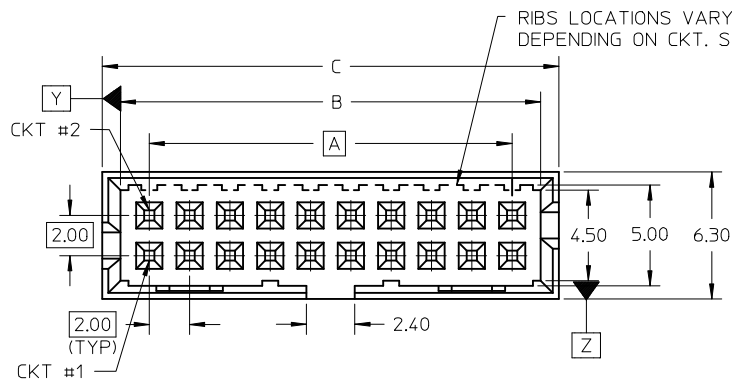
Duration at Max. Process Temperature (seconds)	10
Lead-free Process Capability	Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	260

Material Info

Reference - Drawing Numbers

Product Specification	PS-87831-027
Sales Drawing	SD-87831-011

This document was generated on 06/08/2010
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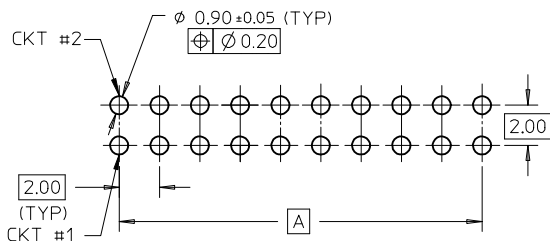


PART NUMBER LEGEND :

87831 - * * * *

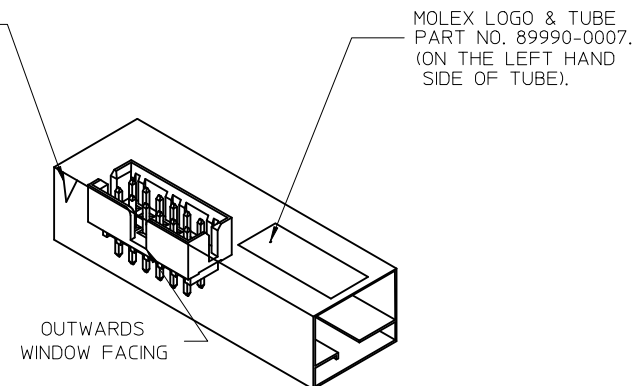
PLATING OPTION

- 19 - 0.05-0.13um/2-5uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 20 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 21 - 0.76um/30uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN. TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.



RECOMMENDED PCB PATTERN

RED ARROW INDICATION



NOTES:

1. FOR ILLUSTRATION PURPOSES, 20 CIRCUIT 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 4 & 6 (EXCEPT FOR 87831-5119).
5. NO SIDE LOCKING SLOT FROM 4 TO 12 CKT SIZE.
6. CKT 4 AND 6 HAS NO IDENTIFICATION TAG.
7. REFER TO PART 87831-**4* FOR CENTRE LOCKING SLOT OPTION FOR 4 TO 12 CKT.
8. THIS HEADER MATES WITH MOLEX :
a) CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES.
b) 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
9. PARTS TO BE PACKED IN TUBE WITH MOISTURE BARRIER BAG.

REVISED	EC NO: S2009-0559	2009/02/23	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
	DRWN:SKANG	2009/02/23				MM ONLY		NTS	METRIC	
	CHKD:ATSEE	2009/02/23				DRAWN BY DATE		TITLE		
	APPR:MLONG	2009/02/23				ATSEE 2003/10/03		MGRID, SHROUDED HEADER		
						CHECKED BY DATE		VERTICAL		
A14	REV	A14	REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	mm INCH		DRAWN BY DATE		MGRID, SHROUDED HEADER
						4 PLACES ± --- ± ---		ATSEE 2003/10/03		
						3 PLACES ± --- ± ---		CHECKED BY DATE		
						2 PLACES ± 0.2 ± ---		KCLING 2003/11/07		
						1 PLACE ± --- ± ---		APPROVED BY DATE		
ANGULAR ± 3 °		SKTOH 2003/11/07		MOLEX MOLEX INCORPORATED						
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.		DOCUMENT NO.		SHEET NO.				
		SEE TABLE		SD-87831-011		1 OF 2				
		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	P/N IN TUBE	CKT SIZE	VOID POSITION	DIMENSION					}	NO CENTRE POLARIZATION SLOT	F										
	A	B	C	D	E																
F	87831-04**	4	-----	2.00	4.85	6.65	5.00	-----													
	87831-06**	6	-----	4.00	6.85	8.65	7.00	-----													
	87831-08**	8	-----	6.00	8.85	10.65	9.00	-----													
	87831-10**	10	-----	8.00	10.85	12.65	11.00	-----													
	87831-12**	12	-----	10.00	12.85	14.65	13.00	-----													
E	87831-14**	14	-----	12.00	14.85	16.65	15.00	8.00			E										
	87831-16**	16	-----	14.00	16.85	18.65	17.00	10.00													
	87831-18**	18	-----	16.00	18.85	20.65	19.00	12.00													
	87831-20**	20	-----	18.00	20.85	22.65	21.00	14.00													
	87831-22**	22	-----	20.00	22.85	24.65	23.00	16.00													
E	87831-24**	24	-----	22.00	24.85	26.65	25.00	18.00													
	87831-26**	26	-----	24.00	26.85	28.65	27.00	20.00													
	87831-28**	28	-----	26.00	28.85	30.65	29.00	22.00													
	87831-30**	30	-----	28.00	30.85	32.65	31.00	24.00													
	87831-32**	32	-----	30.00	32.85	34.65	33.00	26.00													
D	87831-34**	34	-----	32.00	34.85	36.65	35.00	28.00													
	87831-36**	36	-----	34.00	36.85	38.65	37.00	30.00													
	87831-38**	38	-----	36.00	38.85	40.65	39.00	32.00													
	87831-40**	40	-----	38.00	40.85	42.65	41.00	34.00													
	87831-42**	42	-----	40.00	42.85	44.65	43.00	36.00													
D	87831-44**	44	-----	42.00	44.85	46.65	45.00	38.00			D										
	87831-46**	46	-----	44.00	46.85	48.65	47.00	40.00													
	87831-48**	48	-----	46.00	48.85	50.65	49.00	42.00													
	87831-50**	50	-----	48.00	50.85	52.65	51.00	44.00													
	87831-5120	12	1	10.00	12.85	14.65	13.00	-----													
C	87831-5220	44	20	42.00	44.85	46.65	45.00	38.00													
	87831-5320	24	13	22.00	24.85	26.65	25.00	18.00													
	87831-5420	34	3	32.00	34.85	36.65	35.00	28.00													
	87831-5520	20	20	18.00	20.85	22.65	21.00	14.00													
	87831-5620	28	13	26.00	28.85	30.65	29.00	22.00													
C	87831-5119	6	-----	4.00	6.85	8.65	7.00	-----													
	87831-5720	34	15	32.00	34.85	36.65	35.00	28.00													
	87831-5820	40	25	38.00	40.85	42.65	41.00	34.00													
	87831-5920	20	13	18.00	20.85	22.65	21.00	14.00													
	87831-6020	24	20	22.00	24.85	26.65	25.00	18.00													
B												B									
A												A									
fb_frame_A3_P_AM_T Rev. E 2006/04/15													9	8	7	6	5	4	3	2	1

REVISED EC NO: S2009-0559 DRWN:SKANG 2009/02/23 CHKD:ATSEE 2009/02/23 APPR:MLONG 2009/02/23 A14	DESCRIPTION REV	QUALITY SYMBOLS ▽=0 ▽C=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
		4 PLACES 3 PLACES 2 PLACES 1 PLACE	mm	INCH	DRAWN BY ATSEE	DATE 2003/10/03	TITLE MGRID, SHROUDED HEADER VERTICAL W/SLOT & STANDOFF				
			± ---	± ---	CHECKED BY	DATE 2003/11/07					
			± 0.2	± ---	APPROVED BY	DATE 2003/11/07					
			± ---	± ---	MATERIAL NO. SKTOH	DOCUMENT NO. SD-87831-011					
		ANGULAR ± 3 °			SEE TABLE		MOLEX INCORPORATED		SHEET NO. 2 OF 2		
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						
				SIZE A3							

REVISED	EC NO: S2009-0559 2009/02/23 DRWN:SKANG CHKD:ATSEE 2009/02/23 APPR:MLONG 2009/02/23	DESCRIPTION	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 2003/10/03	TITLE MGRID, SHROUDED HEADER VERTICAL W/SLOT & STANDOFF				
				4 PLACES	± ---	± ---	CHECKED BY KCL ING	DATE 2003/11/07					
				3 PLACES	± ---	± ---	APPROVED BY SKTOH	DATE 2003/11/07	MOLEX INCORPORATED				
				2 PLACES	± 0.2	± ---	MATERIAL NO. SEE TABLE						
				1 PLACE	± ---	± ---	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						
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DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS													
A14		REV											