

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0878310821](#)
Status: **Active**
Overview: milligrid
Description: 2.00mm (.079") Pitch Milli-Grid™ Header, Vertical, Through Hole, Shrouded, Lead-free, 8 Circuits, 0.76µm (30µ") Gold (Au) Plating, Center Polarization Slot, without Locking Window, without PCB Locator, Tube

Documents:

[3D Model](#) [Product Specification PS-87831-027 \(PDF\)](#)
[Drawing \(PDF\)](#) [RoHS Certificate of Compliance \(PDF\)](#)

Agency Certification

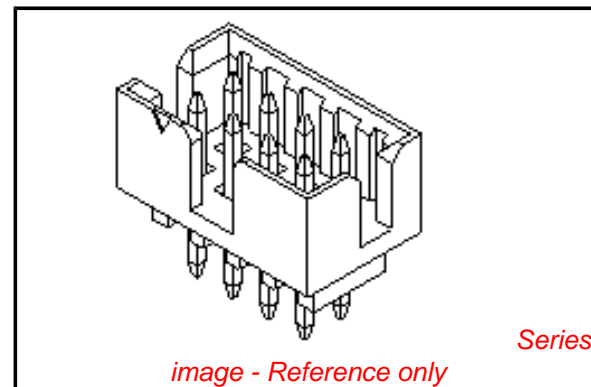
CSA LR19980
 UL E29179

General

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

Physical

Breakaway No
 Circuits (Loaded) 8
 Circuits (maximum) 8
 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 None
 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 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) 30
 Plating min: Mating (µm) 0.76
 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**

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	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

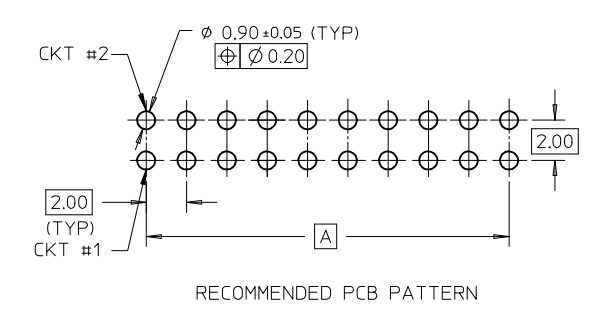
Material Info

Reference - Drawing Numbers

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

This document was generated on 05/26/2010

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION



- 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.

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

P/N IN TUBE	CKT SIZE	VOID POSITION	DIMENSION				
			A	B	C	D	E
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	-----
87831-14**	14	-----	12.00	14.85	16.65	15.00	8.00
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
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
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
87831-44**	44	-----	42.00	44.85	46.65	45.00	38.00
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	-----
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
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

} NO CENTRE POLARIZATION SLOT

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