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Part Number: [0878331051](#)
Status: **Active**
Overview: milligrd
Description: 2.00mm (.079") Pitch Milli-Grid™ Header, Right Angle, Shrouded, Lead-free, 10 Circuits, 0.38µm (15µ") Gold (Au) Plating, without PCB Locator, with Locking Window, without Center Polarization Slot, with Kapton Tape, Embossed Tape on Reel

Documents:

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

Agency Certification

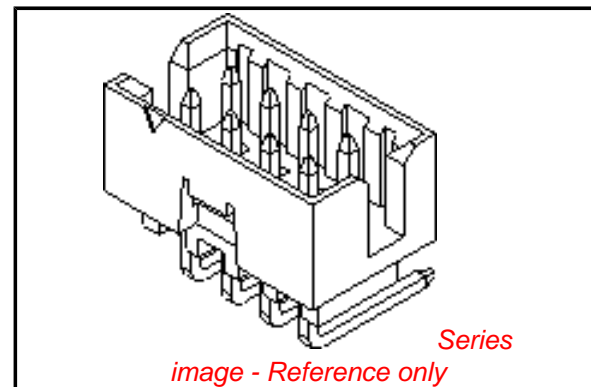
CSA LR19980
 UL E29179

General

Product Family PCB Headers
 Series [87833](#)
 Application Wire-to-Board
 Comments Contact Molex for application in automotive industry
 Overview [milligrd](#)
 Product Name Milli-Grid™

Physical

Breakaway No
 Circuits (Loaded) 10
 Circuits (maximum) 10
 Color - Resin Black
 Durability (mating cycles max) 100
 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 Phosphor Bronze
 Material - Plating Mating Gold
 Material - Plating Termination Tin
 Material - Resin Nylon
 Number of Rows 2
 Orientation Right Angle
 PC Tail Length (in) 0.067 In
 PC Tail Length (mm) 1.70 mm
 PCB Locator No
 PCB Retention None
 PCB Thickness Recommended (in) 0.031 In
 PCB Thickness Recommended (mm) 0.80 mm
 Packaging Type Embossed Tape on Reel
 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) 75
 Plating min: Termination (µm) 1.88



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

[87833Series](#)

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)	11
Lead-free Process Capability	SMC & Wave Capable (TH only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	265

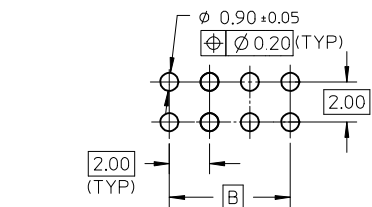
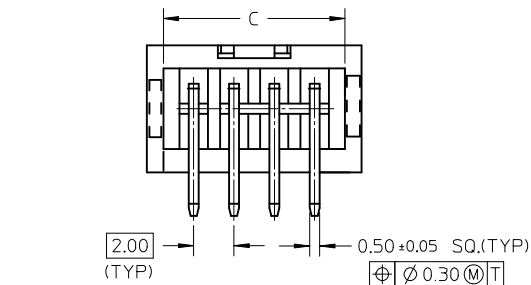
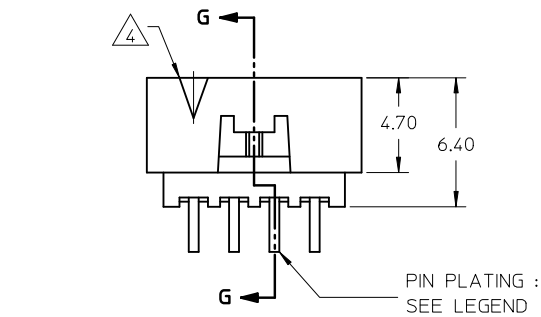
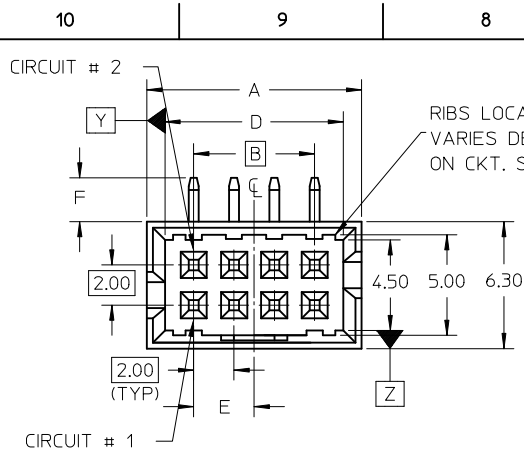
Material Info

Reference - Drawing Numbers

Product Specification	PS-87831-027
Sales Drawing	SD-87833-011

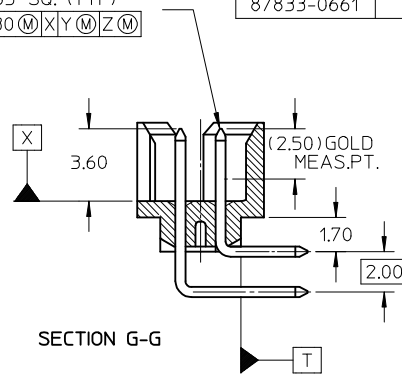
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RECOMMENDED PCB PATTERN

0.50±0.05 SQ. (TYP)
 $\text{⊕} \text{⌀} 0.30 \text{Ⓜ} \text{X} \text{Y} \text{Ⓜ} \text{Z} \text{Ⓜ}$



SECTION G-G

ASSEMBLY P/N (W/O KAPTON)	ASSEMBLY P/N (WITH KAPTON)	ASSEMBLY P/N (WITH KAPTON)	CKT SIZE	VOID PIN LOCATION	DIMENSION						PLATING OPTION
					A	B	C	D	E	F	
87833-0431	87833-0441	87833-0451	4	-	6.65	2.00	5.00	4.85	1.00	2.16	1
87833-0631	87833-0641	87833-0651	6	-	8.65	4.00	7.00	6.85	2.00	2.16	1
87833-0831	87833-0841	87833-0851	8	-	10.65	6.00	9.00	8.85	3.00	2.16	1
87833-1031	-	-	10	-	12.65	8.00	11.00	10.85	4.00	2.16	1
87833-1231	-	-	12	-	14.65	10.00	13.00	12.85	5.00	2.16	1
87833-5230	-	-	12	1	14.65	10.00	13.00	12.85	5.00	2.16	1
87833-0432	-	-	4	-	6.65	2.00	5.00	4.85	1.00	2.16	2
87833-0632	-	-	6	-	8.65	4.00	7.00	6.85	2.00	2.16	2
87833-0832	-	-	8	-	10.65	6.00	9.00	8.85	3.00	2.16	2
87833-1032	-	-	10	-	12.65	8.00	11.00	10.85	4.00	2.16	2
87833-1232	-	-	12	-	14.65	10.00	13.00	12.85	5.00	2.16	2
87833-5220	-	-	10	10	12.65	8.00	11.00	10.85	4.00	2.16	1
-	87833-1041	87833-1051	10	-	12.65	8.00	11.00	10.85	4.00	1.70	1
87833-0661	-	-	6	-	8.65	4.00	7.00	6.85	2.00	3.18	1

PLATING OPTIONS:

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

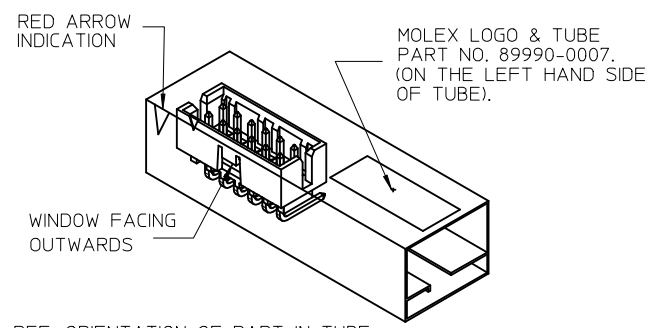
NOTES:

- FOR ILLUSTRATION PURPOSES, 8 CIRCUIT SIZE WAFER IS SHOWN.
- MATERIAL :
HOUSING : NYLON 46, GLASS FILLED, UL94V-0, COLOR BLACK.
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
KAPTON TAPE : POLYIMIDE 4mm X 30m X 0.055mm COLOR: AMBER
- PRODUCT SPECIFICATION PS-87831-027 APPLIES.
- CKT 4 & 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 WITH MOISTURE BARRIER BAG.
- NO CENTRE POLARIZATION SLOT FOR CKT SIZE 4 AND 6

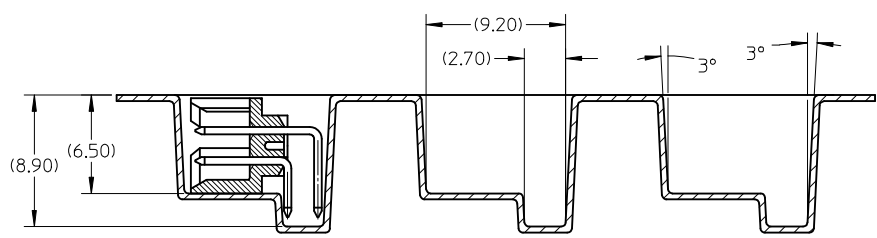
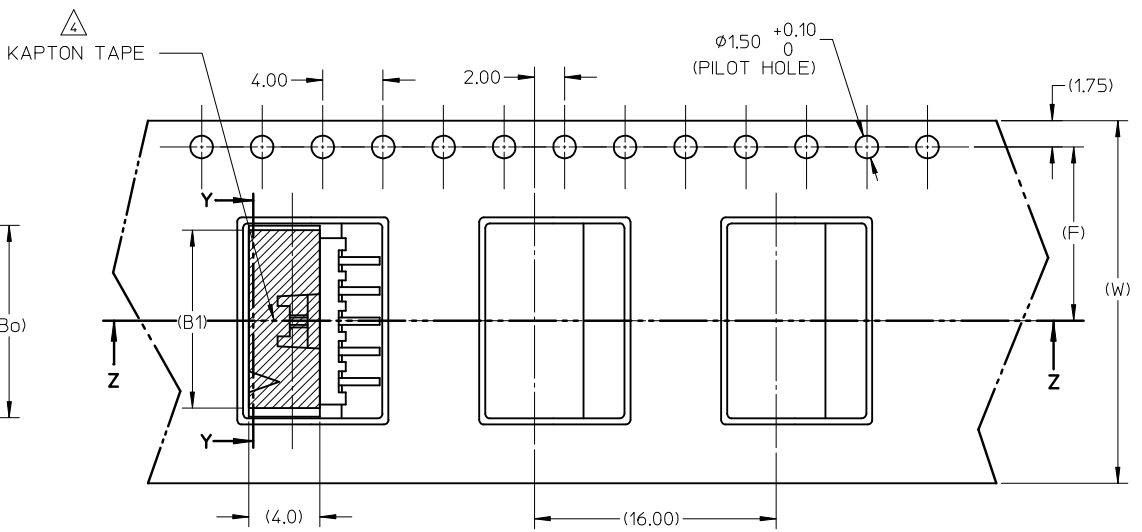
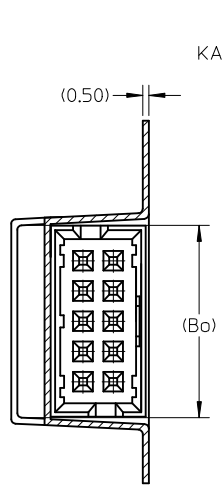
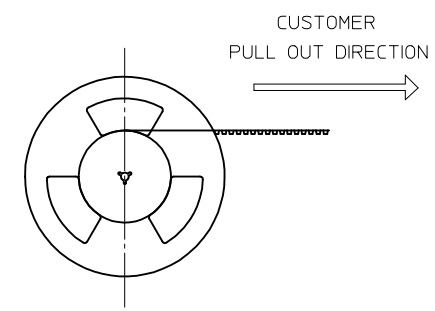
ADD IN NOTE NO. 7 EC NO: S2009-0964 DRWN: YMC HONG CHKD: SKANG APPR: MLONG 2009/07/01 2009/07/08 2009/07/15	QUALITY SYMBOLS $\blacktriangledown = 0$ $\text{Ⓜ} = 0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION			
			mm	INCH	DRAWN BY ATSEE	DATE 2003/10/23	TITLE MGRID, SHROUDED HEADER W/LOCKING FEATURE, R/A				
			4 PLACES	± ---	± ---	CHECKED BY KCL ING	DATE 2003/11/07	MOLEX INCORPORATED			
			3 PLACES	± ---	± ---	APPROVED BY SKTOH	DATE 2003/11/07	DOCUMENT NO. SD-87833-011	SHEET NO. 1 OF 2		
	2 PLACES	± 0.2	± ---	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE					
	1 PLACE	± ---	± ---	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION							
	ANGULAR ± 3 °										

10 9 8 7 6 5 4 3 2 1

ASSEMBLY P/N PACKED IN T&R (WITH KAPTON)	CKT SIZE	(F)	(Bo)	(B1)	(W)
87833-0451	04	7.50	7.00	6.00	16.00
87833-0651	06	11.50	9.00		24.00
87833-0851	08	11.50	11.00	10.00	24.00
87833-1051	10	11.50	13.00	12.00	24.00



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



NOTES:

- LEADER AND TRAILER TAPE
- PEELING OFF FORCE OF THE TOP TAPE: 20-80gf.
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)

- PACKAGING STANDARD IS AS PER EIA-481.
- KAPTON TAPE SHOULD BE LOCATED AS CENTRAL OF PART AS POSSIBLE AND MUST COVER THE WINDOWS.
- TAPE & REEL QUANTITY : 500 PCS/REEL

ADD IN NOTE NO. 7 EC NO: S2009-0964 2009/07/01 DRWN: YMC HONG 2009/07/08 CHKD: SKANG 2009/07/15 APPR: MLONG 2009/07/15	QUALITY SYMBOLS $\blacktriangledown = 0$ $\triangleleft = 0$	GENERAL TOLERANCES (UNLESS SPECIFIED) <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	± ---	± ---	DIMENSION STYLE MM ONLY	SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION
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DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS

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9 8 7 6 5 4 3 2 1