

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

**Part Number:** [0878330832](#)  
**Status:** **Active**  
**Overview:** milligrd  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Right Angle, Shrouded, Lead-free, 8 Circuits, 0.76µm (30µ") Gold (Au) Plating, without PCB Locator, with Locking Window, without Center Polarization Slot, 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 [87833](#)  
 Application Wire-to-Board  
 Comments Contact Molex for application in automotive industry  
 Overview [milligrd](#)  
 Product Name Milli-Grid™

**Physical**

Breakaway No  
 Circuits (Loaded) 8  
 Circuits (maximum) 8  
 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) 0.085 In  
 PC Tail Length (mm) 2.16 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) 75  
 Plating min: Termination (µm) 1.88

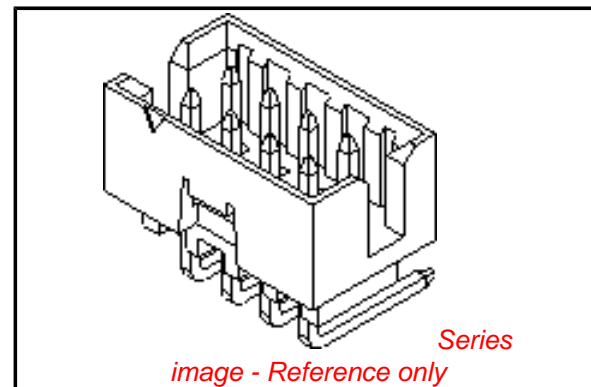


image - Reference only

**EU RoHS**

**ELV and RoHS  
 Compliant**

**REACH SVHC**

**Contains SVHC: No**

**Halogen-Free**

**Status**

**Not Reviewed**

**China RoHS**



**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.

**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**

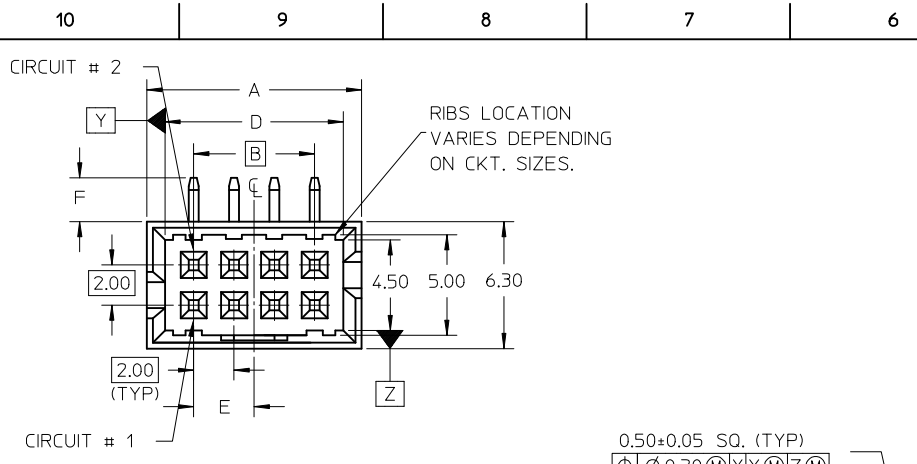
Lead-free Process Capability	Wave Capable (TH only)
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**Material Info****Reference - Drawing Numbers**

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

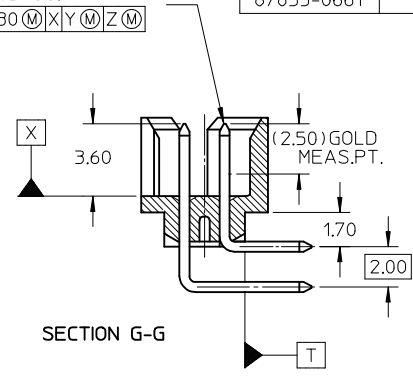
This document was generated on 05/26/2010

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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	-	-	-	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

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

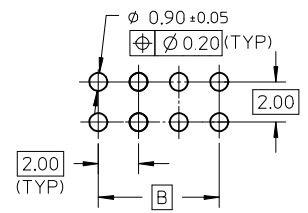
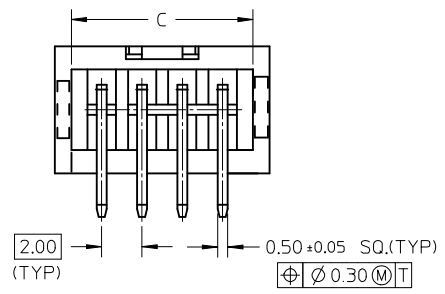
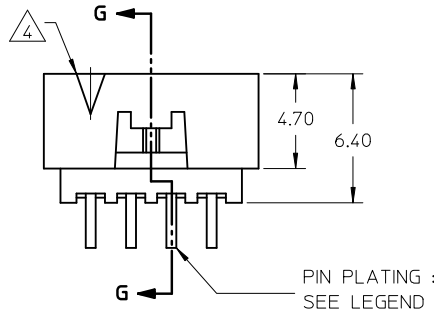


PLATING OPTIONS:

- 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:
  - CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES.
  - 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

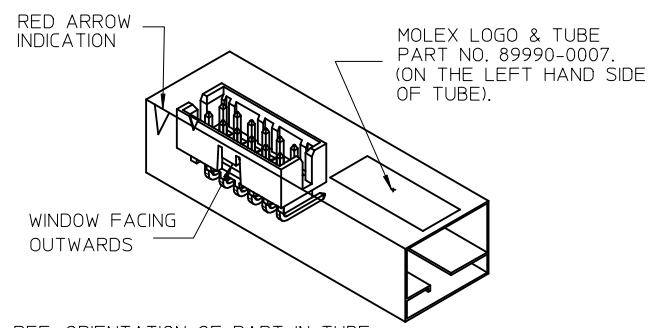


RECOMMENDED PCB PATTERN

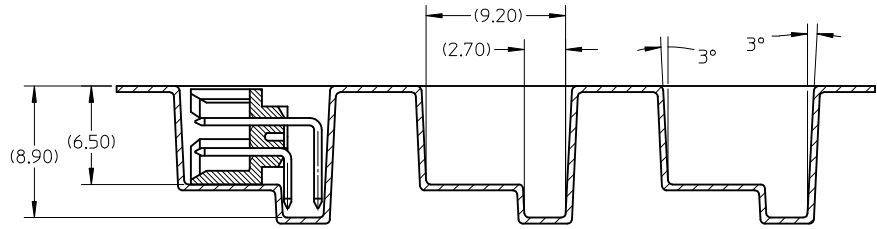
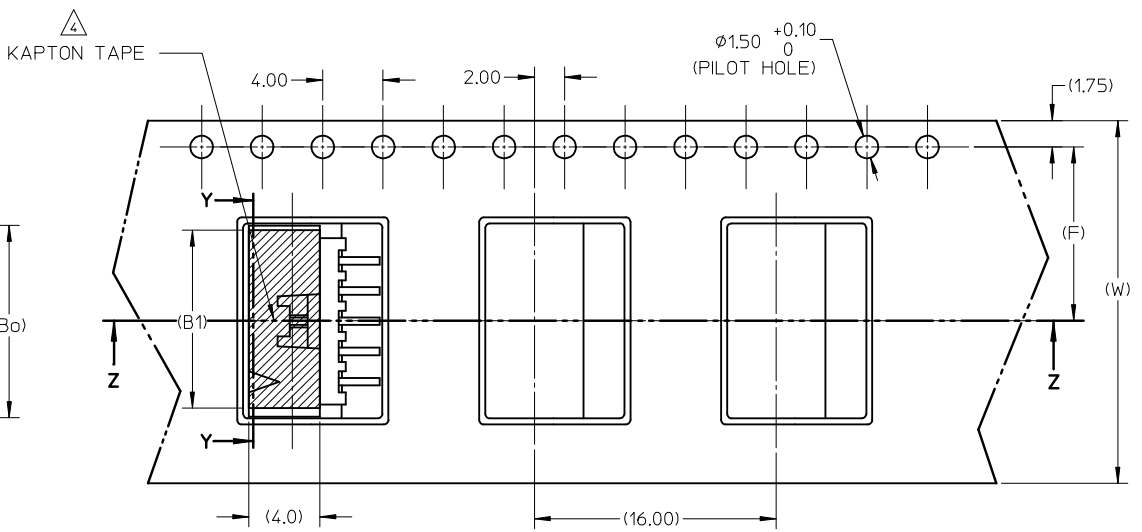
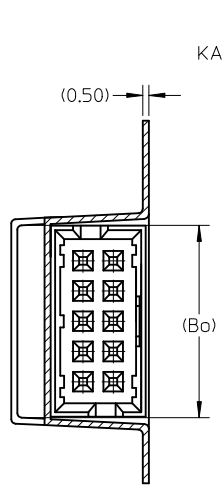
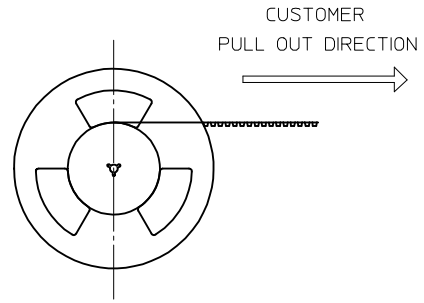
ADD IN NOTE NO. 7 EC NO: S2009-0964 DRWN: YMCHONG CHKD: SKANG APPR: MLONG 2009/07/01 2009/07/08 2009/07/15	QUALITY SYMBOLS $\blacktriangledown = 0$ $\text{Ⓜ} = 0$	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE <b>MM ONLY</b>		SCALE NTS	DESIGN UNITS METRIC	$\text{⊕} \text{Ⓜ}$ THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY	DATE	TITLE			
		4 PLACES	± ---	± ---	ATSEE	2003/10/23	MGRID, SHROUDED HEADER W/LOCKING FEATURE, R/A			
		3 PLACES	± ---	± ---	CHECKED BY	DATE				
2 PLACES	± 0.2	± ---	KCLING	2003/11/07	MOLEX INCORPORATED					
1 PLACE	± ---	± ---	APPROVED BY	DATE						
ANGULAR ± 3 °		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SKTOH	2003/11/07	DOCUMENT NO.		SHEET NO.		
A13		REV		SEE TABLE		SD-87833-011		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

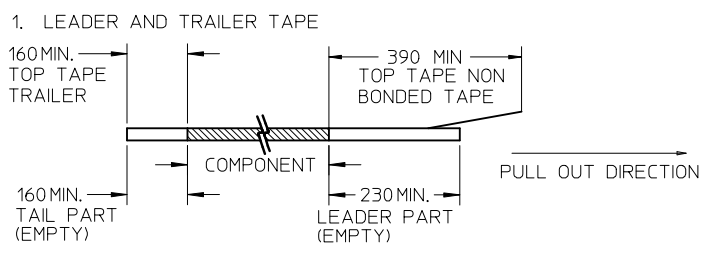
ASSEMBLY P/N PACKED IN T&R (WITH KAPTON)	CKT SIZE	(F)	(Bo)	(B1)	(W)
87833-0451	04	7.50	7.00	6.00	16.00
87833-0651	06	11.50	9.00		24.00
87833-0851	08	11.50	11.00	10.00	24.00
87833-1051	10	11.50	13.00	12.00	24.00



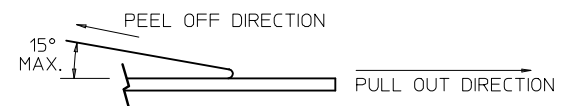
REF: ORIENTATION OF PART IN TUBE.  
(FOR THE REFERENCE OF PART/TUBE ASSEMBLY.)



NOTES:



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



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

ADD IN NOTE NO. 7 EC NO: S2009-0964 DRWN: YMCCHONG CHKD: SKANG APPR: MLONG 2009/07/01 2009/07/08 2009/07/15	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 2003/10/23	TITLE MGRID, SHROUDED HEADER W/LOCKING FEATURE, R/A			
		ANGULAR ± 3 °		CHECKED BY KCLING	DATE 2003/11/07	MOLEX INCORPORATED			
		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		APPROVED BY SKTOH	DATE 2003/11/07	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-87833-011	SHEET NO. 2 OF 2	

9 8 7 6 5 4 3 2 1