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Part Number: [0878330431](#)
Status: **Active**
Overview: [milligrid](#)
Description: 2.00mm (.079") Pitch Milli-Grid™ Header, Right Angle, Shrouded, Lead-free, 4 Circuits, 0.38µm (15µ") 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

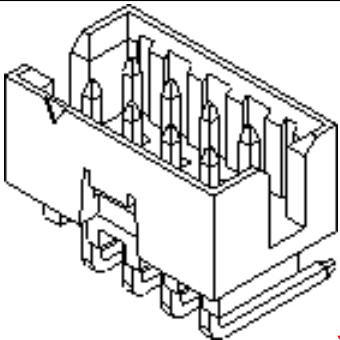
CSA	LR19980
UL	E29179

General

Product Family	PCB Headers
Series	87833
Application	Wire-to-Board
Comments	Contact Molex for application in automotive industry
Overview	milligrid
Product Name	Milli-Grid™

Physical

Breakaway	No
Circuits (Loaded)	4
Circuits (maximum)	4
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)	15
Plating min: Mating (µm)	0.38
Plating min: Termination (µin)	75
Plating min: Termination (µm)	1.88



*Series
image - Reference only*

EU RoHS
ELV and RoHS
Compliant
REACH SVHC
Contains SVHC: No
Halogen-Free
Status
Not Halogen-Free

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

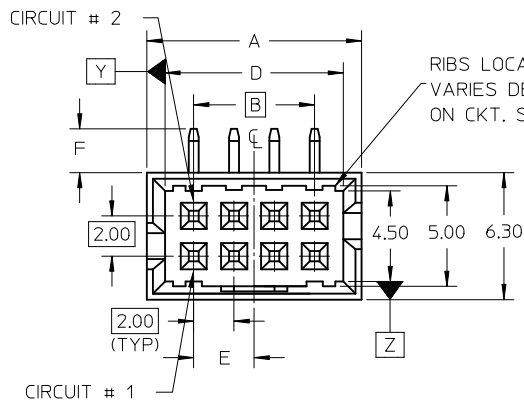
Material Info

Reference - Drawing Numbers

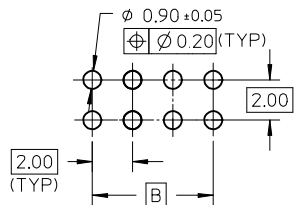
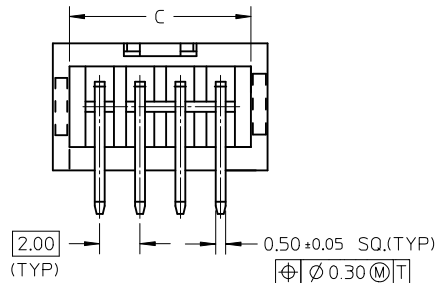
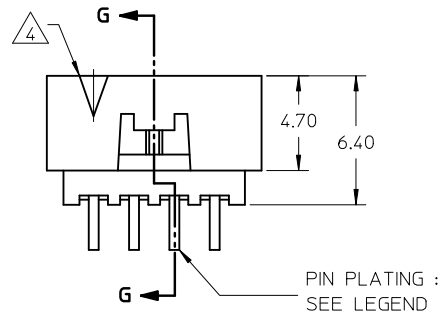
Product Specification	PS-87831-027
Sales Drawing	SD-87833-011

This document was generated on 05/26/2010

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



RECOMMENDED PCB PATTERN

ASSEMBLY P/N PACKED IN TUBE (W/O KAPTON)	ASSEMBLY P/N PACKED IN TUBE (WITH KAPTON)	ASSEMBLY P/N PACKED IN T&R (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	-	-	4	1	6.65	2.00	5.00	4.85	1.00	2.16	1
87833-0432	-	-	6	-	8.65	4.00	7.00	6.85	2.00	2.16	2
87833-0632	-	-	8	-	10.65	6.00	9.00	8.85	3.00	2.16	2
87833-0832	-	-	10	-	12.65	8.00	11.00	10.85	4.00	2.16	2
87833-1032	-	-	12	-	14.65	10.00	13.00	12.85	5.00	2.16	2
87833-1232	-	-	10	10	12.65	8.00	11.00	10.85	4.00	2.16	1
87833-5220	-	-	10	-	12.65	8.00	11.00	10.85	4.00	1.70	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:

- 1 - 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN. NICKEL OVERALL.
- 2 - 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, 8 CIRCUIT SIZE WAFER IS SHOWN.
2. 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
3. PRODUCT SPECIFICATION PS-87831-027 APPLIES.
4. CKT 4 & 6 HAS NO IDENTIFICATION TAG.
5. THIS HEADER MATES WITH MOLEX:
a) CRIMP RECEPTACLE HOUSING, 51110 SERIES
WITH CRIMP TERMINAL, 50394 SERIES.
b) 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
6. PARTS TO BE PACKED WITH MOISTURE BARRIER BAG.
7. 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	DESCRIPTION	QUALITY SYMBOLS ▽=0 ▽C=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm INCH		DRAWN BY DATE		TITLE MGRID, SHROUDED HEADER W/LOCKING FEATURE, R/A				
			4 PLACES ± --- ± ---		ATSEE 2003/10/23						
			3 PLACES ± --- ± ---		CHECKED BY DATE						
			2 PLACES ± 0.2 ± ---		KCL ING 2003/11/07						
			1 PLACE ± --- ± ---		APPROVED BY DATE		MOLEX INCORPORATED				
			ANGULAR ± 3 °		SKTOH 2003/11/07						
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.		DOCUMENT NO.		SHEET NO.		
					SEE TABLE		SD-87833-011		1 OF 2		
					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

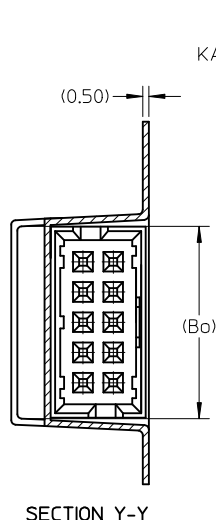
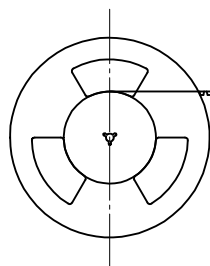
RED ARROW
INDICATION

MOLEX LOGO & TUBE
PART NO. 89990-0007.
(ON THE LEFT HAND SIDE
OF TUBE).

WINDOW FACING
OUTWARDS

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

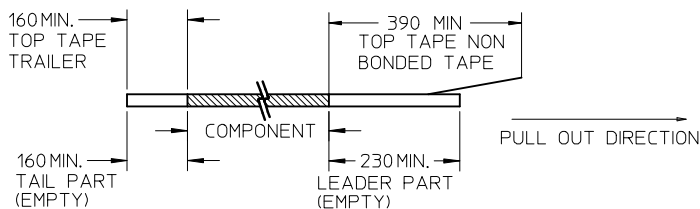
CUSTOMER
PULL OUT DIRECTION



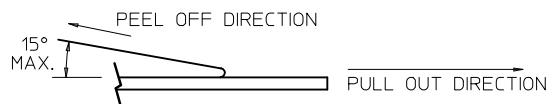
SECTION Y-Y

NOTES:

1. LEADER AND TRAILER TAPE



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

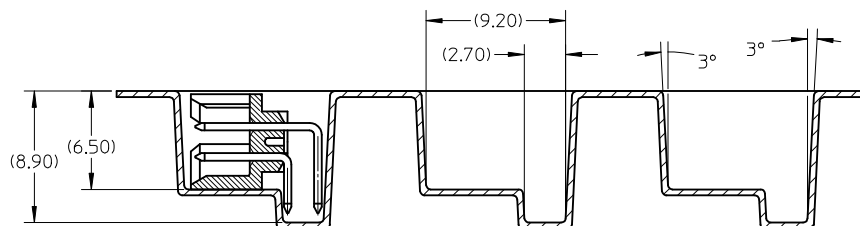
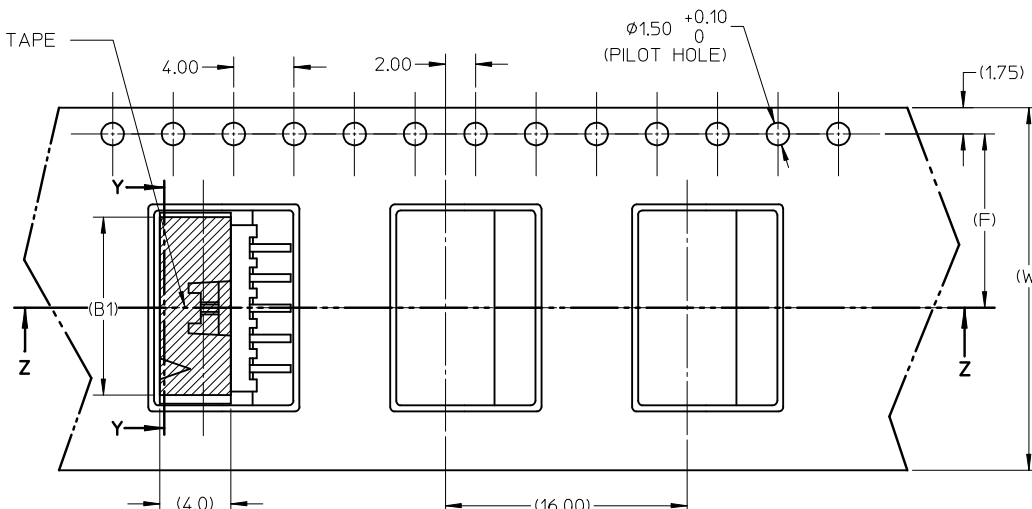


3. PACKAGING STANDARD IS AS PER EIA-481.

△ KAPTON TAPE SHOULD BE LOCATED AS CENTRAL
OF PART AS POSSIBLE AND MUST COVER THE WINDOWS.

5. TAPE & REEL QUANTITY : 500 PCS/REEL

△
KAPTON TAPE



SECTION Z-Z

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

ADD IN NOTE NO. 7 EC NO: S2009-0964 DRWN:YMCCHONG CHKD:SKANG APPR:MLONG A13	QUALITY SYMBOLS ▽=0 ▽=0	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE	
				MM ONLY		NTS	METRIC	PROJECTION	
						TITLE		MGRID, SHROUDED HEADER W/LOCKING FEATURE, R/A	
						MOLEX INCORPORATED			
						DOCUMENT NO.			
				DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		SD-87833-011	
SIZE A3		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