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Part Number: [0878331621](#)
Status: **Active**
Overview: [milligrid](#)
Description: 2.00mm (.079") Pitch Milli-Grid™ Header, Right Angle, Shrouded, Lead-free, 16 Circuits, 0.76µm (30µ") Gold (Au) Plating, without PCB Locator, with Locking Windows, 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) 16
Circuits (maximum) 16
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

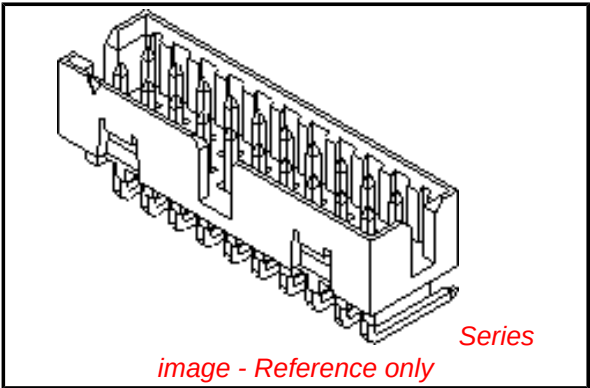


image - Reference only

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

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-87833-010

This document was generated on 05/25/2010
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10 9 8 7 6 5 4 3 2 1

F

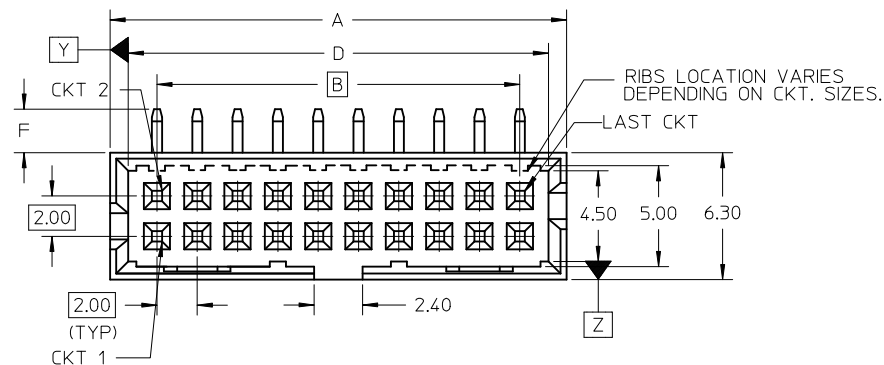
E

D

C

B

A



RED ARROW INDICATION

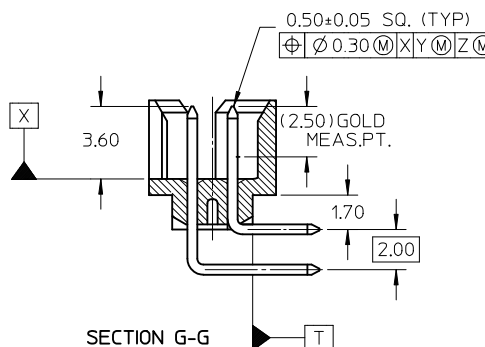
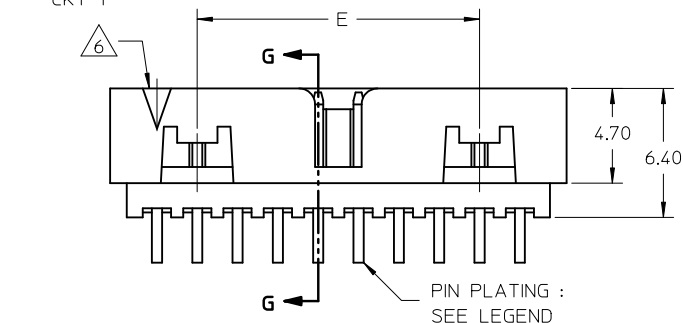
MOLEX LOGO & TUBE PART NO. 89990-0007. (ON THE LEFT HAND SIDE OF TUBE).

WINDOW FACING OUTWARDS

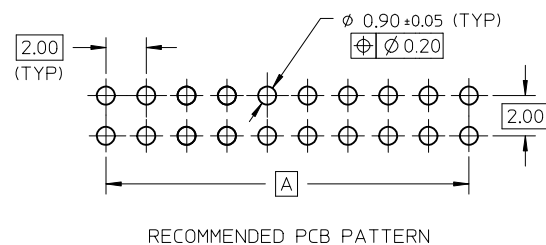
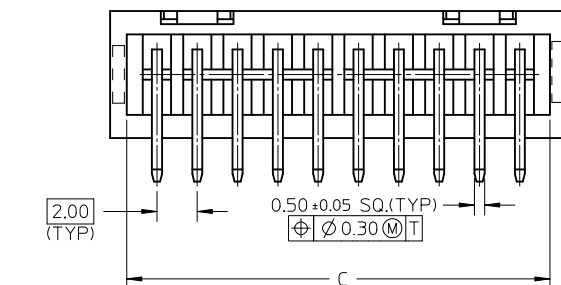
REF: ORIENTATION OF PART IN TUBE
(FOR THE REFERENCE OF PART/TUBE ASSEMBLY)

NOTES:

- FOR ILLUSTRATION PURPOSES, 20 CIRCUIT SIZE WAFER IS SHOWN.
- MATERIAL :
HOUSING : NYLON 46, UL94V-0, COLOR BLACK.
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
- PRODUCT SPECIFICATION PS-87831-027 APPLIES.
- NO CENTRE POLARIZATION SLOT FOR CKT SIZE 4 AND 6.
- NO SIDE LOCKING SLOT FROM 4 TO 12 CKT SIZE.
- 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 IN TUBE WITH MOISTURE BARRIER BAG.
- PLATING SPECIFICATION REFERRED TO SHEET 2.



SECTION G-G



RECOMMENDED PCB PATTERN

ADD P/N 87833-64/6520 EC NO: S2010-0510 DRWN:SKANG CHKD:ATSEE APPR:MLONG 2009/12/17 2010/01/04 2010/01/05	DESCRIPTION	QUALITY SYMBOLS FA=0 FC=0 FP=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/SLOT AND STANDOFF, R/A		
			4 PLACES	± ---	± ---	CHECKED BY KCLING	DATE 2003/11/07			
			3 PLACES	± ---	± ---					
			2 PLACES	± 0.2	± ---	APPROVED BY MLONG	DATE 2010/01/05	MOLEX INCORPORATED		
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			ANGULAR ± 3 °		MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-87833-010		SHEET NO. 1 OF 2	
B3	REV		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	PLS REFER TO PART 87833-***3* FOR CENTER LOCKING SLOT OPTION.												PART NO.	CKT SIZE	VOID PIN LOCATION	DIMENSION						9 PLATING OPTION					
													A	B	C	D	E	F	9								
E	PART NUMBER LEGEND: 87833 - * * * * *												87833-04**	4	-	6.65	2.00	5.00	4.85	-----	2.16	19,20 OR 21					
													87833-06**	6	-	8.65	4.00	7.00	6.85	-----							
D	00/ 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.												87833-08**	8	-	10.65	6.00	9.00	8.85	-----			20				
													87833-10**	10	-	12.65	8.00	11.00	10.85	-----							
C	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.												87833-12**	12	-	14.65	10.00	13.00	12.85	-----				3.18	20 OR 21		
													87833-14**	14	-	16.65	12.00	15.00	14.85	8.00							
B	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.												87833-16**	16	-	18.65	14.00	17.00	16.85	10.00						20	
													87833-18**	18	-	20.65	16.00	19.00	18.85	12.00							
A	00/ 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.												87833-20**	20	-	22.65	18.00	21.00	20.85	14.00							20
													87833-22**	22	-	24.65	20.00	23.00	22.85	16.00							
00/ 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.												87833-24**	24	-	26.65	22.00	25.00	24.85	18.00	20							
												87833-26**	26	-	28.65	24.00	27.00	26.85	20.00								
00/ 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.												87833-28**	28	-	30.65	26.00	29.00	28.85	22.00		20						
												87833-30**	30	-	32.65	28.00	31.00	30.85	24.00								
00/ 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.												87833-32**	32	-	34.65	30.00	33.00	32.85	26.00			20					
												87833-34**	34	-	36.65	32.00	35.00	34.85	28.00								
00/ 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.												87833-36**	36	-	38.65	34.00	37.00	36.85	30.00				20				
												87833-38**	38	-	40.65	36.00	39.00	38.85	32.00								
00/ 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.												87833-40**	40	-	42.65	38.00	41.00	40.85	34.00					20			
												87833-42**	42	-	44.65	40.00	43.00	42.85	36.00								
00/ 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.												87833-44**	44	-	46.65	42.00	45.00	44.85	38.00	20							
												87833-46**	46	-	48.65	44.00	47.00	46.85	40.00								
00/ 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.												87833-48**	48	-	50.65	46.00	49.00	48.85	42.00		20						
												87833-50**	50	-	52.65	48.00	51.00	50.85	44.00								
00/ 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.												87833-7000	34	21	36.65	32.00	35.00	34.85	28.00			20					
												87833-5121	26	14	28.65	24.00	27.00	26.85	20.00								
00/ 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.												87833-5120	10	7	12.65	8.00	11.00	10.85	-----				20				
												87833-5520	40	21	42.65	38.00	41.00	40.85	34.00								
00/ 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.												87833-5620	20	14	22.65	18.00	21.00	20.85	14.00					20			
												87833-5720	24	13	26.65	22.00	25.00	24.85	18.00								
00/ 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.												87833-5820	14	1	16.65	12.00	15.00	14.85	8.00	20							
												87833-63**	8	-	10.65	6.00	9.00	8.85	-----								
00/ 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.												87833-53**	14	-	16.65	12.00	15.00	14.85	8.00		20						
												87833-5420	34	-	36.65	32.00	35.00	34.85	28.00								
00/ 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.												87833-5920	4	-	6.65	2.00	5.00	4.85	-----			20					
												87833-6020	12	-	14.65	10.00	13.00	12.85	-----								
00/ 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.												87833-6120	16	-	18.65	14.00	17.00	16.85	10.00				20				
												87833-6220	18	-	20.65	16.00	19.00	18.85	12.00								
00/ 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.												87833-6420	6	-	8.65	4.00	7.00	6.85	-					20			
												87833-6520	20	-	22.65	18.00	21.00	20.85	14.00								

ADD P/N 87833-64/6520 EC NO: S2010-0510 DRWN:SKANG CHKD:ATSEE APPR:MLONG	DESCRIPTION REV	QUALITY SYMBOLS	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 ± ---	ANGULAR ± 3 °	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
B3										

MGRID, SHROUDED HEADER W/SLOT AND STANDOFF, R/A		MOLEX INCORPORATED		SD-87833-010		SHEET NO. 2 OF 2	
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