

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0878321422](#)
Status: **Active**
Overview: milligrid
Description: 2.00mm (.079") Pitch Milli-Grid™ Header, Surface Mount, Vertical, Shrouded, Lead-free, 14 Circuits, 0.38µm (15µ") Gold (Au) Plating, Pick-and-Place Cap, with Locking Windows and Center Polarization Slot, 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 [87832](#)
 Application Wire-to-Board
 Comments With Cap|Contact Molex for application in automotive industry
 Overview [milligrid](#)
 Product Name Milli-Grid™

Physical

Breakaway No
 Circuits (Loaded) 14
 Circuits (maximum) 14
 Color - Resin Black
 First Mate / Last Break No
 Flammability 94V-0
 Glow-Wire Compliant No
 Guide to Mating Part No
 Keying to Mating Part Yes
 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 Vertical
 PCB Locator Yes
 PCB Retention None
 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
 Polarized to Mating Part Side Slots (2)
 Polarized to PCB No
 Shrouded Fully
 Stackable No

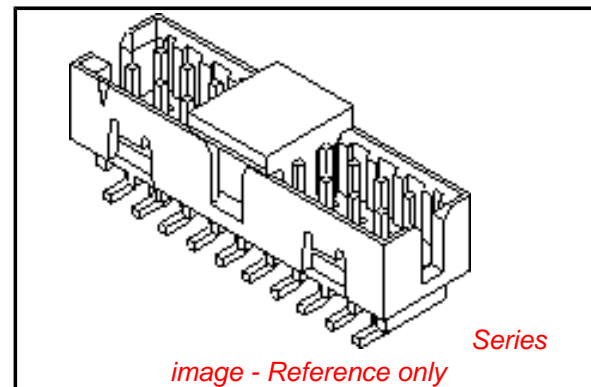


image - Reference only

EU RoHS

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

China RoHS



Not Halogen-Free
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

[87832Series](#)

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

Temperature Range - Operating	-55°C to +105°C
Termination Interface: Style	Surface Mount

Electrical

Current - Maximum per Contact	2A
Voltage - Maximum	125V

Solder Process Data

Duration at Max. Process Temperature (seconds)	10
Lead-free Process Capability	Reflow Capable (SMT only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	260

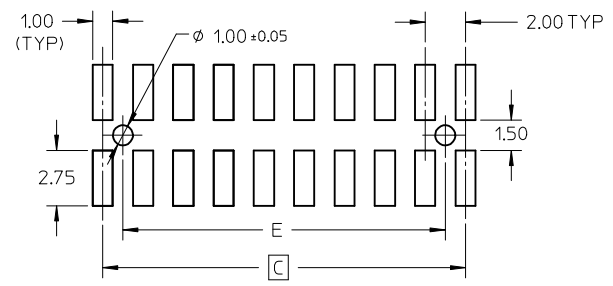
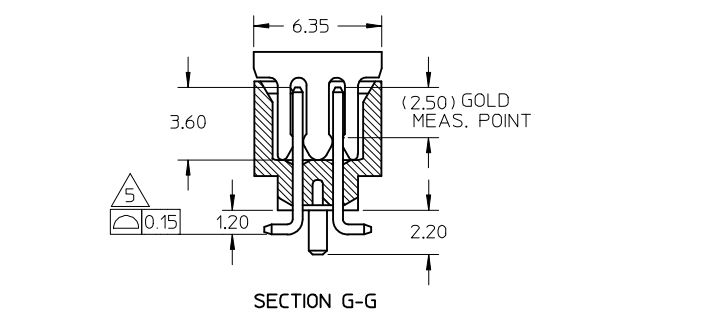
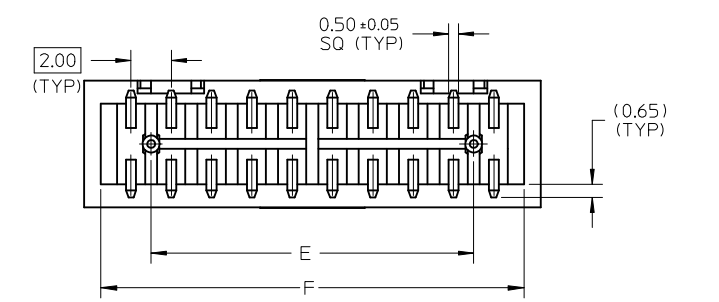
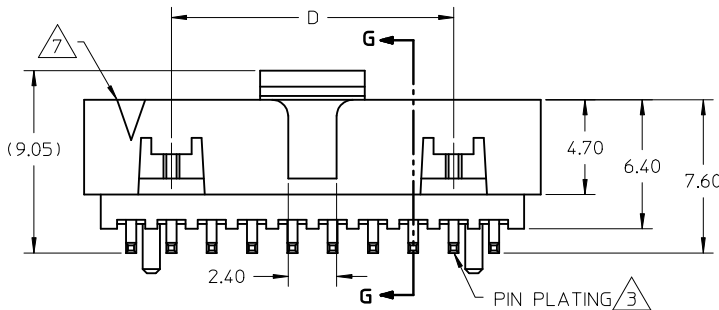
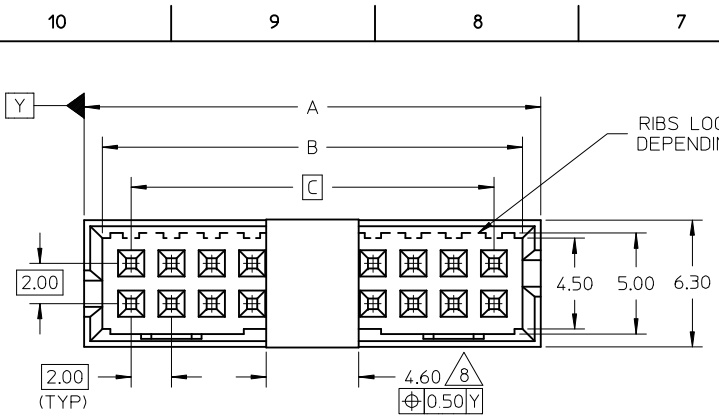
Material Info

Reference - Drawing Numbers

Product Specification	PS-87831-027
Sales Drawing	SD-87832-006

This document was generated on 05/25/2010

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RECOMMENDED PCB PATTERN

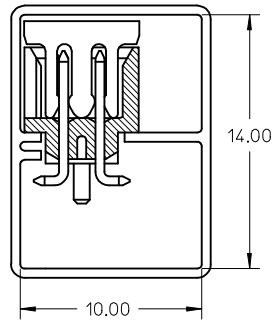
CKT SIZE	A	B	C	D	E	F
4	6.65	4.85	2.00	-----	-----	5.00
6	8.65	6.85	4.00	-----	2.00	7.00
8	10.65	8.85	6.00	-----	4.00	9.00
10	12.65	10.85	8.00	-----	6.00	11.00
12	14.65	12.85	10.00	-----	8.00	13.00
14	16.65	14.85	12.00	8.00	10.00	15.00
16	18.65	16.85	14.00	10.00	12.00	17.00
18	20.65	18.85	16.00	12.00	14.00	19.00
20	22.65	20.85	18.00	14.00	16.00	21.00
22	24.65	22.85	20.00	16.00	18.00	23.00
24	26.65	24.85	22.00	18.00	20.00	25.00
26	28.65	26.85	24.00	20.00	22.00	27.00
28	30.65	28.85	26.00	22.00	24.00	29.00
30	32.65	30.85	28.00	24.00	26.00	31.00
32	34.65	32.85	30.00	26.00	28.00	33.00
34	36.65	34.85	32.00	28.00	30.00	35.00
36	38.65	36.85	34.00	30.00	32.00	37.00
38	40.65	38.85	36.00	32.00	34.00	39.00
40	42.65	40.85	38.00	34.00	36.00	41.00
42	44.65	42.85	40.00	36.00	38.00	43.00
44	46.65	44.85	42.00	38.00	40.00	45.00
46	48.65	46.85	44.00	40.00	42.00	47.00
48	50.65	48.85	46.00	42.00	44.00	49.00
50	52.65	50.85	48.00	44.00	46.00	51.00

- NOTES:
- FOR ILLUSTRATION PURPOSES, 20 CIRCUIT SIZE WAFER IS SHOWN.
 - MATERIAL :
HOUSING & CAP : 30% G.F., NYLON 46, UL94V-0, COLOR BLACK.
PIN : 0.50MM SQ.PHOSPHOR BRONZE.
 - PLATING : 0.38um/15uin GOLD IN CONTACT AREA AND 1.88um/75uin MIN.TIN IN SOLDER TAIL AREA OVER 1.27um/50uin MIN.NICKEL OVERALL.
 - PRODUCT SPECIFICATION PS-87831-027 APPLIES.
 - COPLANARITY IS TO BE MEASURED BY RESTING THE SOLDER TAIL ON A GAUGE SURFACE.
 - NO SIDE LOCKING SLOT FROM 4 TO 12 CKT SIZE.
 - CKT 4 & 6 HAS NO IDENTIFICATION TAG.
 - POSITION OF CAP TO BE LOCATED AT CENTER OF DIMENSION 'A' REGARDLESS OF CIRCUIT SIZE.
 - TOP SURFACE OF CAP TO BE FLAT FOR THE PURPOSE OF PICK-&-PLACE BY VACUUM SUCTION NOZZLE.
 - THIS HEADER MATES WITH MOLEX:
a) CRIMP RECEPTACLE HOUSING, 51110 SERIES WITH CRIMP TERMINAL, 50394 SERIES.
b) 2MM MILLIGRID DUAL ROW IDT, 87568 SERIES.
 - NO CENTRE POLARIZATION SLOT FOR CKT SIZE 4 AND 6.
 - PARTS SHALL BE PACKED IN MOISTURE BARRIER BAG.

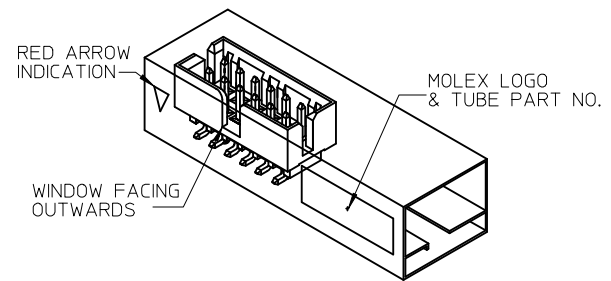
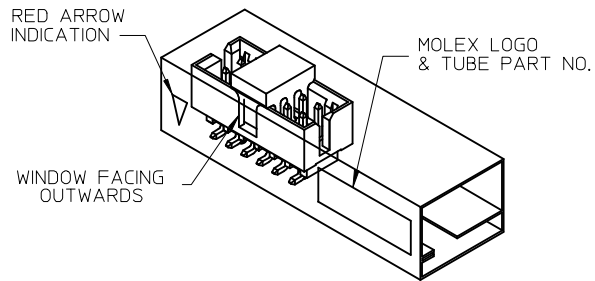
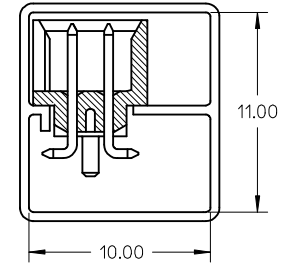
ADD ILLUSTRATION EC NO: S2009-0556 DRWN:SKANG CHKD:ATSEE APPR:MLONG	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
				DRAWN BY ATSEE	DATE 2003/10/14	TITLE MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R				
				CHECKED BY KCLING	DATE 2003/11/07	MOLEX MOLEX INCORPORATED				
				APPROVED BY SKTOH		DATE 2003/11/07	DOCUMENT NO. SD-87832-006		SHEET NO. 1 OF 4	
A9	REV	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					

TUBE PACKAGING

WITH CAP IN TUBE



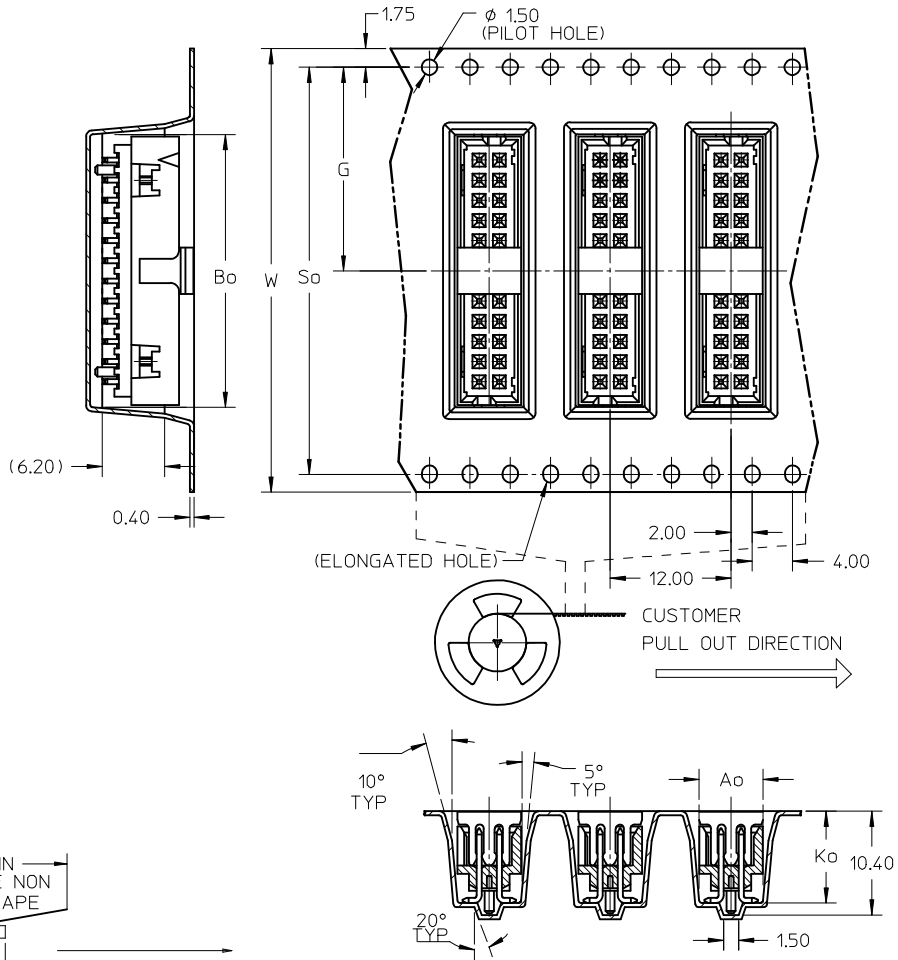
WITHOUT CAP IN TUBE



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

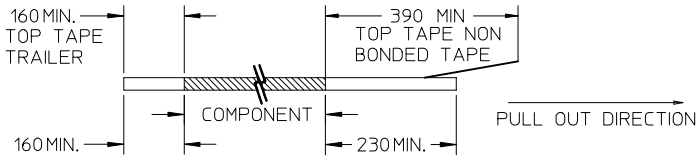
ADD ILLUSTRATION EC NO: S2009-0556 DRWN:SKANG CHKD:ATSEE APPR:MLONG	2009/02/23 2009/02/23 2009/02/23	DESCRIPTION REV	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION																																									
			$\nabla=0$ $\square=0$	<table border="1"> <tr> <td></td> <td>mm</td> <td>INCH</td> </tr> <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> </table>		mm	INCH	4 PLACES	± ---	± ---	3 PLACES	± ---	± ---	2 PLACES	± 0.2	± ---	1 PLACE	± ---	± ---	<table border="1"> <tr> <td>DRAWN BY</td> <td>DATE</td> <td>TITLE</td> </tr> <tr> <td>ATSEE</td> <td>2003/10/14</td> <td rowspan="4">MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R</td> </tr> <tr> <td>CHECKED BY</td> <td>DATE</td> </tr> <tr> <td>KCLING</td> <td>2003/11/07</td> </tr> <tr> <td>APPROVED BY</td> <td>DATE</td> </tr> <tr> <td>SKTOH</td> <td>2003/11/07</td> <td>MATERIAL NO.</td> </tr> <tr> <td colspan="2">DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS</td> <td>SEE TABLE</td> <td>DOCUMENT NO.</td> <td colspan="2">SD-87832-006</td> <td>SHEET NO.</td> </tr> <tr> <td colspan="2"></td> <td>SIZE A3</td> <td colspan="6">THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION</td> </tr> </table>	DRAWN BY	DATE	TITLE	ATSEE	2003/10/14	MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R	CHECKED BY	DATE	KCLING	2003/11/07	APPROVED BY	DATE	SKTOH	2003/11/07	MATERIAL NO.	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE	DOCUMENT NO.	SD-87832-006		SHEET NO.			SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION					
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EMBOSSED CARRIER TAPE LAYOUT
24 CKT USE FOR ILLUSTRATION ONLY



NOTES:

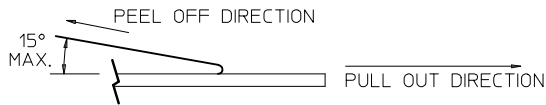
1. LEADER AND TRAILER TAPE



TAIL PART (EMPTY)

LEADER PART (EMPTY)

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.

ADD ILLUSTRATION EC NO: S2009-0556 DRWN:SKANG CHKD:ATSEE APPR:MLONG	2009/02/23 2009/02/23 2009/02/23	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION		
			mm	INCH	MM ONLY	NTS	METRIC			
	4 PLACES		± ---	± ---	DRAWN BY	DATE	TITLE			
	3 PLACES		± ---	± ---	ATSEE	2003/10/14	MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R			
2 PLACES	± 0.2	± ---	CHECKED BY	DATE						
1 PLACE	± ---	± ---	KCLING	2003/11/07	MOLEX INCORPORATED					
ANGULAR ± 3 °		APPROVED BY	DATE	DOCUMENT NO.					SHEET NO.	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SKTOH	2003/11/07	SEE TABLE		SD-87832-006		3 OF 4		
		MATERIAL NO.		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						
A9		REV								

PLS REFER TO PART 87832-**08 FOR CENTER LOCKING SLOT OPTION.

REG. OPTION	P/N W/O CAP IN TUBE	P/N W/CAP IN TUBE	P/N W/CAP IN TAPE & REEL	CKT SIZE	DIMENSION					
					W	G	Bo	So	Ao	Ko
NO	87832-0420	87832-0422	87832-5122	4	16.00	7.50	7.15	-----	6.40	9.30
YES	87832-0620	87832-0622	87832-5222	6	24.00	11.50	9.15	-----	6.40	9.30
YES	87832-0820	87832-0822	87832-5322	8	24.00	11.50	11.05	-----	6.40	9.30
YES	87832-1020	87832-1022	87832-5422	10	24.00	11.50	13.05	-----	6.40	9.30
YES	87832-1220	87832-1222	87832-5522	12	32.00	14.20	15.15	28.40	6.85	9.30
YES	87832-1420	87832-1422	87832-5622	14	32.00	14.20	17.05	28.40	6.40	9.30
YES	87832-1620	87832-1622	87832-5722	16	32.00	14.20	19.05	28.40	6.40	9.30
YES	87832-1820	87832-1822	87832-5822	18	44.00	20.20	21.05	40.40	6.40	9.30
YES	87832-2020	87832-2022	87832-5922	20	44.00	20.20	23.05	40.40	6.40	9.30
YES	87832-2220	87832-2222	87832-6022	22	44.00	20.20	25.05	40.40	6.40	9.30
YES	87832-2420	87832-2422	87832-6122	24	44.00	20.20	27.05	40.40	6.40	9.30
YES	87832-2620	87832-2622	87832-6222	26	44.00	20.20	29.05	40.40	6.40	9.30
YES	87832-2820	87832-2822	87832-6322	28	56.00	26.20	31.05	52.40	6.40	9.30
YES	87832-3020	87832-3022	87832-6422	30	56.00	26.20	33.05	52.40	6.40	9.30
YES	87832-3220	87832-3222	-----	32	-----	-----	-----	-----	-----	-----
YES	87832-3420	87832-3422	87832-6622	34	56.00	26.20	37.05	52.40	6.40	9.30
YES	87832-3620	87832-3622	-----	36	-----	-----	-----	-----	-----	-----
YES	87832-3820	87832-3822	-----	38	-----	-----	-----	-----	-----	-----
YES	87832-4020	87832-4022	87832-6922	40	56.00	26.20	43.05	52.40	6.40	9.30
YES	87832-4220	87832-4222	-----	42	-----	-----	-----	-----	-----	-----
YES	87832-4420	87832-4422	87832-7122	44	56.00	26.20	46.80	52.40	6.40	9.30
YES	87832-4620	87832-4622	87832-7222	46	56.00	26.20	47.05	52.40	6.40	9.30
YES	87832-4820	87832-4822	-----	48	-----	-----	-----	-----	-----	-----
YES	87832-5020	87832-5022	87832-7422	50	72.00	34.20	53.05	68.40	6.40	9.30

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	▽=0 □=0	mm INCH 4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.2 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	MM ONLY	NTS	METRIC	☉ □ THIRD ANGLE PROJECTION
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	MATERIAL NO. SEE TABLE	DOCUMENT NO. SD-87832-006				MOLEX INCORPORATED SHEET NO. 4 OF 4

A9