

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

**Part Number:** [0878322221](#)  
**Status:** **Active**  
**Overview:** milligrid  
**Description:** 2.00mm (.079") Pitch Milli-Grid™ Header, Surface Mount, Vertical, Shrouded, Lead-free, 22 Circuits, 0.76µm (30µ") Gold (Au) Plating, 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 Without Cap; Contact Molex for application in automotive industry  
 Overview [milligrid](#)  
 Product Name Milli-Grid™

**Physical**

Breakaway No  
 Circuits (Loaded) 22  
 Circuits (maximum) 22  
 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) 30  
 Plating min: Mating (µm) 0.76  
 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



**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**

[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

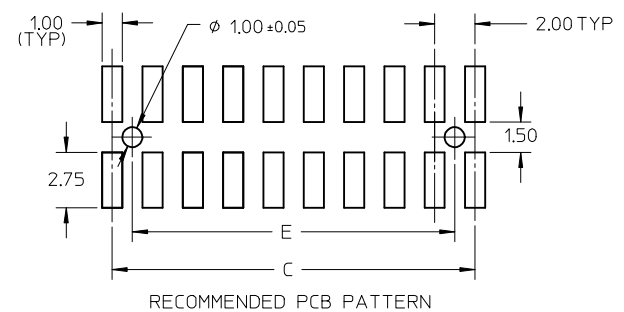
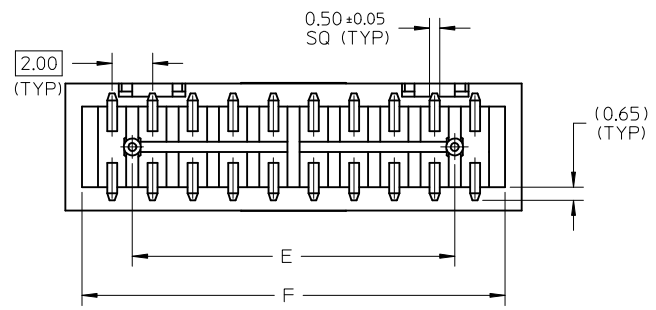
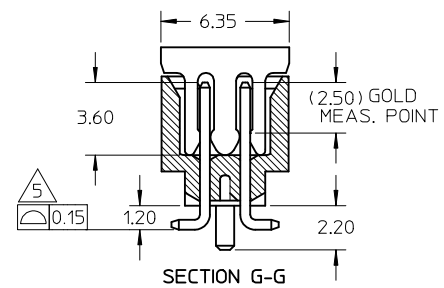
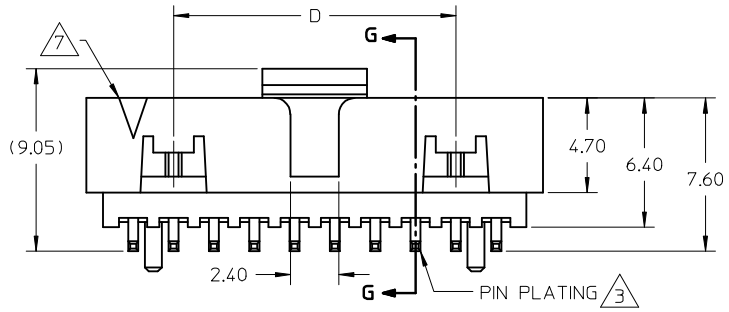
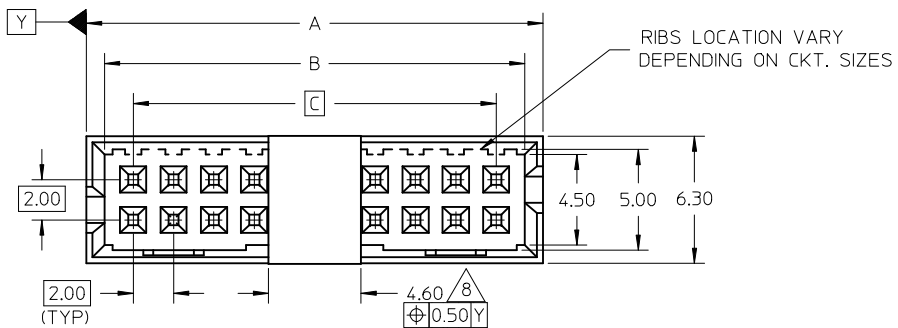
### **Material Info**

#### **Reference - Drawing Numbers**

Product Specification	PS-87831-027
Sales Drawing	SD-87832-007

This document was generated on 05/25/2010

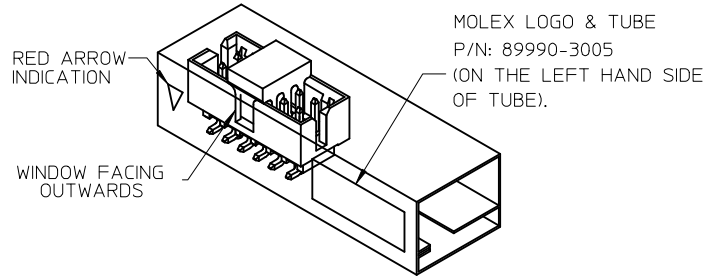
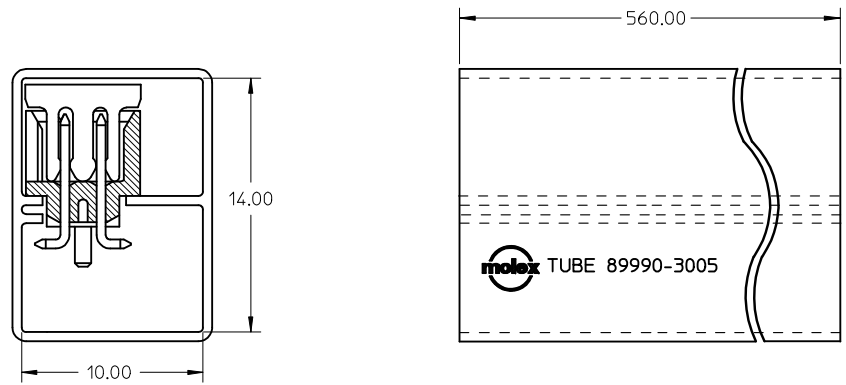
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CKT SIZE	DIMENSION					
	A	B	C	D	E	F
4	6.65	4.85	2.00	---	---	5.00
6	8.65	6.85	4.00	---	2.00	7.00
8	10.65	8.85	6.00	---	4.00	9.00
10	12.65	10.85	8.00	---	6.00	11.00
12	14.65	12.85	10.00	---	8.00	13.00
14	16.65	14.85	12.00	8.00	10.00	15.00
16	18.65	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

ADD 34CKT T&R P/N EC NO: S2009-0642 DRWN:SKANG 2009/03/11 CHKD:ATSEE 2009/03/11 APPR:MLONG 2009/03/18	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
		4 PLACES ± --- ± ---	mm INCH	DRAWN BY ATSEE	DATE 2003/10/14	TITLE MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R				
		3 PLACES ± --- ± ---		CHECKED BY KCL ING	DATE 2003/11/07	MOLEX INCORPORATED				
		2 PLACES ± 0.2 ± ---		APPROVED BY SKTOH	DATE 2003/11/07	DOCUMENT NO. SD-87832-007				
1 PLACE ± --- ± ---		ANGULAR ± 3 °		MATERIAL NO. SEE TABLE		SHEET NO. 1 OF 4				
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								

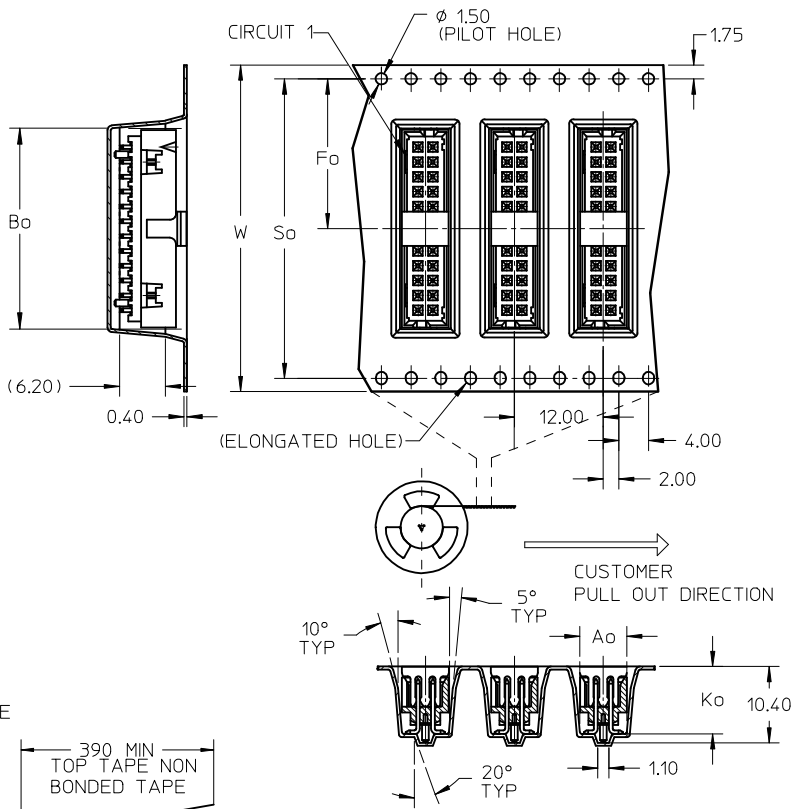
WITH CAP  
TUBE PACKAGING



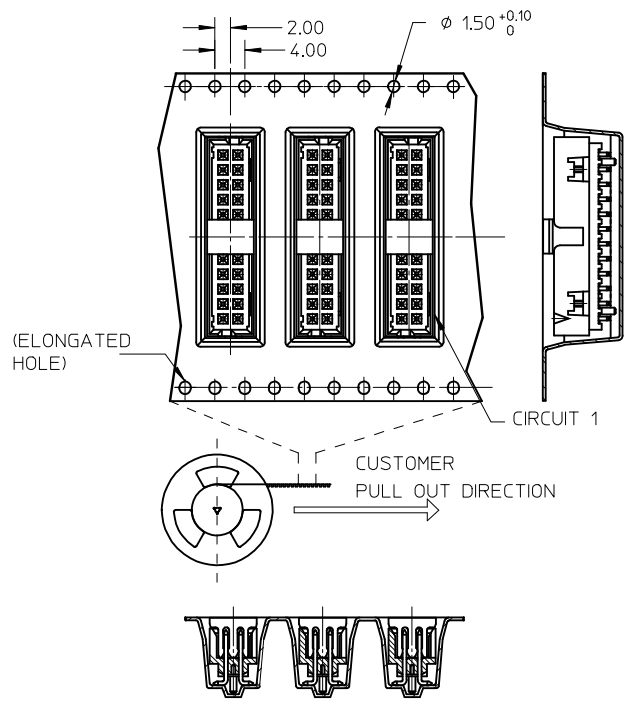
REF : ORIENTATION OF PART IN TUBE,  
(FOR THE REFERENCE OF PART/TUBE ASSEMBLY.)

ADD 34CKT T&R P/N EC NO: S2009-0642 DRWN:SKANG 2009/03/11 CHKD:ATSEE 2009/03/11 APPR:MLONG 2009/03/18	DESCRIPTION REV	QUALITY SYMBOLS ▽=0 ◻=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY	DATE	TITLE				
		4 PLACES	± ---	± ---	ATSEE	2003/10/14	MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R				
		3 PLACES	± ---	± ---	CHECKED BY	DATE					
	± 0.2	± ---	KCLING	2003/11/07	MOLEX INCORPORATED						
2 PLACES	± ---	± ---	APPROVED BY	DATE							
1 PLACE	± ---	± ---	SKTOH	2003/11/07	DOCUMENT NO. SD-87832-007						
ANGULAR ± 3 °			MATERIAL NO.							SHEET NO.	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			SEE TABLE		2 OF 4						
			SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

EMBOSSED CARRIER TAPE LAYOUT OPTION A  
24 CKT USE FOR ILLUSTRATION ONLY

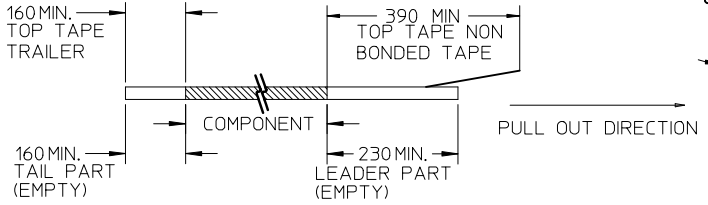


EMBOSSED CARRIER TAPE LAYOUT OPTION B  
24 CKT USE FOR ILLUSTRATION ONLY

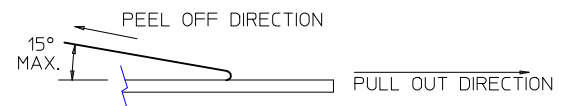


NOTES:

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.

ADD 34CKT T&R P/N	2009/03/11	2009/03/11	2009/03/18
EC NO: S2009-0642	DRWN:SKANG	CHKD:ATSEE	APPR:MLONG
REV	DESCRIPTION		
A9			

QUALITY SYMBOLS	▽=0
	∇=0
GENERAL TOLERANCES (UNLESS SPECIFIED)	mm
	INCH
	4 PLACES ± --- ± ---
	3 PLACES ± --- ± ---
	2 PLACES ± 0.2 ± ---
1 PLACE ± --- ± ---	
ANGULAR ± 3 °	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

DIMENSION STYLE		SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
MM ONLY		NTS	METRIC	
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	MOLEX INCORPORATED		
KCL ING	2003/11/07	DOCUMENT NO. SD-87832-007		
APPROVED BY	DATE	SHEET NO. 3 OF 4		
SKTOH	2003/11/07			
MATERIAL NO.	SEE 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	MOLEX INCORPORATED	
KCL ING		2003/11/07	DOCUMENT NO. SD-87832-007	
APPROVED BY		DATE	SHEET NO. 3 OF 4	
SKTOH		2003/11/07		
MATERIAL NO.		SEE TABLE		
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

REG OPTION	P/N W/O CAP IN TUBE	P/N W/CAP IN TUBE (SHEET 2)	P/N W/CAP TAPE & REEL (SHEET 3)	CKT SIZE	DIMENSION						PACKAGING OPTION (SHEET 3)
					W	Fo	Bo	So	Ao	Ko	
NO	87832-0421	87832-0423	87832-5123	04	16.00	7.50	7.15	-	6.40	9.30	A
YES	87832-0621	87832-0623	87832-5223	06	24.00	11.50	9.15	-	6.40	9.30	A
YES	87832-0821	87832-0823	87832-5323	08	24.00	11.50	11.05	-	6.40	9.30	A
YES	87832-1021	87832-1023	87832-5423	10	24.00	11.50	13.05	-	6.40	9.30	A
YES	87832-1221	87832-1223	87832-5523	12	32.00	14.20	15.15	28.40	6.40	9.30	A
YES	87832-1421	87832-1423	87832-5623	14	32.00	14.20	17.05	28.40	6.40	9.30	A
YES	87832-1621	87832-1623	87832-5723	16	32.00	14.20	19.05	28.40	6.40	9.30	A
YES	87832-1821	87832-1823	87832-5823	18	44.00	20.20	21.05	40.40	6.40	9.30	A
YES	87832-2021	87832-2023	87832-5923	20	44.00	20.20	23.05	40.40	6.40	9.30	A
YES	87832-2221	87832-2223	87832-6023	22	44.00	20.20	25.05	40.40	6.40	9.30	A
YES	87832-2421	87832-2423	87832-6123	24	44.00	20.20	27.05	40.40	6.40	9.30	A
YES	87832-2621	87832-2623	87832-6223	26	44.00	20.20	29.05	40.40	6.40	9.30	A
YES	87832-2821	87832-2823	87832-6323	28	56.00	26.20	31.05	52.40	6.40	9.30	A
YES	87832-3021	87832-3023	87832-6423	30	56.00	26.20	33.05	52.40	6.40	9.30	A
YES	87832-3221	87832-3223	--	32	--	--	--	--	--	--	-
YES	87832-3421	87832-3423	87832-6623	34	56.00	26.20	37.05	52.40	6.40	9.30	A
YES	87832-3621	87832-3623	--	36	--	--	--	--	--	--	-
YES	87832-3821	87832-3823	--	38	--	--	--	--	--	--	-
YES	87832-4021	87832-4023	87832-6923	40	56.00	26.20	43.05	52.40	6.40	9.30	A
YES	87832-4221	87832-4223	--	42	--	--	--	--	--	--	-
YES	87832-4421	87832-4423	87832-7123	44	56.00	26.20	46.80	52.40	6.40	9.30	A
YES	87832-4621	87832-4623	--	46	--	--	--	--	--	--	-
YES	87832-4821	87832-4823	--	48	--	--	--	--	--	--	-
YES	87832-5021	87832-5023	87832-7423	50	72.00	34.20	53.05	68.40	6.40	9.30	A
YES	--	--	87832-9423	10	24.00	11.50	13.05	-	6.40	9.30	B

PLS REFER TO PART  
87832-\*\*\*09 FOR CENTER  
LOCKING SLOT OPTION.

- 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 : 0.76um/30uin 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 34CKT T&R P/N EC NO: S2009-0642 DRWN:SKANG 2009/03/11 CHKD:ATSEE 2009/03/11 APPR:MLONG 2009/03/18	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 2003/10/14	TITLE MGRID, SHROUDED HEADER SMT, W/PEGS/CAP FOR PICK & PLACE IN TUBE AND T&R					
		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-87832-007	SHEET NO. 4 OF 4			

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