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Part Number: [0873810864](#)
Status: **Active**
Description: 2.00mm (.079") Pitch Milli-Grid™ Receptacle, Surface Mount, Top Entry, 0.38µm (15µ") Gold (Au) Plating, with Cap, without Locating Pegs, 8 Circuits, Lead-free

Documents:

3D Model	Product Specification PS-87380-002 (PDF)
Drawing (PDF)	RoHS Certificate of Compliance (PDF)

Agency Certification

CSA	LR19980
UL	E29179

General

Product Family	PCB Receptacles
Series	87381
Application	Board-to-Board
Comments	With Cap
Product Literature Order No	987650-1991
Product Name	Milli-Grid™

Physical

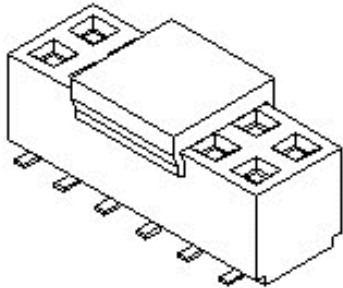
Circuits (Loaded)	8
Circuits (maximum)	8
Color - Resin	Black
Durability (mating cycles max)	25
Flammability	94V-0
Glow-Wire Compliant	No
Lock to Mating Part	None
Material - Metal	Phosphor Bronze
Material - Plating Mating	Gold
Material - Plating Termination	Tin-Lead
Material - Resin	High Temperature Thermoplastic
Number of Rows	2
Orientation	Vertical
PCB Locator	No
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)	50
Plating min: Termination (µm)	1.27
Polarized to PCB	No
Surface Mount Compatible (SMC)	N/A
Temperature Range - Operating	-55°C to +105°C
Termination Interface: Style	Surface Mount

Electrical

Current - Maximum per Contact	1.9A
Voltage - Maximum	125V

Solder Process Data

Duration at Max. Process Temperature (seconds)	12
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Series

image - Reference only

EU RoHS

**ELV and RoHS
Compliant**

REACH SVHC

Not Reviewed

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

[87381Series](#)

Mates With

[87758](#) Vertical, Through Hole, Stackable
PCB Header, [87759](#) Vertical, Surface
Mount, Stackable PCB Header, [87760](#)
Right Angle, Through Hole, Stackable PCB
Header, [87831](#) Vertical, Through Hole PCB
Header, [87832](#) Vertical, Surface Mount PCB

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-87380-002
Sales Drawing	SD-87381-**6*

This document was generated on 04/09/2010

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F

E

D

C

B

A

10

9

8

7

6

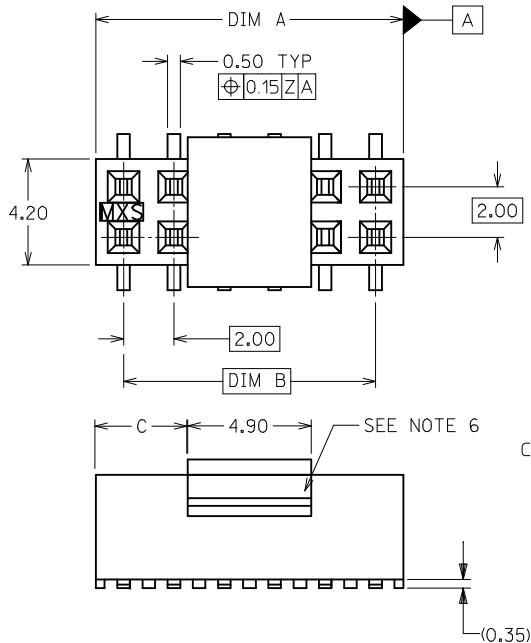
5

4

3

2

1



PART NO. LEGEND
FOR TUBE PACKAGING ONLY

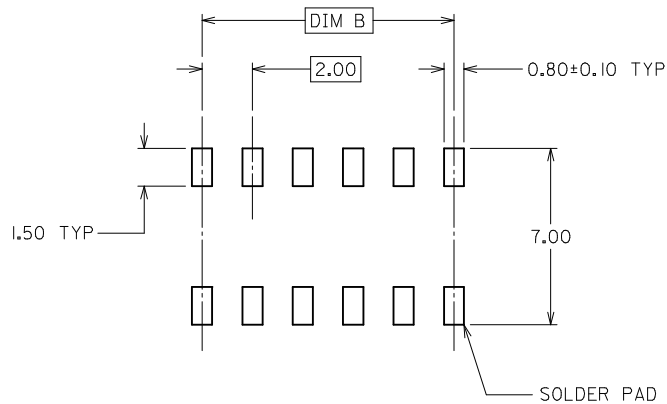
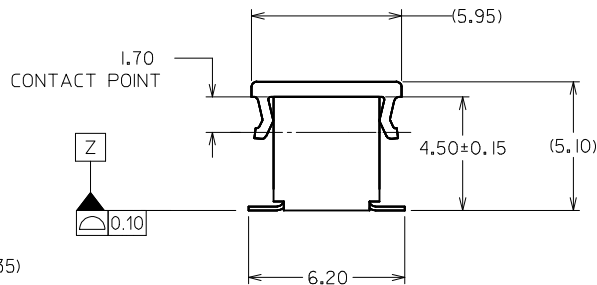
87381 - * * * *

CIRCUIT SIZE

PLATING (SEE NOTE 1)

3
4

6 COVER
7 NO COVER



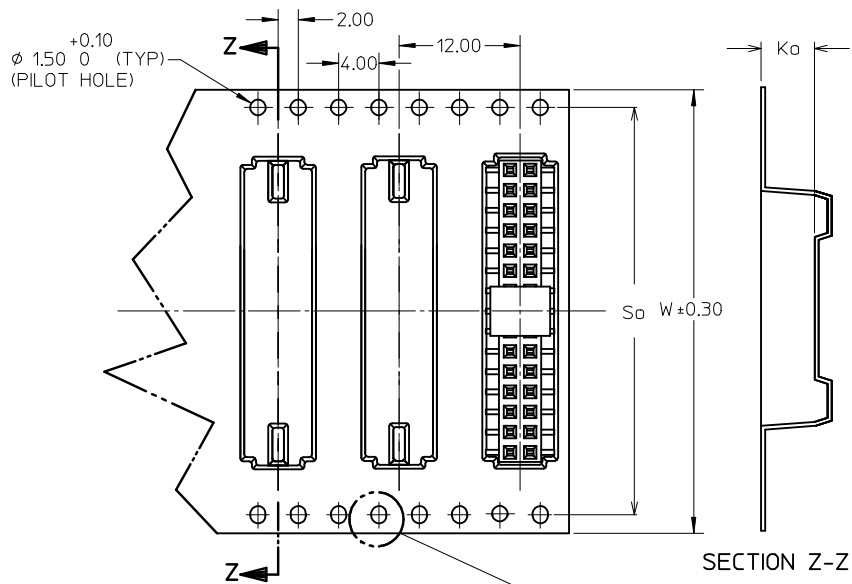
RECOMMENDED PCB LAYOUT

PART NUMBER (SEE NOTE 5)	CKT. SIZE	DIM A	DIM B	DIM C
87381-06**	6	6.00	4.00	0.55
87381-08**	8	8.00	6.00	1.55
87381-10**	10	10.00	8.00	2.55
87381-12**	12	12.00	10.00	3.55
87381-14**	14	14.00	12.00	4.55
87381-16**	16	16.00	14.00	5.55
87381-18**	18	18.00	16.00	6.55
87381-20**	20	20.00	18.00	7.55
87381-22**	22	22.00	20.00	8.55
87381-24**	24	24.00	22.00	9.55
87381-26**	26	26.00	24.00	10.55
87381-28**	28	28.00	26.00	11.55
87381-30**	30	30.00	28.00	12.55
87381-32**	32	32.00	30.00	13.55
87381-34**	34	34.00	32.00	14.55
87381-36**	36	36.00	34.00	15.55
87381-38**	38	38.00	36.00	16.55
87381-40**	40	40.00	38.00	17.55
87381-42**	42	42.00	40.00	18.55
87381-44**	44	44.00	42.00	19.55
87381-46**	46	46.00	44.00	20.55
87381-48**	48	48.00	46.00	21.55
87381-50**	50	50.00	48.00	22.55

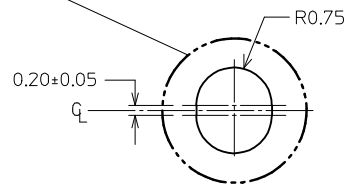
NOTES:

- PLATING FINISH:
3 - 0.76um MIN. GOLD IN CONTACT AREA 1.27um MIN. TIN
IN SOLDER TAIL AREA BOTH OVER 1.27um MIN. NICKEL OVERALL
4 - 0.38um MIN. GOLD IN CONTACT AREA 1.27um MIN. TIN
IN SOLDER TAIL AREA BOTH OVER 1.27um MIN. NICKEL OVERALL
- 12 CKT SIZE SHOWN FOR ASSY ILLUSTRATION ONLY. (SEE CHART FOR ALL PART SIZES), 6 CKT & 30 CKT ILLUSTRATED FOR TAPE/REEL VERSION ON SHT 2.
- PRODUCT SPECIFICATION PS-87380 APPLIES.
- COPLANARITY OF SOLDER TAILS ARE TO BE MEASURED BY RESTING THE PART ON A FLAT GAUGE SURFACE.
- TUBE PACKAGING STANDARD.
- COVER IS OPTIONAL, SEE LEGEND.
- PARTS SHALL BE PACKED IN MOISTURE BARRIER BAG.
- REFER SHT 3 FOR P/N: 87381-6000 T&R ILLUSTRATION.

ADD P/N: 87381-3200 EC NO: S2009-0725 DRWN:SKANG CHKD:ATSEE APPR:MLONG REV E8	QUALITY SYMBOLS ▽=0 ◇=0	DESCRIPTION	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
					DRAWN BY DATE		TITLE				
			4 PLACES ± --- ± ---		JAMES 1998/01/08		MGRID, TOP ENTRY RECEPT. 4.50MM HT., SMT				
			3 PLACES ± --- ± ---		CHECKED BY DATE						
			2 PLACES ± 0.20 ± ---		LCHANG 1999/04/23						
			1 PLACE ± --- ± ---		APPROVED BY DATE		MOLEX MOLEX INCORPORATED				
			ANGULAR ± 3 °		SQUEK 1999/04/26						
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO.		DOCUMENT NO.		SHEET NO.		
					SEE TABLE		SD-87381-***6*		1 OF 4		
		REV			SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

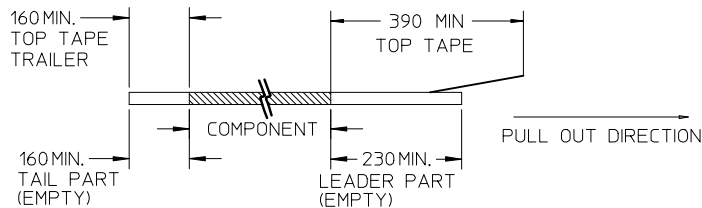


30 CKT FOR ILLUSTRATION ONLY
TAPE & REEL TYPE 'B'



NOTES:

1. LEADER AND TRAILER TAPE



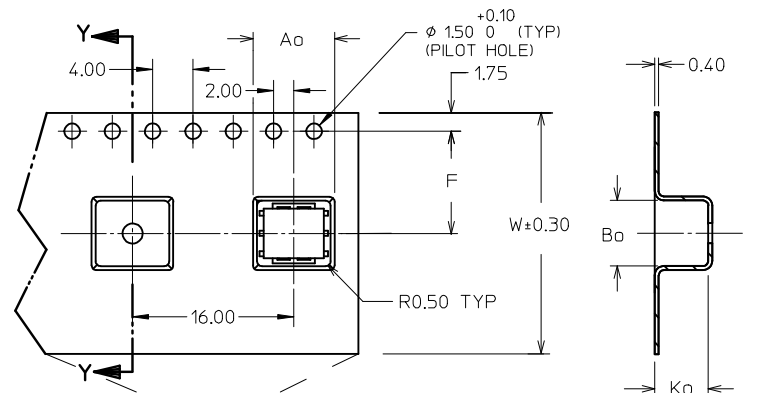
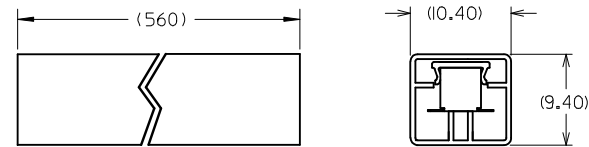
2. PEELING OFF FORCE OF THE TOP TAPE: 20-80gf.
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)



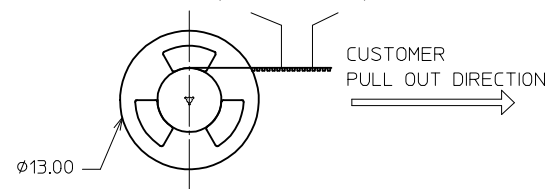
3. PACKAGING STANDARD IS AS PER EIA-481.

4. TAPE & REEL QUANTITY = SEE TABLE

CONNECTOR ORIENTATION
IN TUBE



SECTION Y-Y



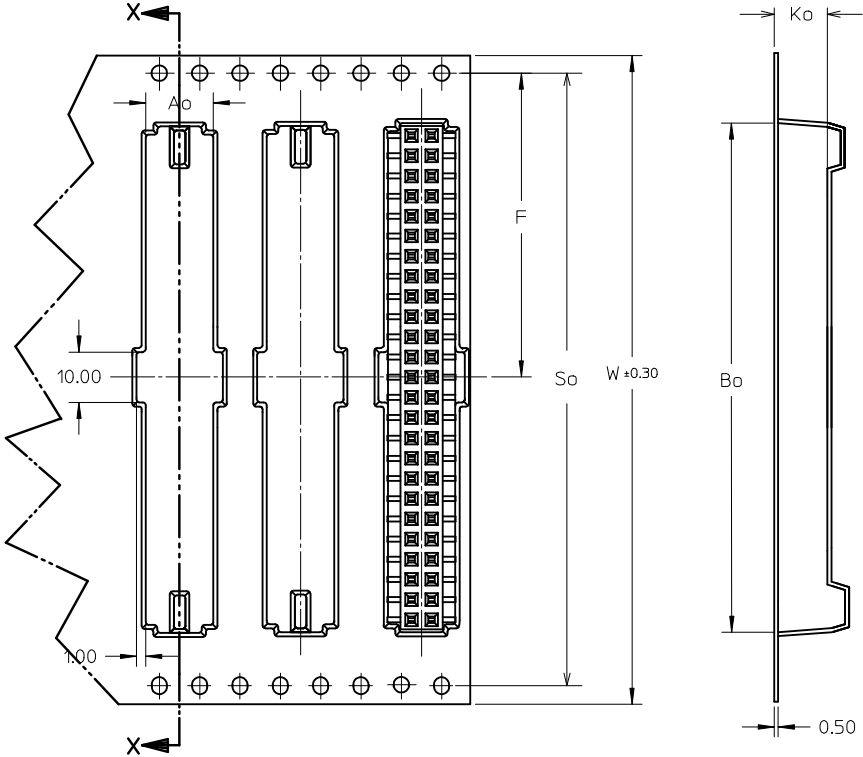
6 CKT FOR ILLUSTRATION ONLY
TAPE & REEL TYPE 'A'

ADD P/N: 87381-3200 EC NO: S2009-0725 DRWN:SKANG CHKD:ATSEE APPR:MLONG REV E8	DESCRIPTION 2009/04/01 2009/04/06 2009/04/07	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
				mm	INCH	DRAWN BY JAMES	DATE 1998/01/08	TITLE MGRID, TOP ENTRY RECEPT. 4.50MM HT., SMT		
			4 PLACES	± ---	± ---	CHECKED BY LCHANG	DATE 1999/04/23			
			3 PLACES	± ---	± ---	APPROVED BY SQUEK	DATE 1999/04/26	MOLEX MOLEX INCORPORATED	DOCUMENT NO. SD-87381-**6*	SHEET NO. 2 OF 4
			2 PLACES	± 0.20	± ---	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS				
		1 PLACE	± ---	± ---	ANGULAR ± 3 °					

F	E	D	C	B	A	10	9	8	7	6	5	4	3	2	1					
						CKT SIZE	PART NO. WITH CAP IN TUBE	PART NO. WITH CAP IN TAPE / REEL	W	So	Ao	F	Bo	Ko	T&R TYPE (SHT 2)	T&R QTY PER REEL				
						6	87381-0664	87381-9002	24	-	7.00	11.50	6.50	5.30	A	500				
						8	87381-0864	87381-9003	24	-	7.00	11.50	8.50	5.30	A	600				
						10	87381-1064	87381-9005	24	-	7.00	11.50	10.50	5.30	A	680				
						14	87381-1464	87381-9006	32	28.40	7.20	14.20	14.50	5.30	B	750				
						16	87381-1664	87381-9004	32	28.40	7.20	14.20	16.50	5.30	B	800				
						18	87381-1864	87381-1800	32	28.40	7.20	14.20	18.50	5.30	B	750				
						20	87381-2063	87381-2000	32	28.40	7.20	14.20	20.50	5.30	B	800				
						22	87381-2264	87381-2200	44	40.40	7.20	20.20	22.50	5.30	B	500				
						30	87381-3064	87381-3000	44	40.40	7.20	20.20	30.50	5.30	B	500				
						32	87381-3264	87381-3200	44	40.40	7.20	20.20	32.50	5.30	B	500				
						44	87381-4464	87381-4400	56	52.40	7.20	26.20	44.50	5.30	B	500				
						46	87381-4664	87381-4600	72	68.40	7.20	34.20	46.50	5.30	B	750				
						50	87381-5063	87381-5030	72	68.40	7.20	34.20	50.50	5.30	B	500				
						50	87381-5064	87381-5000	72	68.40	7.20	34.20	50.50	5.30	B	500				
						QUALITY SYMBOLS						GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
ADD P/N: 87381-3200 EC NO: S2009-0725 DRWN:SKANG CHKD:ATSEE APPR:MLONG						DESCRIPTION REV	▽=0 ◻=0	4 PLACES	± ---	± ---	DRAWN BY	DATE	TITLE MGRID, TOP ENTRY RECEPT. 4.50MM HT., SMT							
								3 PLACES	± ---	± ---	CHECKED BY	DATE								
								2 PLACES	± 0.20	± ---	LCHANG	1999/04/23	MOLEX INCORPORATED							
								1 PLACE	± ---	± ---	APPROVED BY	DATE								
E8								ANGULAR ± 3 °			SQUEK		1999/04/26	SD-87381-**6*						
								DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS			MATERIAL NO.		DOCUMENT NO.							SHEET NO. 3 OF 4
								SIZE A3	THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION											
fb_frame_A3_P_AM_T Rev. E 2006/04/15						9	8	7	6	5	4	3	2	1						

CKT SIZE	PART NO. WITHOUT CAP IN TUBE	PART NO. WITHOUT CAP IN TAPE / REEL	W	So	Ao	F	Bo	Ko	T&R TYPE (SHT 2)	T&R QTY PER REEL
50	87381-5074	87381-6000 	72	68.40	6.80	34.20	50.50	8.00	B	500

 ILLUSTRATION FOR P/N: 87381-6000
50 CKT IN T&R W/O CAP



SECTION X-X

ADD P/N: 87381-3200 EC NO: S2009-0725 DRWN:SKANG CHKD:ATSEE APPR:MLONG	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 JAMES	DATE 1998/01/08	TITLE MGRID, TOP ENTRY RECEPT. 4.50MM HT., SMT								
			4 PLACES	± ---	± ---	CHECKED BY LCHANG	DATE 1999/04/23									
			3 PLACES	± ---	± ---	APPROVED BY SQUEK		DATE 1999/04/26	MOLEX MOLEX INCORPORATED							
			2 PLACES	± 0.20	± ---											
			1 PLACE	± ---	± ---	MATERIAL NO. SEE TABLE		DOCUMENT NO. SD-87381-***6*						SHEET NO. 4 OF 4		
			ANGULAR ± 3 °			SIZE A3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION								
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS													