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Part Number: [0873811864](#)
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, 18 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

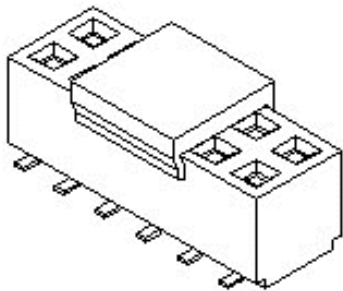
Product Family	PCB Receptacles
Series	87381
Application	Board-to-Board
Comments	With Cap
Product Literature Order No	987650-1991
Product Name	Milli-Grid™

Physical

Circuits (Loaded)	18
Circuits (maximum)	18
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
PCB Thickness Recommended (in)	0.031 In
PCB Thickness Recommended (mm)	0.80 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)	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



Series

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

[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

Solder Process Data

Duration at Max. Process Temperature (seconds)	12
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 03/18/2010

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F

E

D

C

B

A

10

9

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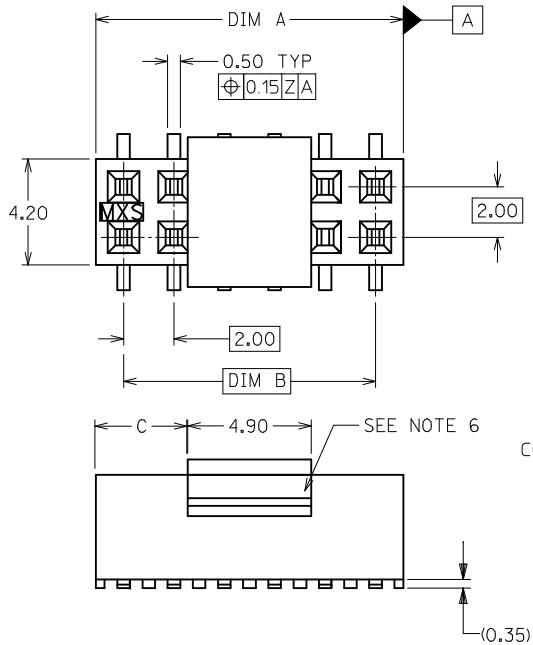
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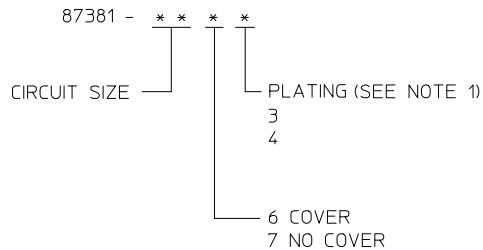
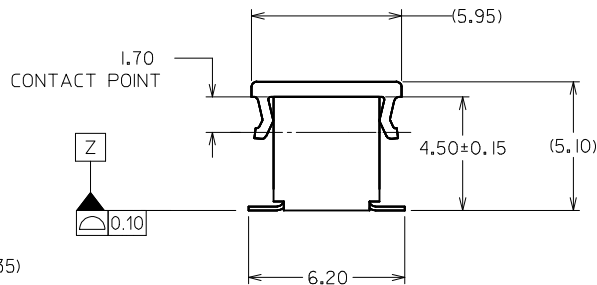
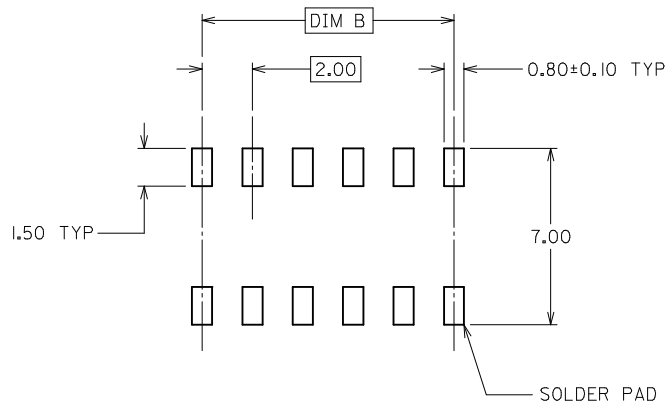
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1



PART NO. LEGEND
FOR TUBE PACKAGING ONLY



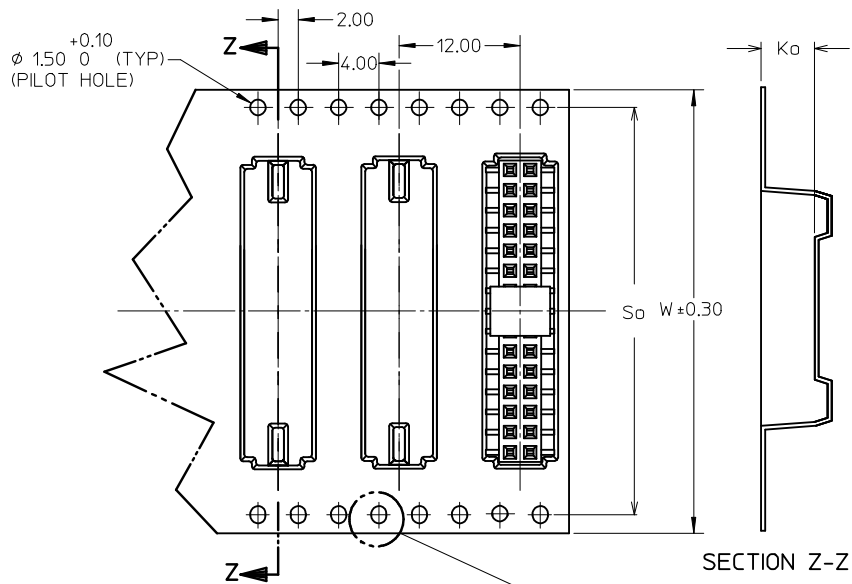
RECOMMENDED PCB LAYOUT

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.

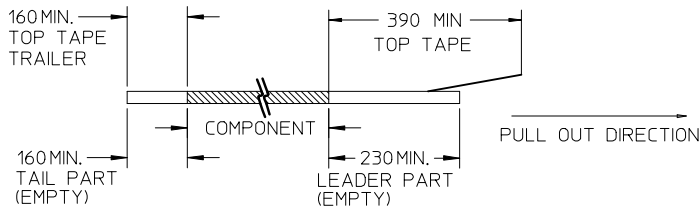
ADD P/N: 87381-3200 EC NO: S2009-0725 DRWN:SKANG CHKD:ATSEE APPR:MLONG REV E8				QUALITY SYMBOLS ▽=0 C=0		GENERAL TOLERANCES (UNLESS SPECIFIED)				DIMENSION STYLE MM ONLY				SCALE NTS		DESIGN UNITS METRIC		THIRD ANGLE PROJECTION			
DESCRIPTION				REV		mm		INCH		DRAWN BY JAMES		DATE 1998/01/08		TITLE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



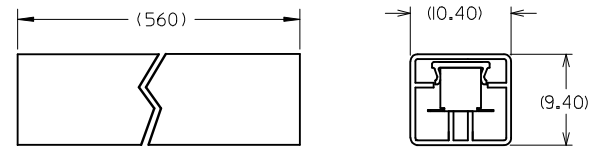
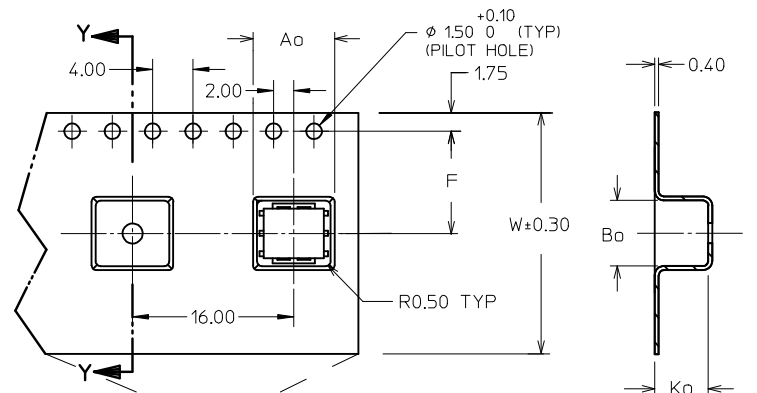
2. PEELING OFF FORCE OF THE TOP TAPE: 20-80gf.
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)



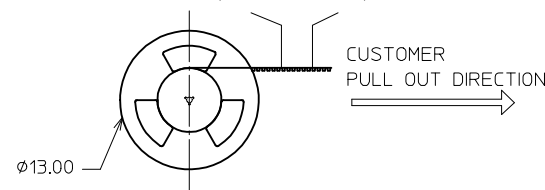
3. PACKAGING STANDARD IS AS PER EIA-481.

4. TAPE & REEL QUANTITY = SEE TABLE

CONNECTOR ORIENTATION
IN TUBE



SECTION Y-Y



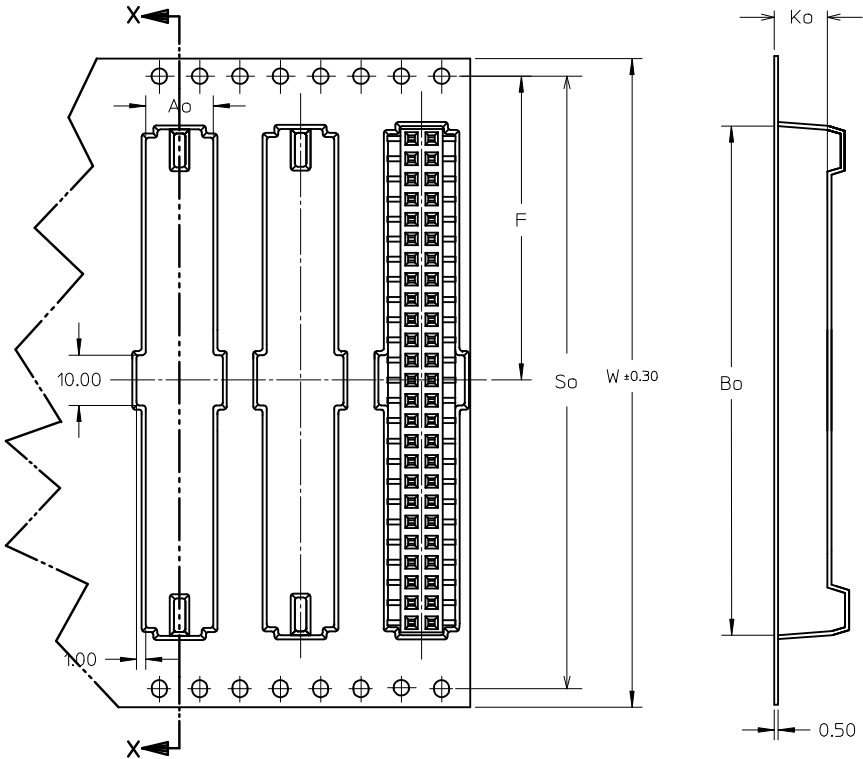
6 CKT FOR ILLUSTRATION ONLY
TAPE & REEL TYPE 'A'

ADD P/N: 87381-3200 EC NO: S2009-0725 DRWN:SKANG CHKD:ATSEE APPR:MLONG REV E8	2009/04/01 2009/04/06 2009/04/07	DESCRIPTION	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	DATE			
				3 PLACES	± ---	± ---	LCHANG	1999/04/23			
				2 PLACES	± 0.20	± ---	APPROVED BY	DATE	MOLEX MOLEX INCORPORATED	DOCUMENT NO. SD-87381-**6*	SHEET NO. 2 OF 4
				1 PLACE	± ---	± ---	SQUEK	1999/04/26			
			ANGULAR ± 3 °		MATERIAL NO. SEE TABLE						
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					

[illegible]

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

2009/04/07

2009/04/06

2009/04/07

DESCRIPTION

REV

8

QUALITY SYMBOLS

=0

=0

GENERAL TOLERANCES
(UNLESS SPECIFIED)

	mm	INCH
4 PLACES	± ---	± ---
3 PLACES	± ---	± ---
2 PLACES	± 0.20	± ---
1 PLACE	± ---	± ---

ANGULAR ± 3 °

DRAFT WHERE APPLICABLE
MUST REMAIN
WITHIN DIMENSIONS

DIMENSION STYLE

MM ONLY

DRAWN BY

JAMES

DATE

1998/01/08

CHECKED BY

L CHANG

DATE

1999/04/23

APPROVED BY

SQUEK

DATE

1999/04/26

MATERIAL NO.

SEE TABLE

SIZE

A3

SCALE

NTS

DESIGN UNITS

METRIC

THIRD ANGLE PROJECTION

TITLE

MGRID, TOP ENTRY RECEPT.
4.50MM HT., SMT

DOCUMENT NO.

SD-87381-***6*

SHEET NO.

4 OF 4

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