

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0873811800](#)
Status: **Active**
Description: 2.00mm (.079") Pitch Milli-Grid™ Receptacle, Surface Mount, Top Entry, 4.50mm (.177") Height, 0.38µm (15µ") Gold (Au) Plating, with Cap,without Locating Peg, 18 Circuits, Embossed Tap on Reel, 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

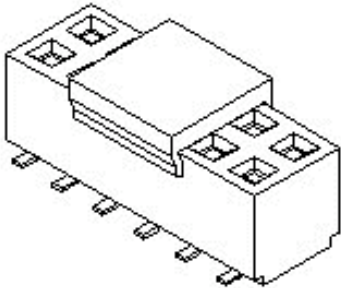
Product Family	PCB Receptacles
Series	87381
Application	Board-to-Board
Comments	With Cap
Product Name	Milli-Grid™

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
Packaging Type	Embossed Tape on Reel
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 Mating Part	No
Polarized to PCB	No
Stackable	Yes
Surface Mount Compatible (SMC)	Yes
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

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

Solder Process Data

Duration at Max. Process Temperature (seconds)	14
Lead-free Process Capability	Reflow Capable (SMT only)
Max. Cycles at Max. Process Temperature	1
Process Temperature max. C	265

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

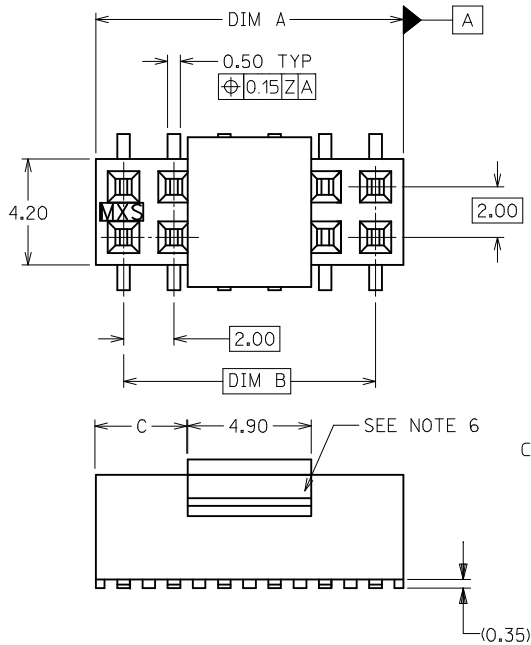
5

4

3

2

1



PART NO. LEGEND
FOR TUBE PACKAGING ONLY

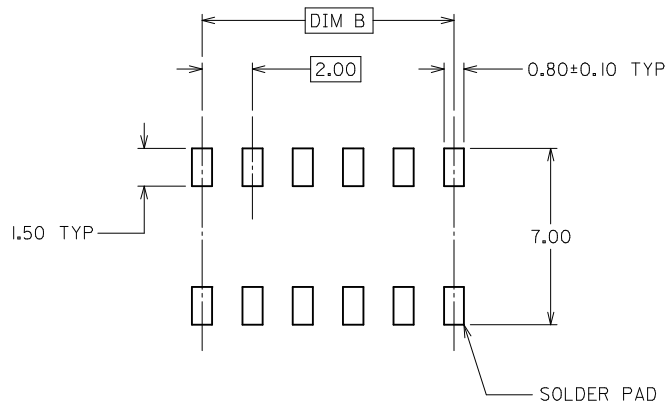
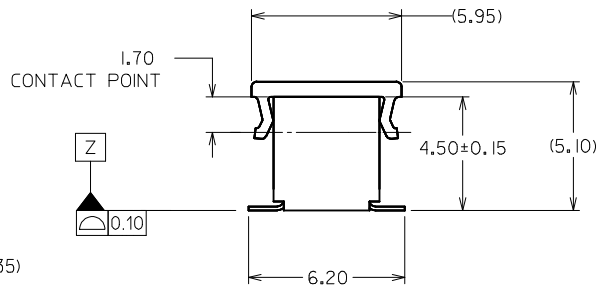
87381 - * * * *

CIRCUIT SIZE

PLATING (SEE NOTE 1)

3
4

6 COVER
7 NO COVER



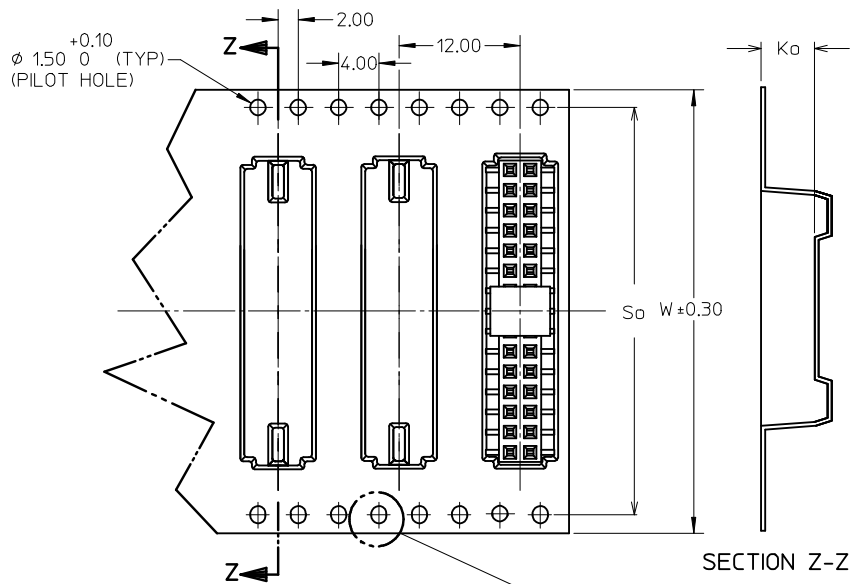
RECOMMENDED PCB LAYOUT

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.

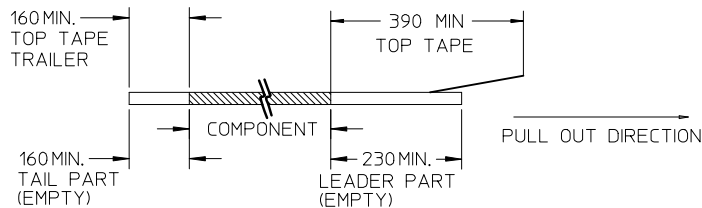
ADD P/N: 87381-3200 EC NO: S2009-0725 DRWN:SKANG CHKD:ATSEE APPR:MLONG REV E8	DESCRIPTION	QUALITY SYMBOLS ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
				mm	INCH	DRAWN BY JAMES	DATE 1998/01/08	TITLE MGRID, TOP ENTRY RECEPT.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



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

NOTES:

1. LEADER AND TRAILER TAPE



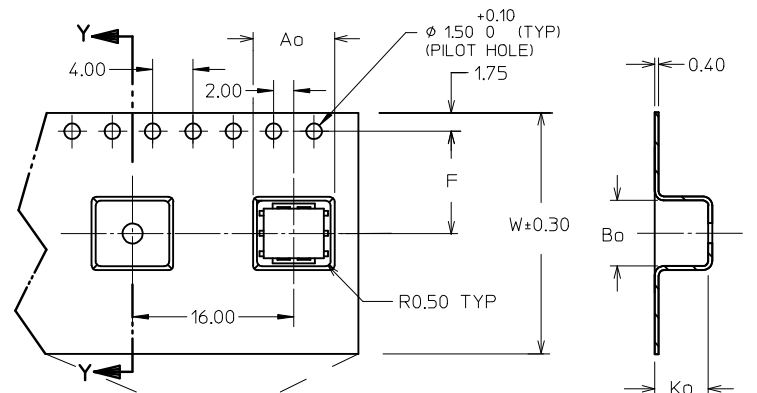
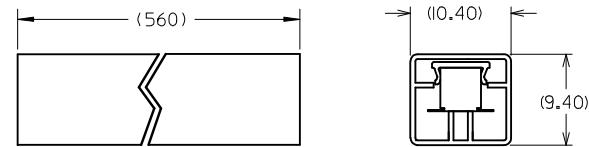
2. PEELING OFF FORCE OF THE TOP TAPE: 20-80gf.
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)



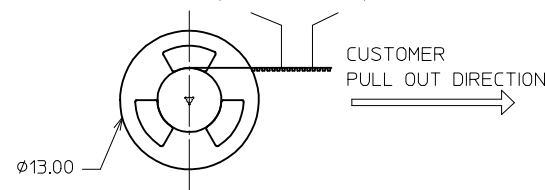
3. PACKAGING STANDARD IS AS PER EIA-481.

4. TAPE & REEL QUANTITY = SEE TABLE

CONNECTOR ORIENTATION
IN TUBE



SECTION Y-Y



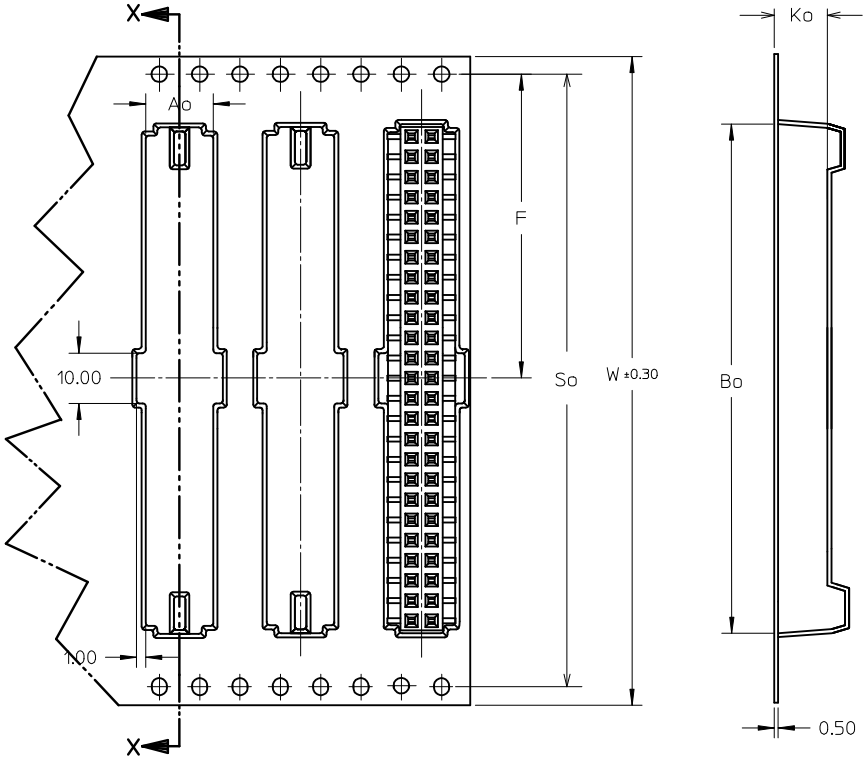
6 CKT FOR ILLUSTRATION ONLY
TAPE & REEL TYPE 'A'

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 LCHANG	DATE 1999/04/23						
				3 PLACES	± ---	± ---	APPROVED BY SQUEK	DATE 1999/04/26	MOLEX		MOLEX INCORPORATED		SHEET NO. 2 OF 4	
				2 PLACES	± 0.20	± ---	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		SD-87381-**6*		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION	
1 PLACE	± ---	± ---	ANGULAR ± 3 °		MATERIAL NO.		DOCUMENT NO.							

[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

DATE

CHECKED BY

DATE

APPROVED BY

DATE

JAMES

1998/01/08

L CHANG

1999/04/23

SQUEK

1999/04/26

MATERIAL NO.

SEE TABLE

SIZE

A3

THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION

SCALE

NTS

DESIGN UNITS

METRIC

 THIRD ANGLE PROJECTION

TITLE

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

 MOLEX INCORPORATED

DOCUMENT NO.

SD-87381-***6*

SHEET NO.

4 OF 4