

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

Part Number: [0873814683](#)
Status: **Active**
Description: 2.00mm (.079") Pitch Milli-Grid™ Receptacle, Surface Mount, Top Entry, 0.76µm (30µ") Gold (Au) Plating, with Cap, with Locating Pegs, 46 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 Name Milli-Grid™

Physical

Circuits (Loaded) 46
 Circuits (maximum) 46
 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
 Material - Resin Nylon
 Number of Rows 2
 Orientation Vertical
 PCB Locator Yes
 PCB Retention Yes
 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) 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) 14
 Lead-free Process Capability Reflow Capable (SMT only)
 Max. Cycles at Max. Process Temperature 1

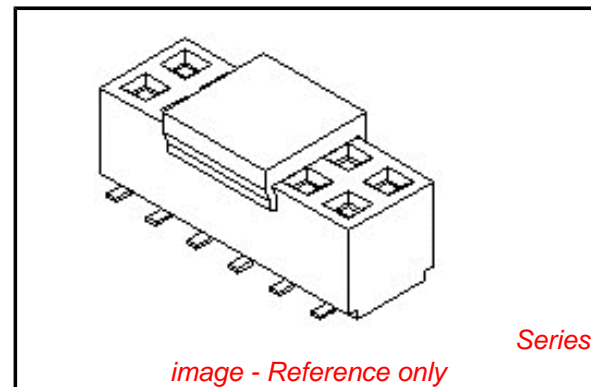


image - Reference only

EU RoHS

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

China RoHS



Not Reviewed

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](#) , [87759](#), [87760](#), [87832](#) Surface Mount PCB Header, [87833](#) Right Angle PCB Header, [87831](#) Vertical, Through Hole PCB Header

Process Temperature max. C

265

Material Info

Reference - Drawing Numbers

Product Specification

PS-87380-002

Sales Drawing

SD-87381-***8*

This document was generated on 03/18/2010

PLEASE CHECK WWW.MOLEX.COM FOR LATEST PART INFORMATION

10 9 8 7 6 5 4 3 2 1

F

E

D

C

B

A

F

E

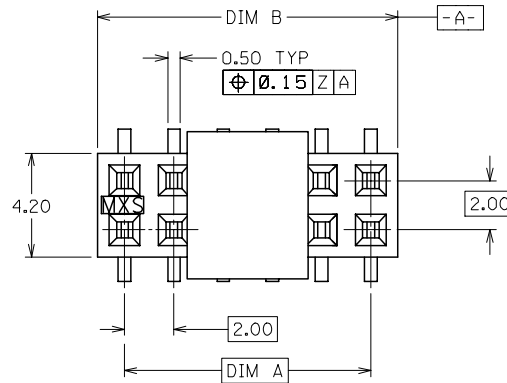
D

C

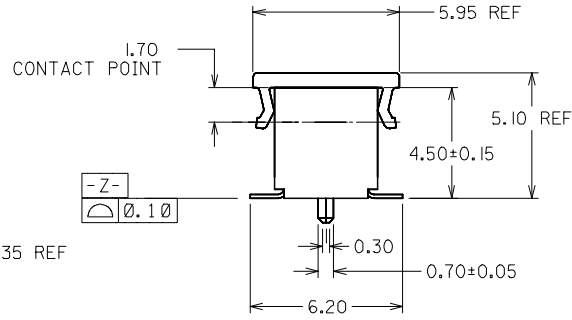
B

A

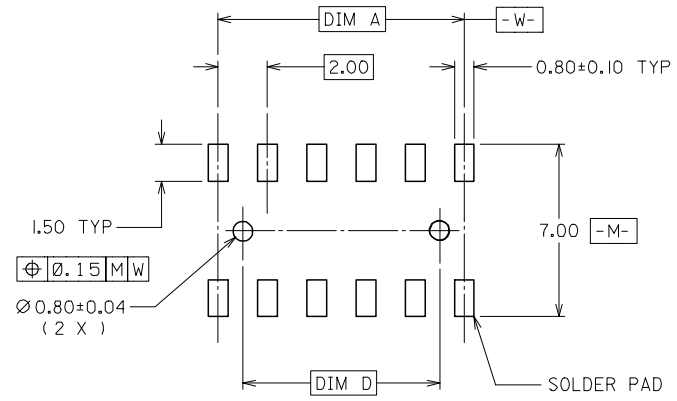
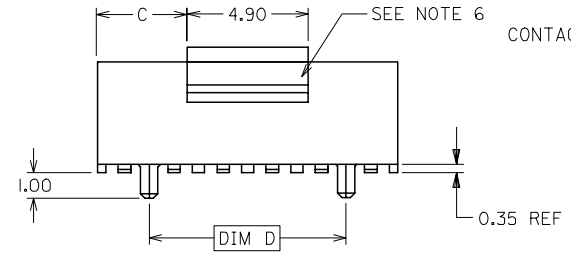
PART NUMBER (W/ CAP IN TUBE)	CKT. SIZE	DIM A	DIM B	DIM C	DIM D
87381-08**	8	6.00	8.00	1.55	4.00
87381-10**	10	8.00	10.00	2.55	6.00
87381-12**	12	10.00	12.00	3.55	8.00
87381-14**	14	12.00	14.00	4.55	10.00
87381-16**	16	14.00	16.00	5.55	12.00
87381-18**	18	16.00	18.00	6.55	14.00
87381-20**	20	18.00	20.00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



PART NO. LEGEND
 87381 - * * * *
 CIRCUIT SIZE
 PLATING
 3 (SEE NOTE 1)
 4
 8 COVER
 9 NO COVER



- NOTES:
 1. PLATING FINISH :
 3 - 0.76um MIN. GOLD IN CONTACT AREA, 1.27um MIN. TIN
 IN SOLDER TAIL AREA BOTH OVER 1.27um MIN NBICKEL OVEALL
 4 - 0.38um MIN. GOLD IN CONTACT AREA 1.27um MIN. TIN
 IN SOLDER TAIL AREA BOTH OVER 1.27um MIN NBICKEL OVEALL
 2. 12 CKT SIZE SHOWN FOR ILLUSTRATION ONLY. SEE CHART
 FOR ALL AVAILABLE PART SIZES
 3. PRODUCT SPECIFICATION PS-87380 APPLIES
 4. COPLANARITY OF SOLDER TAILS ARE TO BE MEASURED BY
 RESTING THE PART ON A FLAT GAUGE SURFACE
 5. TUBE PACKAGING STANDARD
 6. COVER IS OPTIONAL, SEE LEGEND.
 7. PARTS SHALL BE PACKED IN MOISTURE BARRIER BAG.



RECOMMENDED PCB LAYOUT

ADD NOTE 7. EC NO: S2008-0281 DRWNS:KANG CHKD:ATSEE APPR:MLONG	QUALITY SYMBOLS ▽=0 ▽C=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
		mm	INCH	DRAWN BY RSHAN	DATE 1998/03/10	TITLE MGRID 2MM RECEPTACLE 4.50MM HT.	MOLEX INCORPORATED		
D2	REV	4 PLACES ± --- ± ---		APPROVED BY SKTOH		DATE 1998/03/28	DOCUMENT NO. SD-87381-***8*		
		3 PLACES ± --- ± ---		MATERIAL NO.		DATE 1998/03/28	SHEET NO. 1 OF 3		
		2 PLACES ± 0.20 ± ---		DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE			
		1 PLACE ± --- ± ---							
		ANGULAR ± 3 °							

9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1

F

E

D

C

B

A

F

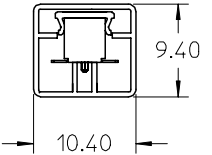
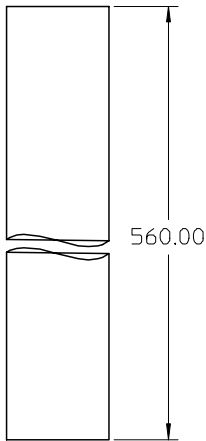
E

D

C

B

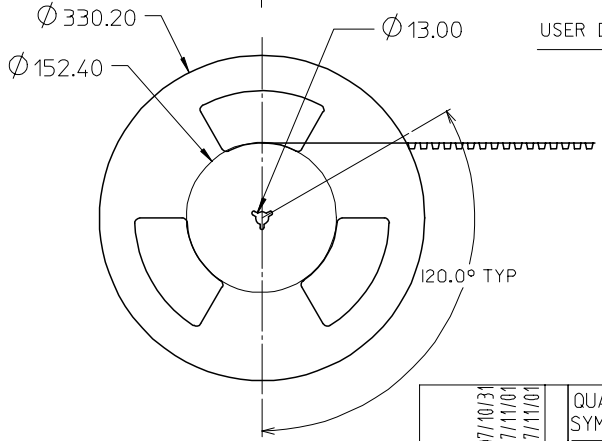
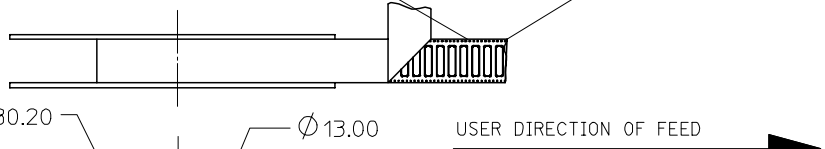
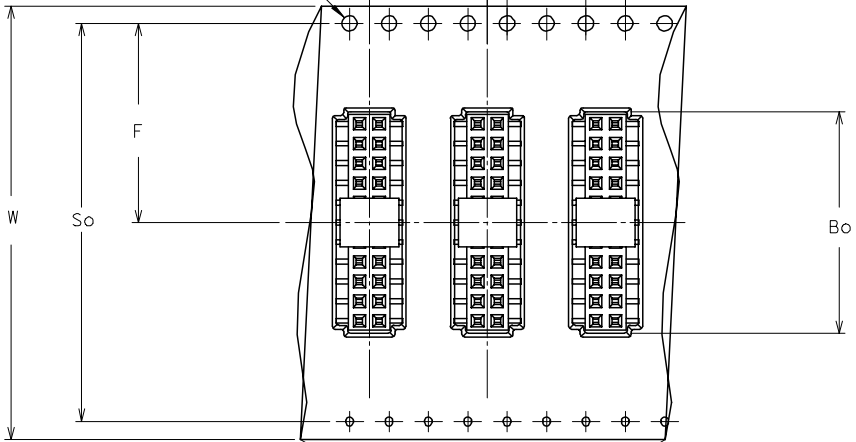
A



TUBE PACKAGING ORIENTATION
(SEE SHT 1 FOR PART NUMBER)

$\varnothing 1.50^{+0.10}_0$ (TYP)
(PILOT HOLE)

12.00
2.00
4.00



TAPE AND REEL ORIENTATION

NOTES:

- LEADER AND TRAILER TAPE
160MIN. TOP TAPE TRAILER
390 MIN TOP TAPE
160MIN. TAIL PART (EMPTY)
230MIN. LEADER PART (EMPTY)
PULL OUT DIRECTION
- PEELING OFF FORCE OF THE TOP TAPE: 20-80gf.
(PEELING DIRECTION AS SHOWN IN FOLLOWING FIGURE)
15° MAX.
PEEL OFF DIRECTION
PULL OUT DIRECTION

- PACKAGING STANDARD IS AS PER EIA-481.
- TAPE & REEL QUANTITY = 800 PCS/REEL

ADD NOTE 7. EC NO: S2008-0281 DRWNS:KANG CHKD:ATSEE APPR:MLONG	2007/10/31 2007/11/01 2007/11/01	QUALITY SYMBOLS ▽=0 ▽=0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION	
	REV D2	DESCRIPTION	4 PLACES ± --- ± --- 3 PLACES ± --- ± --- 2 PLACES ± 0.20 ± --- 1 PLACE ± --- ± --- ANGULAR ± 3 °	mm INCH	DRAWN BY RSHAN 1998/03/10	DATE 1998/03/10	TITLE MGRID 2MM RECEPTACLE 4.50MM HT.		MOLEX INCORPORATED	
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	SEE TABLE		APPROVED BY SKTOH 1998/03/28	DATE 1998/03/28	DOCUMENT NO. SD-87381-***8*		SHEET NO. 2 OF 3
					MATERIAL NO.					

9 8 7 6 5 4 3 2 1

10 9 8 7 6 5 4 3 2 1

PART NUMBER (W/CAP IN TUBE)	MOISTURE BARRIER BAG P/N FOR TUBE	PART NUMBER (W/ CAP IN T&R)	MOISTURE BARRIER BAG P/N FOR T&R	CKT. SIZE	W	So	F	Bo
87381-2284	89990-0201	87381-8252	89990-0200	22	44.00	40.40	20.20	22.50
87381-3084		87381-8231		30	56.00	52.40	26.20	30.50

F

F

E

E

D

D

C

C

B

B

A

A

ADD NOTE 7. EC NO: S2008-0281 DRWNS:KANG 2007/10/31 CHKD:ATSEE 2007/11/01 APPR:MLONG 2007/11/01	QUALITY SYMBOLS = 0 = 0	GENERAL TOLERANCES (UNLESS SPECIFIED)		DIMENSION STYLE MM ONLY		SCALE NTS	DESIGN UNITS METRIC	THIRD ANGLE PROJECTION		
			mm	INCH	DRAWN BY RSHAN	DATE 1998/03/10	TITLE MGRID 2MM RECEPTACLE 4.50MM HT.			
		4 PLACES	± ---	± ---	CHECKED BY SQUEK	DATE 1998/03/28				
		3 PLACES	± ---	± ---	APPROVED BY SKTOH	DATE 1998/03/28	MOLEX INCORPORATED			
		2 PLACES	± 0.20	± ---	MATERIAL NO.	DOCUMENT NO.				
1 PLACE	± ---	± ---	DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		SEE TABLE		SD-87381-***8*		3 OF 3	
ANGULAR ± 3 °				SIZE 3		THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

9 8 7 6 5 4 3 2 1