

Distributed by:

**JAMECO**<sup>®</sup>  
ELECTRONICS

**www.Jameco.com ♦ 1-800-831-4242**

The content and copyrights of the attached  
material are the property of its owner.

Jameco Part Number 803292

**PRODUCT SPECIFICATION  
PS-87340**

**TITLE : "MILLI-GRID" VERY LOW PROFILE  
RECEPTACLE (TOP/BOTTOM ENTRY)**

**ORIGINAL**

15 AUG 1994



DOCUMENT  
CONTROL

C	ADD PIN TIP CONFIGURATION ECN# S50034	ERPOH	940719
B	ADD TERMINAL RETENTION FORCE ECN# S3-0198	JACK	921008
A	REVISED AND RELEASED PER ECN# S2-599	MAX	920610
1	X-RELEASED PER ECN #S2-375	JDK	920224
LT	REVISION RECORD	BY	DATE
Prepared By : J.KACHLIC 920224	Approved By : ROY WONG 920224	Product Specification "MILLI-GRID" VERY LOW PROFILE RECEPTACLE (TOP/BOTTOM ENTRY)	No. of Pages 5  Rev C

This Spec. contains Molex proprietary information and should not be used without permission.

Rev C Page 1/5

**PRODUCT SPECIFICATION**  
**PS-87340****1.0 SCOPE**

This specification covers the performance requirement for Milli-Grid Very Low Profile Receptacle (Top/Bottom Entry).

**2.0 PRODUCT DESCRIPTION**

The Milli-Grid Very Low Profile Receptacle (Top/Bottom Entry), as its name implies, is a very low profile 2.0mm by 2.0mm grid receptacle that can be used for both top and bottom entry application. It is a board-in connector that can be mated with Milli-Grid Headers for inter-connection. Applicable family part numbers for this receptacle are 87340 and 87366.

**3.0 APPLICABLE DOCUMENT**

The following documents form a part of this specification to the extent specified herewith. In the event of conflict between the requirements of this specification and the product drawing, the product drawing shall take precedence. In the event of conflict between the requirements of this specification and the reference documents, this specification shall take precedence.

MIL-STD-202 Test methods for Electronic and Electrical component parts.

MIL-STD-1344 Test methods for Electrical Connectors.

**4.0 MATERIALS**

4.1 Housing - 30% Glass Filled LCP, UL 94V-0  
Color - Black

4.2 Contact - Phosphor Bronze  
(See Product Sales Drawings for  
available plating options)

**5.0 RATINGS**

5.1 Current : 1.0 amps

5.2 Temperature Range : -55 to +105 deg C

**ORIGINAL**

15 AUG 1994

DOCUMENT  
CONTROL

**PRODUCT SPECIFICATION**  
**PS-87340**

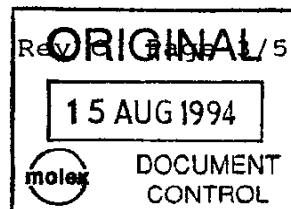
**6.0 PERFORMANCE SPECIFICATIONS****6.1 Electrical Performance**

<u>ITEM</u>	<u>TEST CONDITION</u>	<u>REQUIREMENT</u>
Contact Resistance	Per MIL-STD-1344A method 3004.1	15 milliohms Max.
Insulation Resistance	250 VDC applied for 1 minute between adjacent terminals	1000 Megohms Min.
Dielectric Strength	1000 V AC/DC for 1 min between adjacent terminals	No Breakdown
Capacitance	Measure between adjacent terminals	1.0 pf Max.

**6.2 Mechanical Performance**

<u>ITEM</u>	<u>TEST CONDITION</u>	<u>REQUIREMENT</u>
Terminal Retention In Housing	Apply an axial load to dislodge terminal from housing at a rate of 12.7 mm/min.	0.32 kg min.
Individual Contact Insertion Forces	Insert a 0.50mm square pin at a rate of 12 +/- 5 cm/min (See 8.0 for pin tip configuration)	180 grams Max.
Individual Contact Withdrawal Forces	Withdraw a 0.50mm square pin at a rate of 12 +/- 5 cm/min (See 8.0 for pin tip configuration)	20 grams Min.
Contact Normal Force	Apply a load normal to the point of contact of the terminal	50 grams Min. @ deflection of 0.06mm
Durability	Mate connectors 25 times at a maximum rate of 10 cycles/min	Contact Resistance 10 milliohms Max. change from initial
Mechanical Shock	1/2 Sine Wave, 50G, 11ms, Pulse, 3 shocks per axis per MIL-STD-202F method 231B condition A	Contact Resistance 10 milliohms Max. Change from initial  Discontinuity 1 micro-second Max.

This Spec. contains Molex proprietary information and should not be used without permission.



**PRODUCT SPECIFICATION  
PS-87340**

**6.2 Mechanical Performance cont....**

<u>ITEM</u>	<u>TEST CONDITION</u>	<u>REQUIREMENT</u>
Vibration	Simple Harmonic Motion 1.52 mm total excursion, 10-55-10 Hz traverse in 1 minute for 2 hours in each axis per MIL-STD-202F method 201A	Contact Resistance 10 milliohms Max. change from initial  Discontinuity 1 micro-second Max.

**6.3 Environmental Performance**

<u>ITEM</u>	<u>TEST CONDITION</u>	<u>REQUIREMENT</u>
Thermal Shock	Mated connectors expose for 5 cycles: Temperature      Duration -55 +0/-5 C      30 min. +105 +3/-0 C      30 min.	No damage in appearance  Contact Resistance 10 milliohms Max. change from initial
Thermal Aging	Mated connectors expose at 105 +/-2 C for 96 hours	No damage in appearance  Contact Resistance 10 milliohms Max. change from initial
Cyclic Humidity	Mated connectors expose to temperature cycle between +25 +/-2 C to +65 +/-2 C at 90% to 98% R.H. for 240 hours per MIL-STD- 1344A method 1002.2 type II, except step 7	No damage in appearance  Contact Resistance 10 milliohms Max. change from initial
Salt Spray	Mated connectors exposed to 5% concent- ration sodium chloride solution at 35 +/-2 C for 96 hours per MIL- STD-202F method 101D condition A	Contact Resistance 10 milliohms Max. change from initial

**ORIGINAL**

15 AUG 1994



• DOCUMENT  
CONTROL

This Spec. contains Molex proprietary information and should not be used without permission.

Rev C Page 4/5

**PRODUCT SPECIFICATION  
PS-87340**

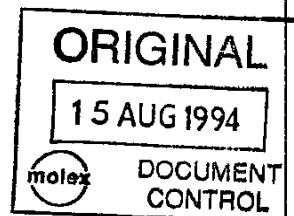
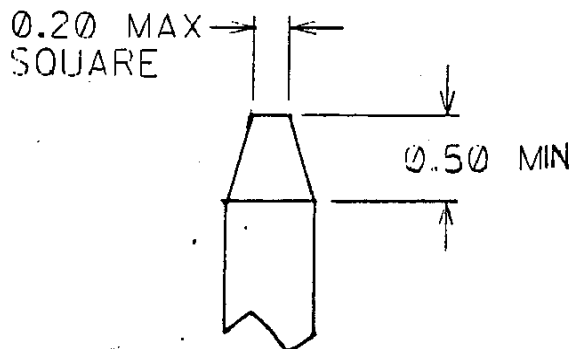
**6.3 Environmental Performance cont....**

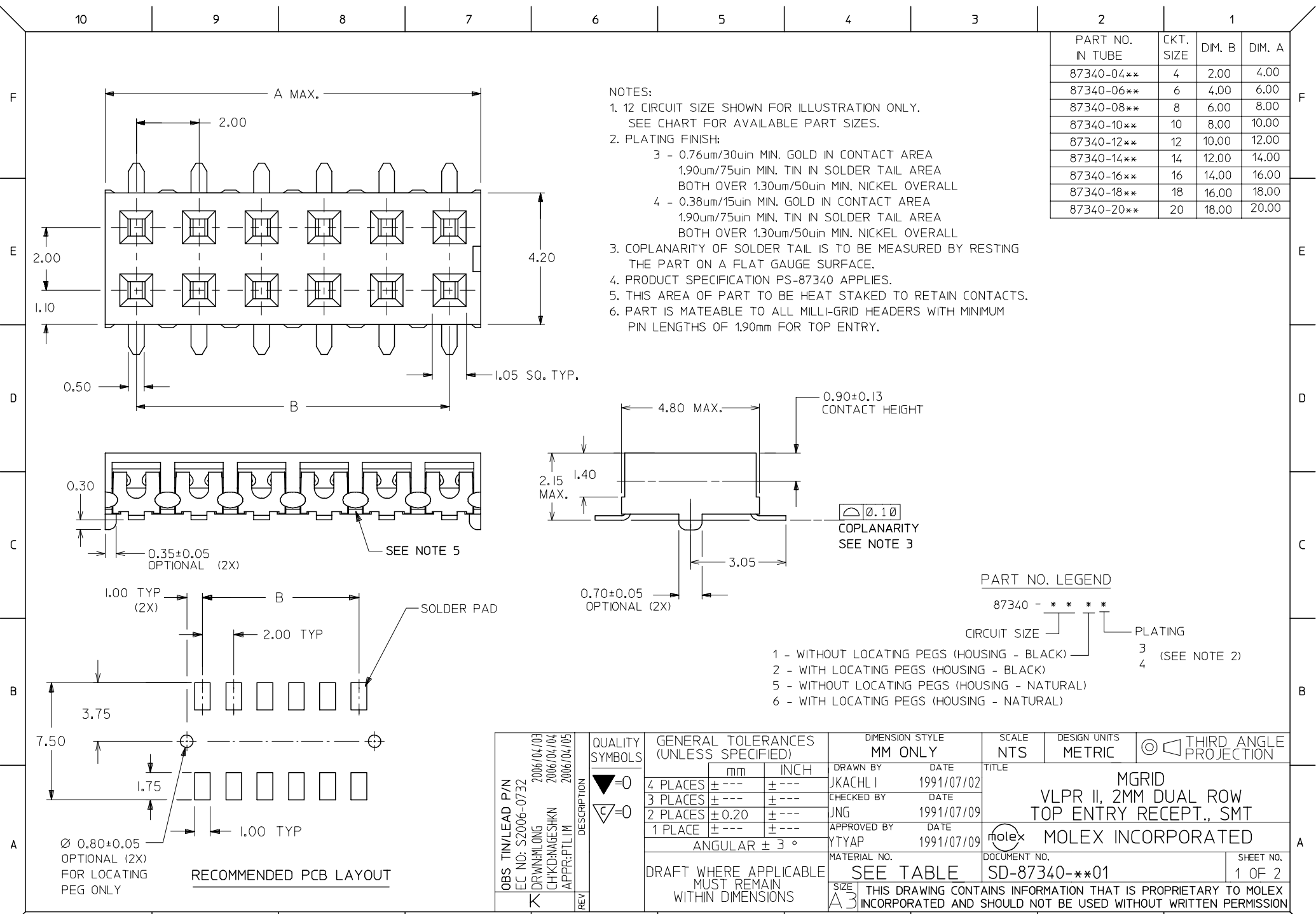
<u>ITEM</u>	<u>TEST CONDITION</u>	<u>REQUIREMENT</u>
Temperature Rise	Apply 1.0 amps DC to mated connectors and measure contact temperature rise for 96 hours	+30 degree C Max. temperature rise over ambient
Solderability	Solder tail to be dipped in flux and examined as per MIL-STD-202F method 208F	Dipped plated portion should have 95% continuous new solder coating coverage
Resistance to Soldering Heat	Solder tail to be dipped in flux as per MIL-STD-202F method 210A condition B	No damage in appearance of the connector
Resistance to Infra-Red Heat	Subject connector to the IR Reflow temp. of 260 +/- 5 C for 12 +/- 2 sec.	No damage in appearance of the connector

**7.0 PACKAGING**

Parts shall be packaged to protect against damage during handling, transit, and storage.

**8.0 PIN TIP CONFIGURATION**





PART NO. IN TUBE	CKT. SIZE	DIM. B	DIM. A
87340-04**	4	2.00	4.00
87340-06**	6	4.00	6.00
87340-08**	8	6.00	8.00
87340-10**	10	8.00	10.00
87340-12**	12	10.00	12.00
87340-14**	14	12.00	14.00
87340-16**	16	14.00	16.00
87340-18**	18	16.00	18.00
87340-20**	20	18.00	20.00

- NOTES:
- 12 CIRCUIT SIZE SHOWN FOR ILLUSTRATION ONLY. SEE CHART FOR AVAILABLE PART SIZES.
  - PLATING FINISH:
    - 3 - 0.76um/30uin MIN. GOLD IN CONTACT AREA  
1.90um/75uin MIN. TIN IN SOLDER TAIL AREA  
BOTH OVER 1.30um/50uin MIN. NICKEL OVERALL
    - 4 - 0.38um/15uin MIN. GOLD IN CONTACT AREA  
1.90um/75uin MIN. TIN IN SOLDER TAIL AREA  
BOTH OVER 1.30um/50uin MIN. NICKEL OVERALL
  - COPLANARITY OF SOLDER TAIL IS TO BE MEASURED BY RESTING THE PART ON A FLAT GAUGE SURFACE.
  - PRODUCT SPECIFICATION PS-87340 APPLIES.
  - THIS AREA OF PART TO BE HEAT STAKED TO RETAIN CONTACTS.
  - PART IS MATEABLE TO ALL MILLI-GRID HEADERS WITH MINIMUM PIN LENGTHS OF 1.90mm FOR TOP ENTRY.

PART NO. LEGEND

87340 - \* \* \* \*

CIRCUIT SIZE | PLATING

1 - WITHOUT LOCATING PEGS (HOUSING - BLACK) | 3 (SEE NOTE 2)

2 - WITH LOCATING PEGS (HOUSING - BLACK) | 4

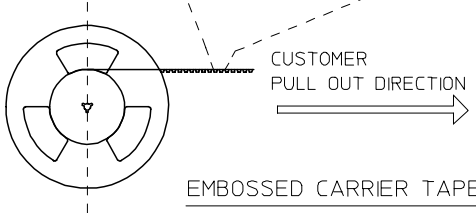
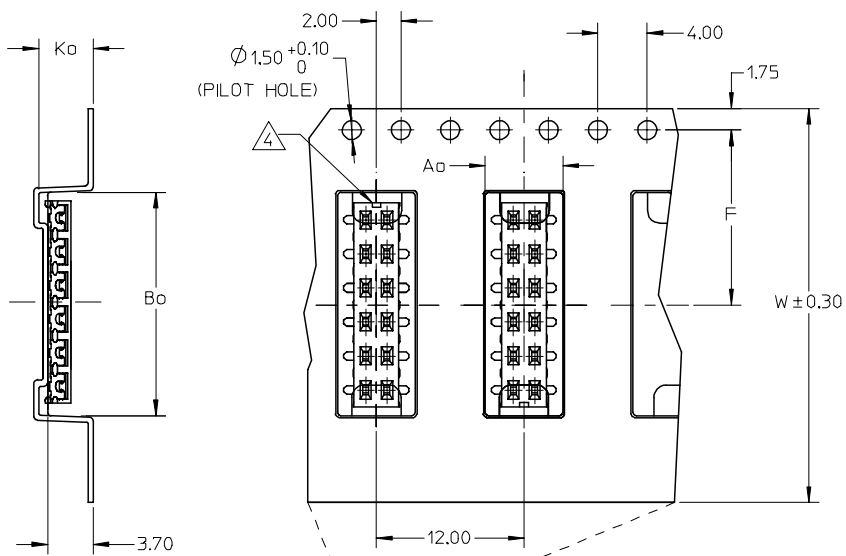
5 - WITHOUT LOCATING PEGS (HOUSING - NATURAL)

6 - WITH LOCATING PEGS (HOUSING - NATURAL)

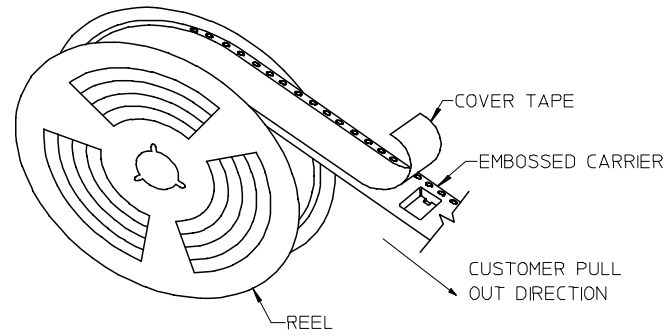
OBS TIN/LEAD P/N EC NO: S2006-0732 2006/04/03	DRWN:MLONG 2006/04/04 CHKD:NAGESHKH 2006/04/04 APPR:PTLIM 2006/04/05	DESCRIPTION	QUALITY SYMBOLS	GENERAL TOLERANCES (UNLESS SPECIFIED)	DIMENSION STYLE	SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
			▽=0 ▽C=0	mm   INCH	MM ONLY	NTS	METRIC	☉ □
K	REV	DESCRIPTION	4 PLACES ± ---   ± ---	DRAWN BY	DATE	TITLE		
			3 PLACES ± ---   ± ---	JKACHL I	1991/07/02	MGRID VLPR II, 2MM DUAL ROW TOP ENTRY RECEPT., SMT		
K	REV	DESCRIPTION	2 PLACES ± 0.20   ± ---	CHECKED BY	DATE	MOLEX INCORPORATED		
			1 PLACE ± ---   ± ---	JNG	1991/07/09	SD-87340-**-01		
K	REV	DESCRIPTION	ANGULAR ± 3 °	APPROVED BY	DATE	DOCUMENT NO.	SHEET NO.	
			DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	YTYAP	1991/07/09	SD-87340-**-01	1 OF 2	
				MATERIAL NO.	DOCUMENT NO.			
				SEE TABLE	SD-87340-**-01			
				THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION				

10 9 8 7 6 5 4 3 2 1

PART NO. IN TUBE	PART NO. TAPE/REEL	CKT SIZE	Ao	Bo	F	W	Ko
87340-1014	87340-1019	10	6.70	10.40	11.50	24.00	5.30
87340-1613	87340-1618	16	6.60	16.30	11.50	24.00	4.40



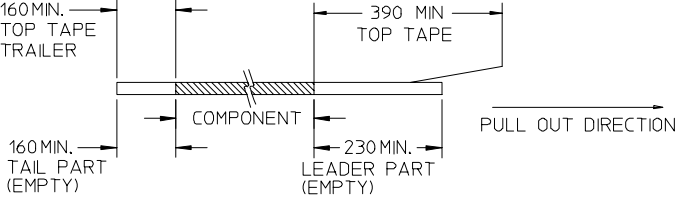
EMBOSSD CARRIER TAPE WITH DIMENSIONS



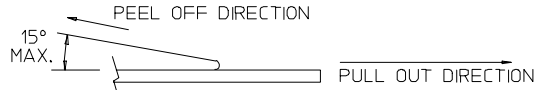
TAPE AND REEL ASSEMBLY SHOWN IS FOR ILLUSTRATION ONLY.

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.

4. NO FIX ORIENTATION OF ASSEMBLY PART IN T&R.

5. TAPE & REEL QUANTITY : 1000 PCS / REEL

OBS TIN/LEAD P/N	2006/04/03	QUALITY SYMBOLS
EC NO: S2006-0732	2006/04/04	▽=0
DRWN:MLONG	2006/04/04	▽=0
CHKD:NAGESHKN	2006/04/05	
APPR:PTLIM		

REV	DESCRIPTION
K	

GENERAL TOLERANCES (UNLESS SPECIFIED)	
	MM ONLY
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
JKACHL I	1991/07/02
CHECKED BY	DATE
JNG	1991/07/09
APPROVED BY	DATE
YTYAP	1991/07/09
MATERIAL NO.	
SEE TABLE	

SCALE	DESIGN UNITS	THIRD ANGLE PROJECTION
NTS	METRIC	☉ □
TITLE		
MGRID VLPR II, 2MM DUAL ROW TOP ENTRY RECEPT., SMT		
MOLEX INCORPORATED		
DOCUMENT NO.		SHEET NO.
SD-87340-**01		2 OF 2
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