Jameco Part Number 803313

PRODUCT SPECIFICATION
PS-87264

TITLE : "MILLI-GRID" 2mm DUAL ROW
SIDE-ENTRY RECEPTACLES

A	REVISED AND RELEASED PER ECN# S2-599	MAX	920610
3	ADD 87368-**** TO SPEC PER ECN #S2-494	MAX	920414
2	REVISED PER ECN #S1-619	JDK	910502
1	X-RELEASED PER ECN #S1-385	JDK	910206
LT	REVISION RECORD	BY	DATE

Prepared By :	Approved By :	Product Specification	No. of Pages	Rev
J.KACHLIC 910204	92/7/1	"MILLI-GRID" 2mm DUAL ROW SIDE-ENTRY RECEPTACLES	6	A

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1.0 SCOPE

This specification covers the performance requirement for Milli-Grid 2mm Dual Row Side-Entry Receptacles.

2.0 PRODUCT DESCRIPTION

The Milli-Grid 2mm Dual Row Side-Entry Receptacles include the P.C. board Through Hole version 87264, and the P.C. board Surface Mount version 87368. They are board-in connectors that are intended to mate with Milli-Grid Headers for inter-connections.

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 Nylon 46, UL 94V-0
Color - Black

4.2 Terminal - 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

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6.0 PERFORMANCE SPECIFICATIONS

6.1 Electrical Performance

ITEM	TEST CONDITION	REQUIREMENT
Contact Resistance	Per MIL-STD-1344A method 3004.1	15 milliohms Max.
Insulation Resistance	500 VDC applied for 1 minute per MIL-STD-1344A method 3003.1	1000 Megaohms Min.
Dielectric Strength	500 Vrms for 1 minute between adjacent terminals	No Breakdown
Capacitance	Measure between adjacent terminals at 1 MHz	2.0 pf Max.

6.2 Mechanical Performance

ITEM	TEST CONDITION	REQUIREMENT
Individual Contact Insertion Forces	Insert a maximum gage pin at a rate of 12 +/- 5 cm/min	180 grams Max.
Individual Contact Withdrawal Forces	Withdraw a minimum gage pin at a rate of 12 +/- 5 cm/min	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.

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6.2 Mechanical Performance cont....

ITEM	TEST CONDITION	REQUIREMENT
Vibration	Simple Harmonic Motion 0.06 inch 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

ITEM	TEST CONDITION	REQUIREMENT
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
Flowers of Sulfur	Mated connectors exposed to sulfur vapors for 17 hours at +65 +/-2 C	Contact Resistance 10 milliohms Max. change from initial

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6.3 Environmental Performance cont....

ITEM	TEST CONDITION	REQUIREMENT
Salt Spray	Mated connectors exposed to 5% concentration 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
Current Cycling	Apply 1 amp DC to mated connectors over a cycle of 45 minutes ON and 15 minutes OFF for 48 hours	Contact Resistance 10 milliohms Max. change from initial
Temperature Rise	Apply 1.0 amps DC to mated connectors and measure contact temperature rise for 48 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.

ORIGINAL
03 JUL 1992
molex DOCUMENT CONTROL

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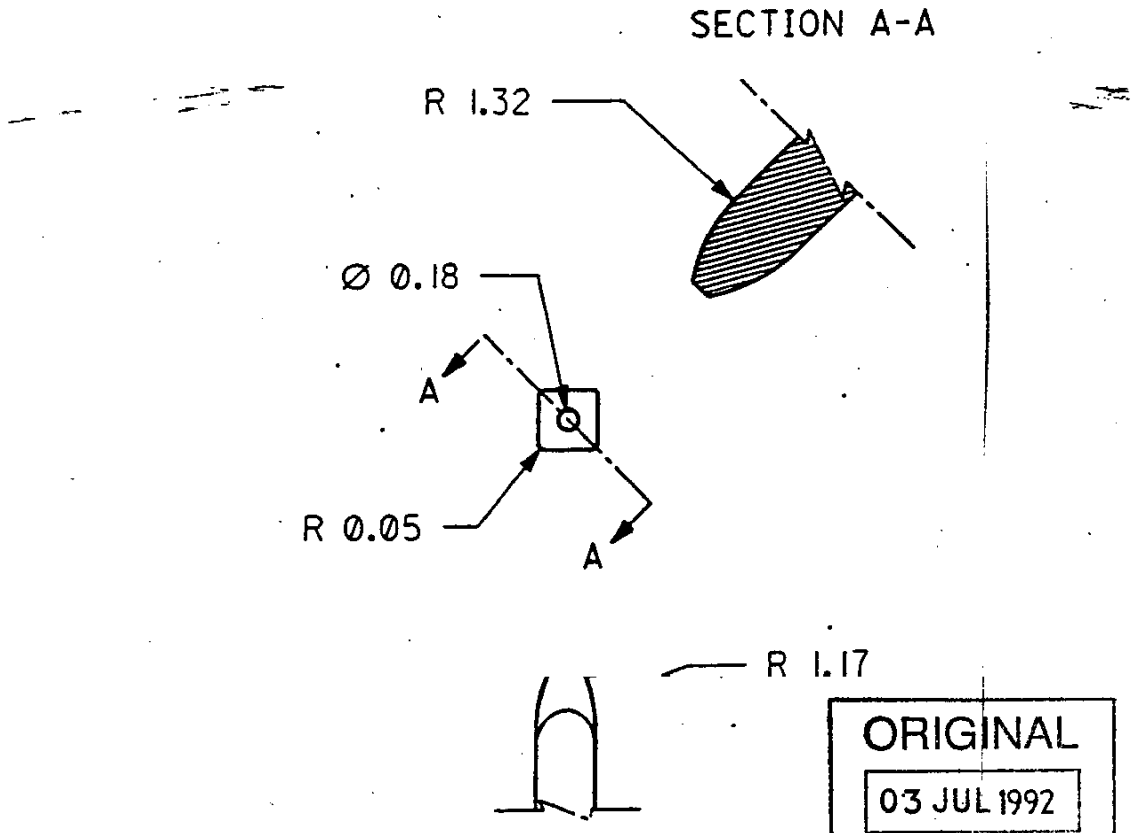
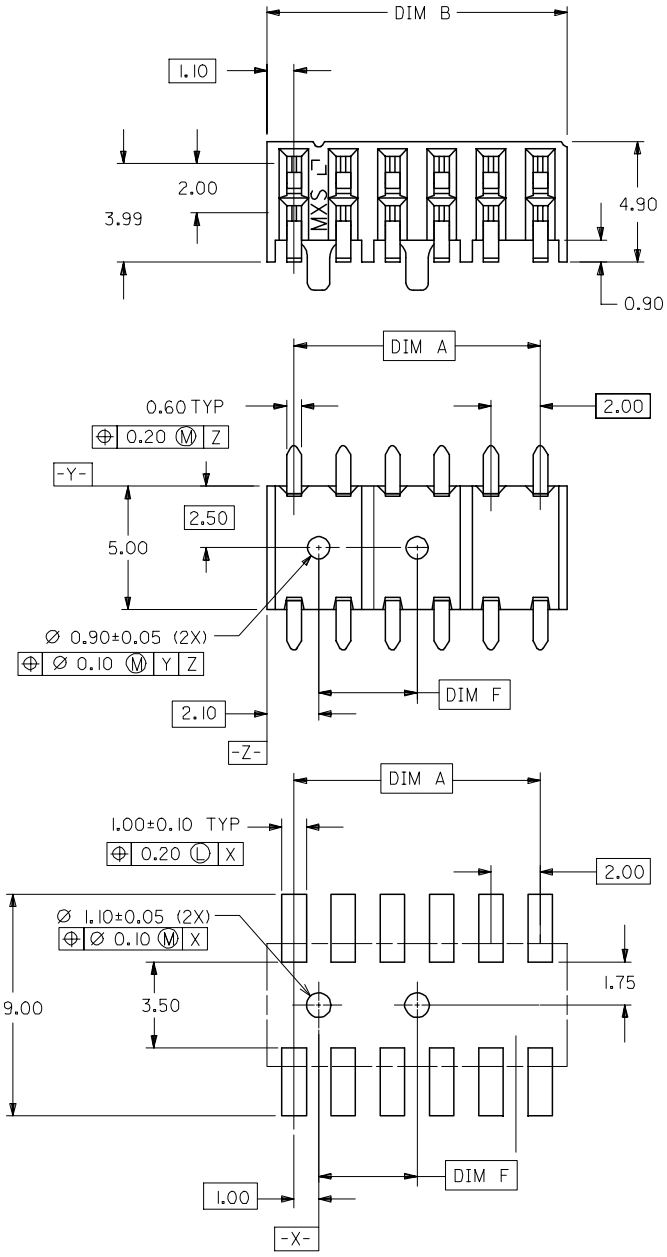
8.0 GAGES

Individual Contact Insertion and Withdrawal Test to be performed using steel gage pins to simulate the minimum and maximum mating pin dimensions. The size of these gage pins are as follows:

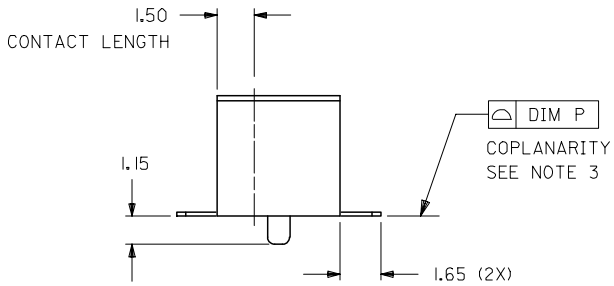
Minimum Pin Size = 0.48 +/- 0.005 mm
Maximum Pin Size = 0.52 +/- 0.005 mm

Recommended Pin Configuration





RECOMMENDED P.C. BOARD LAYOUT



PART NUMBER	CKT. SIZE	DIM A	DIM B	DIM F	DIM P
87368-082*	8	6.00	8.20	4.00	0.10
87368-102*	10	8.00	10.20	4.00	0.10
87368-122*	12	10.00	12.20	4.00	0.13
87368-142*	14	12.00	14.20	6.00	0.13
87368-162*	16	14.00	16.20	8.00	0.13
87368-182*	18	16.00	18.20	10.00	0.13
87368-202*	20	18.00	20.20	12.00	0.13
87368-222*	22	20.00	22.20	14.00	0.13
87368-242*	24	22.00	24.20	16.00	0.15
87368-262*	26	24.00	26.20	18.00	0.15
87368-282*	28	26.00	28.20	20.00	0.15
87368-302*	30	28.00	30.20	22.00	0.15
87368-322*	32	30.00	32.20	24.00	0.15
87368-342*	34	32.00	34.20	26.00	0.15
87368-362*	36	34.00	36.20	28.00	0.15
87368-382*	38	36.00	38.20	30.00	0.15
87368-402*	40	38.00	40.20	32.00	0.15
87368-422*	42	40.00	42.20	34.00	0.15
87368-442*	44	42.00	44.20	36.00	0.15
87368-462*	46	44.00	46.20	38.00	0.15
87368-482*	48	46.00	48.20	40.00	0.15
87368-502*	50	48.00	50.20	42.00	0.15

NOTE:

1) 12 CIRCUIT SIZE SHOWN FOR ILLUSTRATION ONLY. SEE CHART FOR AVAILABLE PART SIZES.

2) PLATING FINISH:
   4 - 0.38um/15uin MIN. GOLD IN CONTACT AREA
   2.54um/100uin MIN. TIN IN SOLDER TAIL AREA
   BOTH OVER 1.27um/50uin MIN. NICKEL OVERALL
   5 - 0.76um/30uin MIN. GOLD IN CONTACT AREA
   2.54um/100uin MIN. TIN IN SOLDER TAIL AREA
   BOTH OVER 1.27um/50uin MIN. NICKEL OVERALL

3) COPLANARITY OF SOLDER TAIL IS TO BE MEASURED BY RESTING THE PART ON A FLAT GAUGE SURFACE.

4) RECOMMENDED PC BOARD THICKNESS IS 1.60 ± 0.10mm.

5) PRODUCT SPECIFICATION PS-87264 APPLIES.

6) PART MATEABLE TO ALL MILLI-GRID HEADERS WITH MATING PIN LENGTH BETWEEN 2.50mm AND 4.20mm

PART NO. LEGEND

87368 - * * 2 *

CKT SIZE

PLATING

4
5 (SEE NOTE 2)

OBS TIN/LEAD P/N
EC NO: S2006-0732 2006/04/03
DRWN:MLONG 2006/04/04
CHKD:NAGESHKN 2006/04/05
APPR:PTLIM
DESCRIPTION
REV

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
SCALE: NTS
DESIGN UNITS: METRIC
THIRD ANGLE PROJECTION

DRAWN BY: JACK DATE: 1992/06/12
CHECKED BY: TAY DATE: 1992/09/24
APPROVED BY: ROY DATE: 1992/09/25

TITLE: MGRID 2MM DUAL ROW SIDE ENTRY RECEPT., SMT

MOLEX INCORPORATED

MATERIAL NO.: SEE TABLE
DOCUMENT NO.: SD-87368-**20
SHEET NO.: 1 OF 1

SIZE A3