



PRODUCT SPECIFICATION



LANGUAGE

ENGLISH

1.0 SCOPE

This specification covers the performance requirement for MilliGrid 2mm Dual Row Top Entry Receptacle.

2.0 PRODUCT DESCRIPTION

2.1 The MilliGrid 2mm Dual Row Top Entry Receptacle is a 2.00mm by 2.00mm grid board in receptacle designed to mate with MilliGrid Headers for inter-connections.

2.2 The part number series with suffixes "****" designating product versions covered in this specification are as follow:

Part Number Series

87380
87381

3.0 APPLICABLE DOCUMENT

The following documents formed 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 Components Parts
MIL-STD-1344 Test Methods for Electrical Connectors

4.0 MATERIALS

4.1 Housing - See Sales Drawings

4.2 Contact - Phosphor Bronze (see product sales drawings for available plating options)

REVISE ON PC ONLY		TITLE		MGRID 2MM DUAL ROW TOP ENTRY RECEPTACLE	
F1	RELEASE AS PER ECN S2000-0333	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION			
	DESCRIPTION				
DOCUMENT NO.		FILE NAME		SHEET	
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4.3 Anti-Flux Treatment - Hi-Coat SIF-200
(see Appendix A for details and product sales drawings for options)

5.0 RATINGS

5.1 Current : 1.9 Amps

5.2 Voltage : 125 V

5.3 Temperature Range: -55 to +105 degC

6.0 PERFORMANCE SPECIFICATIONS

6.1 Electrical Performance

ITEM	TEST CONDITION	REQUIREMENTS
Contact Resistance	Per MIL-STD-1344A Method 3004.1	15 milliohmsmax
Insulation Resistance	500 VDC applied for 1 minute between adjacent terminals	1000 Megaohms min
Dielectric Strength	1000 VAC rms for 1 minute between adjacent terminals	No Breakdown
Capacitance	Measure between adjacent terminals at 1 MHz	1.0 pf max

6.2 Mechanical Performance (Cont)

ITEM	TEST CONDITION	REQUIREMENTS
Individual Contact Insertion Forces	Insert a 0.50mm square pin at a rate of 12 +/- 5 cm/min	180 grams max
Individual Contact Withdrawal Forces	Withdraw a 0.50mm square pin at a rate of 12 +/- 5 cm/min	20 grams min

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Contact Normal Force	Apply a load normal to the point of contact of the terminal	50 grams min @ deflection of 0.06mm
Terminal Retention in Housing	Apply an axial load to dislodge terminal from housing	1.21 lbf min
Durability	Mate connectors 25 times at a maximum rate of 10 cycles/min	Contact resistance 10 milliohmsmax 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 milliohmsmax change from initial
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	Discontinuity 1 micro-second max

6.3 Environmental Performance (Cont)

ITEM	TEST CONDITION	REQUIREMENTS
Thermal Shock	Mated connectors expose for 5 cycles: Temperature Duration -55 +0/-5 degC 30 mins +105 +3/-0 degC 30 mins	No damage in appearance Contact resistance 10 milliohmsmax change from initial
Thermal Ageing	Mated connectors expose at 105 +/- 2 degC for 96 hours	No damage in appearance Contact resistance 10 milliohmsmax change from initial

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Cyclic Humidity	Mated connectors expose to temperature cycle between +25 +/- 2 degC to +65 +/- degC at 90% to 98% RH for 240 hours per MIL-STD-1344A Method 1002.2 Type II except Step 7	No damage in appearance Contact resistance 10 milliohmsmax change from initial
Salt Spray	Mated connectors exposed to 5% concentration sodium chloride solution at 35 +/- 2 degC for 96 hours per MIL-STD-202F Method 101D Condition A	Contact resistance 10 milliohmsmax change from initial
Flower of Sulphur	Mated connectors exposed to sulphur vapours for 17 hours at +65 +/- 2 degC	Contact resistance 10 milliohmsmax change from initial
Temperature Rise	Apply 1.0 Amps DC to mate connectors and measure contact temperature rise for 96 hours	+30 degC max temperature rise over ambient
Solderability	Soldertail 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 Hear	Solder tail to be dipped in flux as per MIL-STD-202F Method 201A Condition B	No damage in appearance of connector
Resistance to IR Heat	Subject connector to the IR Reflow Temperature of 260 +/- 5 degC for 12 +/- 2 sec	No damage in appearance of connector

7.0 Packaging

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

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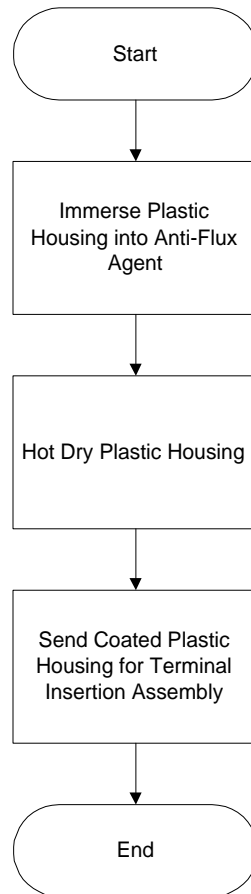


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Appendix A

As an optional feature (see Product Sales Drawing), an anti-flux wicking fluid can be applied to the plastic housing in the following process flow:



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