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0679130002

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molex	**PRODUCT SPECIFICATION**	LANGUAGE: ENGLISH

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REVISE ON PC ONLY

REV	DESCRIPTION
A	**PDR MXT-TM0008**

TITLE: **SD/IO MEMORY CARD CONNECTOR FOR CARD HEADER WITH EJECTOR MECHANISM & LEAD FREE**

DESIGN CONTROL	STATUS	WRITTEN BY:	CHECKED BY:	APPROVED BY:	DATE: YR / MO / DAY
MXT	M	MAX CHANG	WILSON	ERICK	2003/08/05

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PS-67913-002	C CRITICAL = 0 ▼ MAJOR =0	PS-67913-002 .PDF	1 oF 8

molex	PRODUCT SPECIFICATION	molex

LANGUAGE: ENGLISH

1.0 SCOPE

This specification covers the SD MEMORY CONNECTOR series.

2.0 APPLICABLE DOCUMENTS

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

3.0 MATERIAL SPECIFICATIONS

3.1 Design and Construction

Connector shall be of the design, construction and physical dimensions specified on the applicable sales drawing

3.2 Materials

Refer to respective sales and Engineering drawings

4.0 RATINGS

4.1 Voltage

100 Volts DC per contact for Header
3.6 Volts DC per contact for Card

4.2 Current

0.5 Amps per contact

5.0 Performance and Test Description

Connector shall be designed to meet the electrical, mechanical and environmental performance requirements specified in 5.0

GENERAL REQUIREMENTS

Operating Temperature Range: -25 °C to +90 °C
Storage Temperature Range: -40 °C to +90 °C

ELECTRICAL

Item	Test Condition	Requirement
Contact Resistance	Mated dummy card dry circuit measurement, 20mV Max. 10mA Max.	**100** milliohm Maximum initial & After test Including: Connector contacts Detection switch
Insulation Resistance	Apply 500V DC between adjacent terminals or ground (base upon MIL-STD-202 method 302)	**1000** Megohms Minimum initial **100** Megohms Minimum After test
Withstanding Voltage	Apply 500 V AC for 1 min. between adjacent terminals or ground (base upon MIL-STD-202 method 301)	No breakdown

MECHANICAL

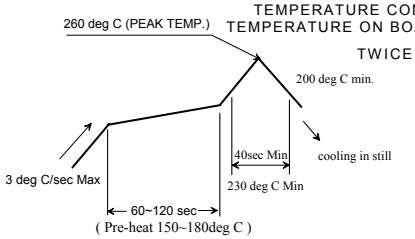
Item	Test Condition	Requirement
Push in strength	The card is inserted in positive and the opposite direction and the load of 19.6 (2 kgf) is added with 1 minute and repeated 5 times.	Appearance : No Damage
Card Insertion force	Push the card at the speed rate of 25 +/-3mm/minute on card pushing position.	Insertion force:15N Max (1.5 kgf Max.)
Card Retention Force	Pull out the card directly at the speed rate of 25 +/-3mm/minute on card lock position.	Withdrawal force: 4 N Min. (0.4kgf Min.)
Terminal Normal Force	Apply axial push-out force at the speed of 25 +/-3 mm/min.	0.2 N Min. Per Pin (0.02 kgf Min. per pin)
Durability (Push in/ push out)	Insertion and extraction are repeated 10,000 cycles with the actually card at the speed rate of 400-600 cycles/hour. Exchange the actually card every 2000 cycles.	Appearance :No damage Contact Resistance: 100 milliohm Max. measuring by dummy card

ENVIRONMENTAL

Item	Test Condition	Requirement
Vibration	Mate dummy card and sbject to the following vibration conditions, for a period of 2 hours in each of 3 mutually perpendicular axis, passing DC 1mA during the test. Amplitude : 1.52mm P-P Frequency : 10-55-10 Hz shall be traversed in 1 minute. (MIL-STD-202 Method 201)	Appearance : No damage. Contact resistance: 100 milliohms MAX. Discontinuity: 1 microsecond MAX.
Shock	Mate dummy card and subject to the following shock conditions. 3 shocks shall be applied along 3 mutually perpendicular axis, passing DC 1mA current during the test. (Total of 18 shocks) Test Pulse: Half Sine. Peak Value : 490m/s^2 Duration : 11ms (MIL-STD-202 Method 213,)	Appearance : No damage. Contact resistance: 100 milliohms MAX. Discontinuity: 1 microsecond MAX.
Moisture Resistance	Matedummy card and subject to the conditions specified on per.(6) for 9 cycles. The test specimens shall exposed to step 7a during only 5 out of 9 cycles. A 10th cycles consisting of only step 1 through 6 is then performed, after which the test specimens shall be conditioned at ambient room conditions for 24 hours. (MIL-STD-202 Method 106)	Appearance : No damage Contact resistance: 100 milliohms MAX. Dielectric strength : Must meet electrical requirement. Insulation resistance : 100 Megohms Minimum.
Solderability	Dip solder tails into the molten solder (held at 230 +5ºC/-5ºC) up to 0.5mm from the tip of tail for 3+/-0.5sec.	Solder coverage : 95% Min.
Temperature Rise	Mated with dummy card measure the temperature rise at the rated current after 96 hours	Temperature rise **30**ºC Maximum

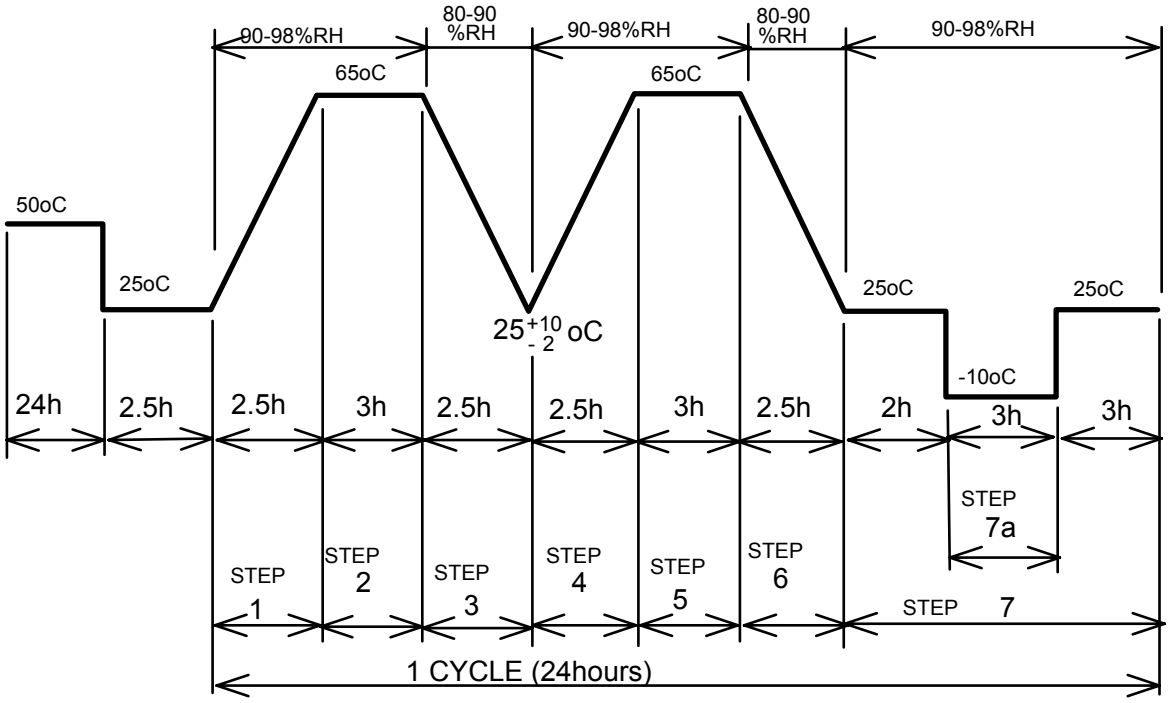
Item	Test Condition	Requirement
Temperature cycling	Mate connector and subject to the following conditions for 5 cycles. Upon completions of the exposure period, the test specimens shall be conditions at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed. 1 cycle a) -55 + 5º/- 5ºC 30min. b) +85 +2º/- 2ºC 30min. Trainsit tie shall be within 3 min.	Appearance : No damage Contact resistance : 100 milliohm MAX.
Heat Resistance	Mate connector and exposed to 85 ºC +2º /-2ºC for 96 hours. Upon completions of the exposure period, the test specimens shall be conditions at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed (MIL-STD-202 Method 108)	Appearance : No damage. Contact resistance : 100 milliohm MAX.
Cold Resistance	Mate connector and exposed to -40ºC +2º/-2ºC for 96 hours. Upon completion of the exposure period, the test specimens shall be conditions at ambient room conditions for 1 to 2 hours, after which the specified measurements shall be performed (MIL-STD-202 Method 108)	Appearance : No damage. Contact resistance : 100 milliohm MAX.
Salt spray	Mate connector and exposed to the following salt mist conditions. Upon completion of the exposure period, salt deposites shall be removed by a gentle wash or dip in running water, after which the specified measurements shall be performed NaCL solution concentration : 5+/- 1% Spray time : 48 hours Ambient temperature : 35 +2ºC/-2 ºC. (MIL-STD-1344)	Appearance : No damage. Contact resistance : 100 milliohm MAX.
SO_2 Gas	Mate dummy card and expose to 50+/-5 ppm SO_2 gas, anbient temperature 40+/- 2ºC, relative humidity 75 %for 24 hours.	Appearance : No damage. Contact resistance : 100 milliohm MAX.

6.0 INFRARED RELOLW CONDITIONS

Item	Test Condition	Requirement
Resistance to soldering Heat	(INFRARED SOLDERING CONDITION)  (NOTE) 1. Please check the reflow soldering condition by your own devices beforehand 2. Thickness of the cream solder shall be maintained 0.12mm MIN. After reflow process. Because the condition changes by the soldering devices, P.C.Boards, and so on.	Appearance: No Damage . After 2 times of reflow

7.0 MOISTURE RESISTANCE CONDITIONS

MIL-STD-202 METHOD 106



8.0 APPLICATION NOTES

8.1 washing after soldering

Please wash only the soldering part partially when washing after this item is soldered when a whole soaking etc. are. washed, the insertion and extraction of the card might become difficult.