



PRODUCT SPECIFICATION



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

Table with 4 columns: REVISE ON PC ONLY, TITLE, DIMENSION CLASS, FILE NAME, SHEET. Includes revision history (A, REV), title 'SD MEMORY CARD CONNECTOR FOR CARD HEADER WITH EJECTOR MECHANISM', dimension class 'CRITICAL = 0 MAJOR = 0', file name 'PS-67913-002.PDF', and sheet number '2'.



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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 |

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| | REVISE ON PC ONLY | | TITLE SD MEMORY CARD CONNECTOR FOR CARD HEADER WITH EJECTOR MECHANISM | |
| | A | SEE SHEET 1 | | THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION |
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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 |

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ENVIRONMENTAL

| Item | Test Condition | Requirement |
|---------------------|---|---|
| Vibration | Mate dummy card and subject 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 +5°C/-5°C) 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°C Maximum |

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| 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 + 5°/- 5°C 30min. b) +85 +2°/- 2°C 30min. Transit tie shall be within 3 min. | Appearance : No damage Contact resistance : 100 milliohm MAX. |
| Heat Resistance | Mate connector and exposed to 85 °C +2°/-2°C 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 -40°C +2°/-2°C 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 deposits 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 +2°C/-2 °C. (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, ambient temperature 40+/- 2°C, relative humidity 75 %for 24 hours. | Appearance : No damage. Contact resistance : 100 milliohm MAX. |

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6.0 INFRARED RELOLW CONDITIONS

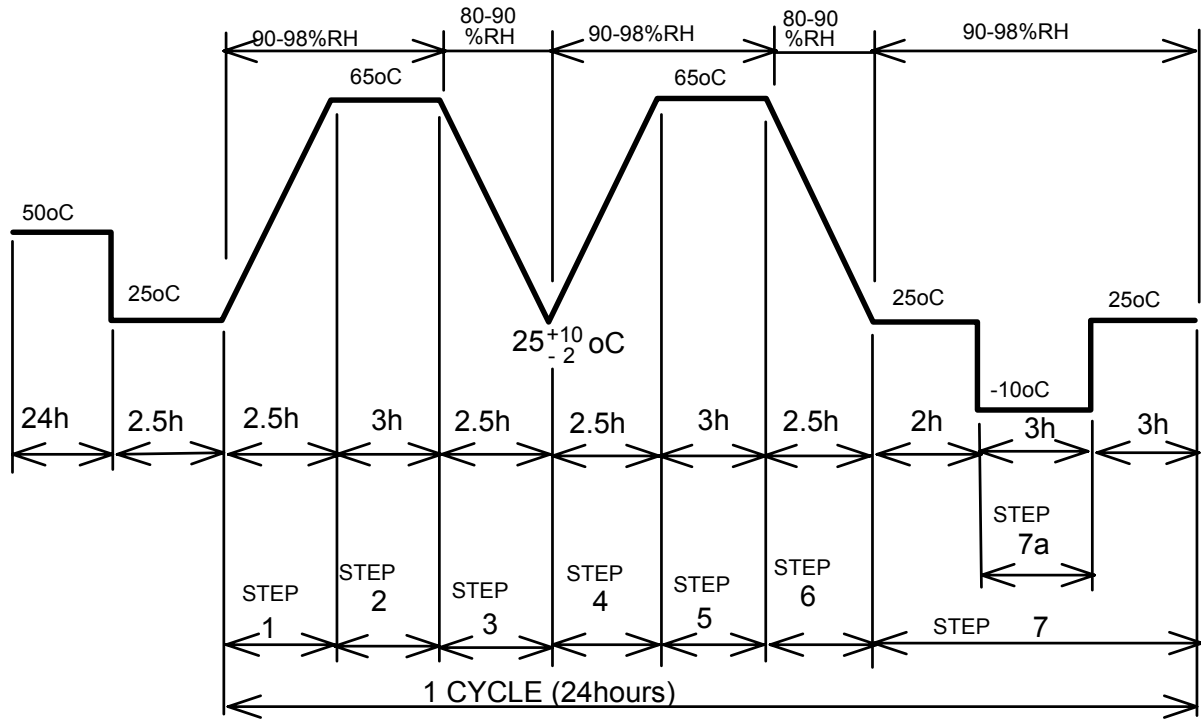
| Item | Test Condition | Requirement |
|------------------------------|---|--|
| Resistance to soldering Heat | <p>(INFRARED SOLDERING CONDITION)</p> <p>TEMPERATURE CONDITION GRAPH TEMPERATURE ON BOARD PATTERN SIDE TWICE</p> <p>(NOTE)</p> <ol style="list-style-type: none"> 1. Please check the reflow 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 |

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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.

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