



LANGUAGE ENGLISH

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#### 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

250 Volts DC per contact

#### 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

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## **ELECTRICAL**

Item	Test Condition	Requirement
Contact Resistance	Mated dummy card dry circuit measurement, 20mV Max. 10mA Max.	100 milliohm Maximum After test
Insulation Resistance	Apply 500V DC between adjacent terminals or ground (base upon MIL-STD-202 method 302)	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
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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## **MECHANICAL**

Item	Test Condition	Requirement
Push in strengh	The card is inserted in positive and the opposite direction and the load of 30N (2.94 kgf) is added with 1 minute and repeated 5 times.	Appearance : No Damage
Connector Mating and Unmating Forces	Push the card at the speed rate of 25 +/-3mm/minute	Mating force:40 N Max (4 kgf Max.) Unmating force: 2 N Min. (0.2 kgf 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 per pin Min.)
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 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 connector 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 Pules: Half Sine. Peak Value: 490m/s² Duration: 11ms (MIL-STD-202 Method 213,)	Appearance : No damage.  Contact resistance: 100 milliohms MAX.  Discontinuity: 1 microsecond MAX.
Moisture Resistance	Mate connector 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.

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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.  Trainsit 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 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.
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 +2°C/-2°C. (MIL-STD-1344)	Appearance : No damage.  Contact resistance : 100 milliohm MAX.

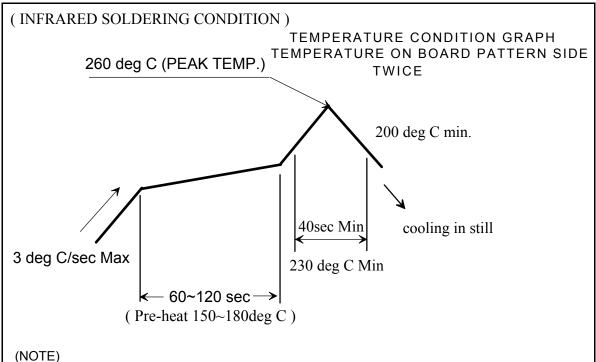
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#### INFRARED RELOLW CONDITIONS



- 1. Please check the reflow soldering condition by your own devices beforehand Because the condition changes by the soldering devices, P.C.Boards, and so on.
- 2. Thickness of the cream solder shall be maintained 0.12mm MIN. After reflow process.

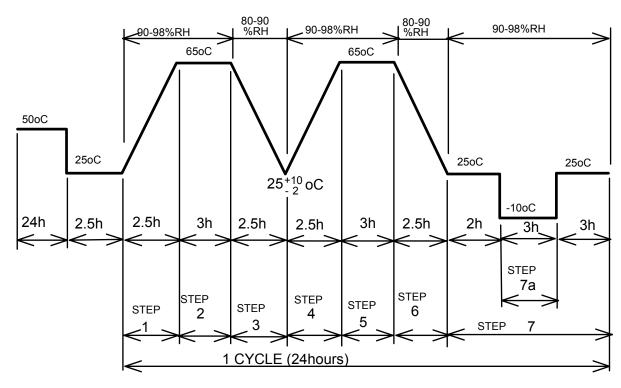
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## 7.0 MOISTURE RESISTANCE CONDITIONS



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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