SmartMedia™

SmartMedia™ Physical Specifications

Web-Online Version 1.00

Issued: May 19, 1999

SSFDC Forum Technical Committee

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Revision History

Version			Date
1.00	Web-Online Version	Formal release	May, 1999

Contents

0. Application

This document describes the physical specifications for SmartMedia™ (SSFDC or Solid State Floppy Disk Card) defined by the SSFDC Forum.

The reference values provided represent the most indispensable properties.
The Products must meet these specification.

1. Card Configuration

1.1. Parts Names

1) Electrodes (contact board)
2) Notches
3) Base card
4) Write-protect seal affixing location (optional)

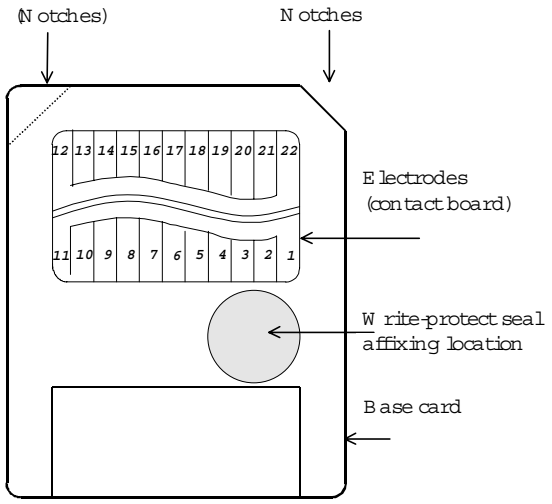


Fig. 1-1 Parts Names

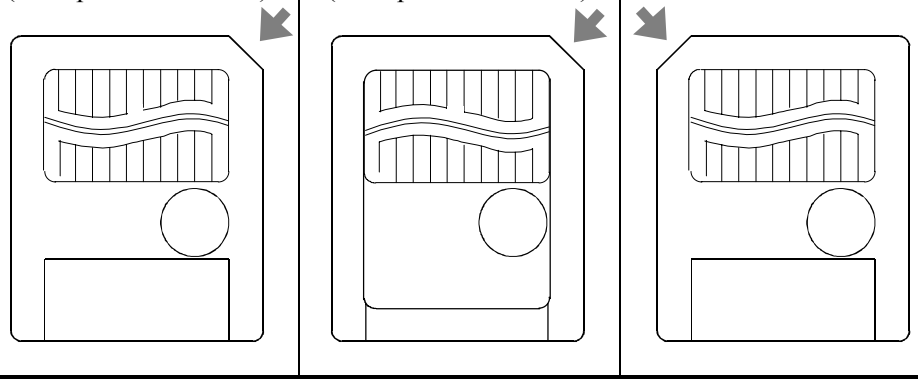
1.2. Shape and Dimensions

Regardless of the type and memory capacity, all SmartMedia™ cards have the same shape, except that the location of the notch varies depending on the operating voltage (Table 1-1).

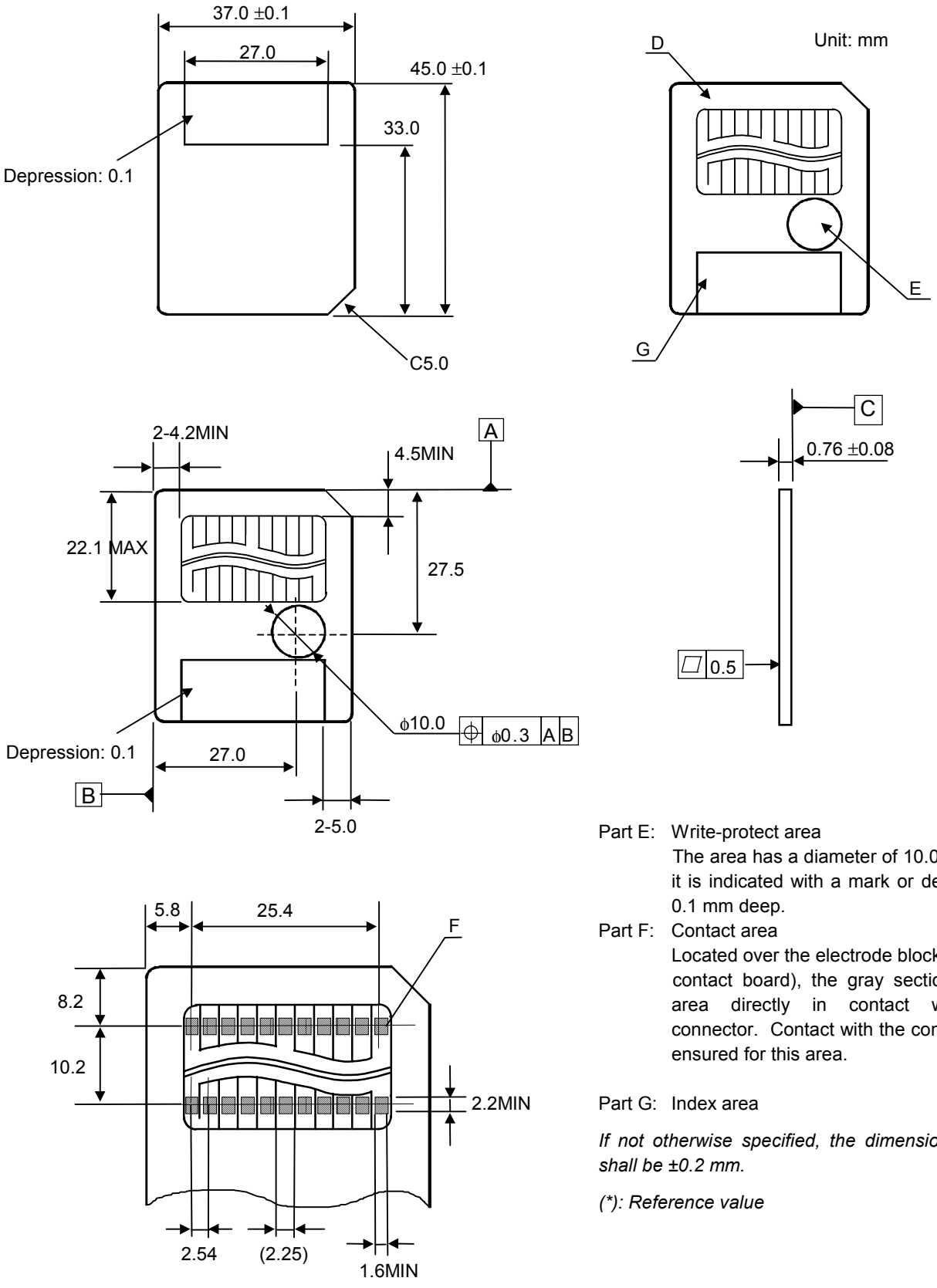
- 3.3V card : With the electrode plane facing upward, the notch is located at the top right.
- 5V card : With the electrode plane facing upward, the notch is located at the top left.

Table 1-1 Relationship between power source voltages and notch positions

Operating voltage	3.3 V Model		5 V Model
Package	(1Chip SmartMedia™)	(2Chip SmartMedia™)	



1.2.1. 3.3 V Card Configuration (1Chip SmartMedia™)



Part E: Write-protect area
The area has a diameter of 10.0 mm and it is indicated with a mark or depression 0.1 mm deep.

Part F: Contact area
Located over the electrode block (the contact board), the gray section is the area directly in contact with the connector. Contact with the connector is ensured for this area.

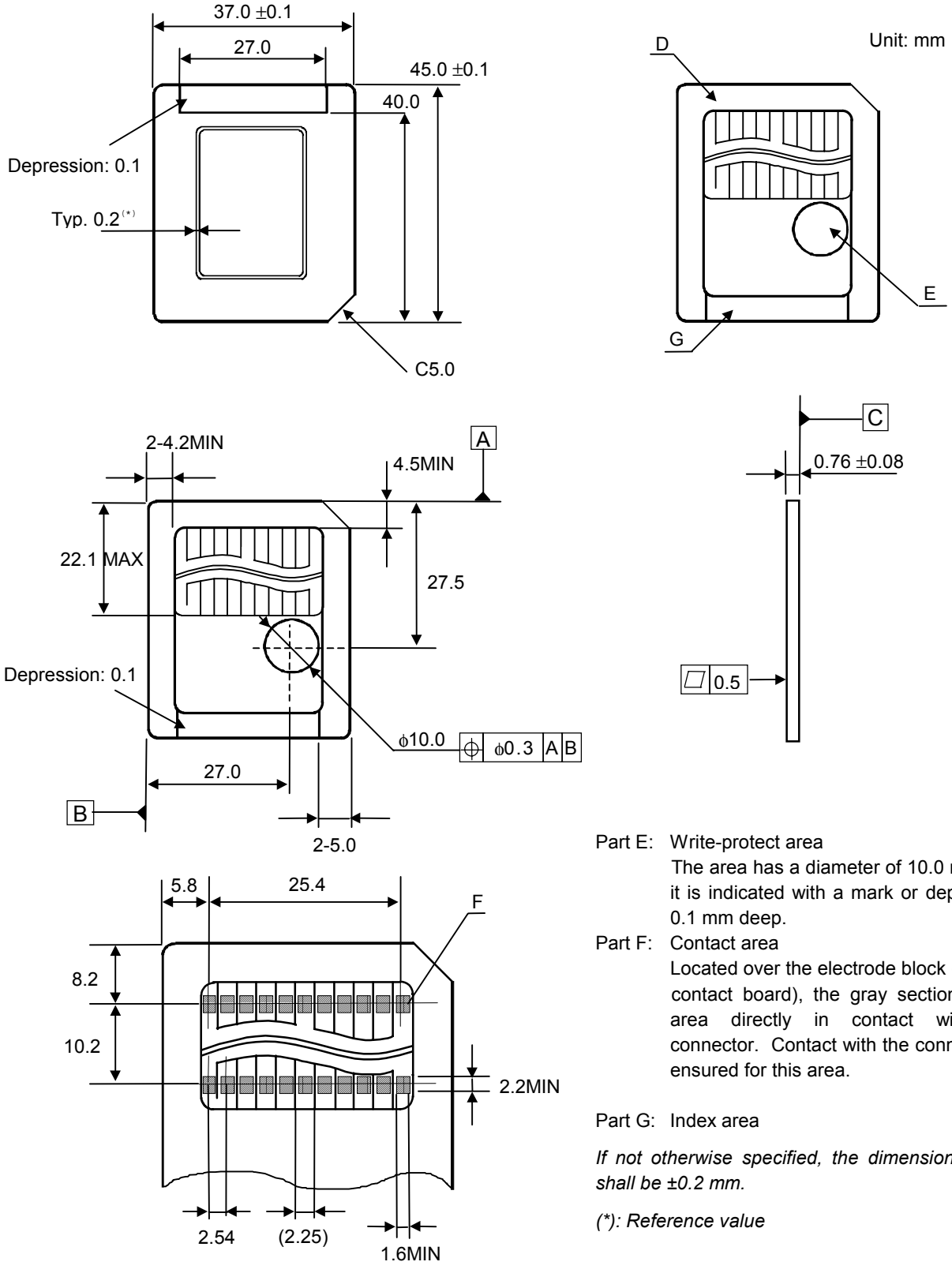
Part G: Index area

If not otherwise specified, the dimensional error shall be ±0.2 mm.

(*): Reference value

Fig. 1-2 3.3 V Card Configuration (1Chip SmartMedia™)

1.2.2. 3.3 V Card Configuration (2Chip SmartMedia™)



Part E: Write-protect area
The area has a diameter of 10.0 mm and it is indicated with a mark or depression 0.1 mm deep.

Part F: Contact area
Located over the electrode block (the contact board), the gray section is the area directly in contact with the connector. Contact with the connector is ensured for this area.

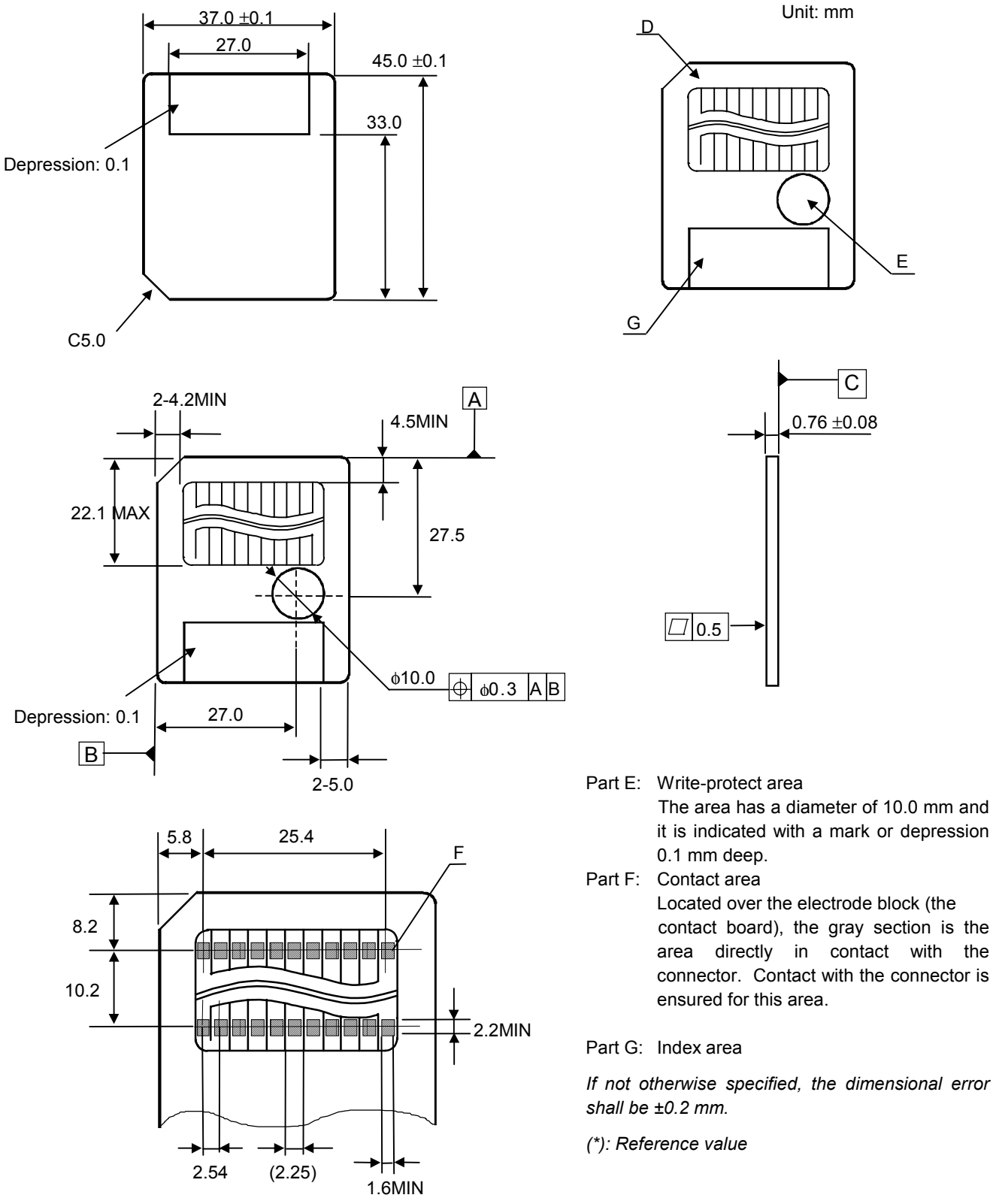
Part G: Index area

If not otherwise specified, the dimensional error shall be ±0.2 mm.

(*): Reference value

Fig. 1-3 3.3 V Card Configuration (2Chip SmartMedia™)

1.2.3. 5V Card Configuration



Part E: Write-protect area
The area has a diameter of 10.0 mm and it is indicated with a mark or depression 0.1 mm deep.

Part F: Contact area
Located over the electrode block (the contact board), the gray section is the area directly in contact with the connector. Contact with the connector is ensured for this area.

Part G: Index area

If not otherwise specified, the dimensional error shall be ±0.2 mm.

(*): Reference value

Fig. 1-4 5 V Card Configuration

2. Card Environmental

2.1. Environmental Performance

1) Operating Environmental

Ambient temperature 0°C to 55°C .

2) Storage Environmental

Storage temperature -20°C to 65°C .

2.2. Environmental Resistance

Table 2-1 Environmental Resistance

ITEM	TESTING
High Storage Temperature	Test Condition 65°C and 90-95% RH for 96 hours minimum, Vcc=0
Low Storage Temperature	Test Condition –20°C for 96 hours minimum, Vcc=0
High Operating Temperature	Test Condition 55°C for 96 hours minimum, Vcc=Spec.
Low Operating Temperature	Test Condition 0°C 96 hours minimum, Vcc=Spec.
Thermal Shock	Test Condition –20°C to 65°C 30 minutes / 100 Cycles, Vcc=0
Moisture Resistance	Maximum Temperature 55°C. Minimum Temperature 0°C. Repeat test for 10 cycles 90-95% RH, Vcc=Spec.
Electrostatic Discharge	IEC-1000-4-2 C=150pF, R=330Ω, Discharge ten (10) times on PAD.
X-ray Exposure	140kV @5mA Intensity 0.1Gy minimum for 1 hour minimum.
Ultraviolet Light Exposure	Wavelength 254nm, Intensity 15,000μW/cm^2 Exposure time 20 minutes

2.3. Mechanical Performance

Table 2-2 Mechanical Performance

ITEM	TESTING
Vibration and High Frequency	Peak at 147m/s^2 (15G) or amplitude of 1.52 mm, at 10Hz to 2,000Hz, 36 cycles for three(3) axes 12 cycles per axis (12hours).
Shock	Acceleration 490 m/s^2 Duration 11ms Semi-sine wave
Bend Test	Dislocation caused when a load of 11.76N(1.2kgf) is applied. The dislocation shall not exceed 3mm lengthwise and 1mm widthwise. 250 times in each of four(4) directions (30cycles per minute).
Drop test	Drop SmartMedia™ two (2) times in three(3) mutually exclusive axes for a height of 75cm onto a noncushioning, vinyl-tile surface.
Torque test	Inclination caused when a torque of 0.1568N·m(1.6kgf·cm) is applied. The inclination shall not exceed ±10° lengthwise. 1,000 times (30 times per minute)