



Memory Stick Information for Developers

Memory Stick ►► Physical Specifications

2. Physical Specifications

2.1. Outline

2.1.1. Dimensions

See the attached drawing.

2.1.2. Material Specifications

2.1.2.1. Measures to Protect Environment

Usage of the following materials is prohibited:

Toxic materials

Currently prohibited materials

Materials to be prohibited in the future

Materials causing destruction of ozone layer

Materials causing environmental pollution

2.1.2.2. Electrode

Plating specification : Au plating on the surface (plated to substrate edge)

Flammability rating : Equivalent to UL94HB

2.1.2.3. Packaging

Flammability rating : Equivalent to UL94V2

2.2. Connector

2.2.1. Requirements

Requirements shall conform to PC Card standard, Volume3, and Physical Specification.

2.2.2. Environmental Performance

2.2.2.1. Operating Environment

Ambient temperature : -20 to 60°C

Ambient humidity : Max 95% (saturated state)

2.2.2.2. Storage Environment

Storage temperature : -40 to 70°C

Storage humidity : Max 95% (saturated state)

2.2.3. Durability

2.2.3.1. Office Environment

Insertion/extraction : 12,000 cycles

In accordance with PC Card Standard (Volume 3) Physical Specification Section 8.1

2.2.3.2. Harsh Environment

Insertion/extraction : 6,000 cycles

In accordance with PC Card Standard (Volume 3) Physical Specification Section 8.2

2.2.4. Reliability

2.2.4.1. Mechanical Performance

Vibration test	: Same as the Memory Stick test standard 3.2.1.2.
Shock test	: Same as the Memory Stick test standard 3.2.1.3
Drop test	: Same as the Memory Stick test standard 3.2.1.5.
Insertion force	: 10N Max
Pulling force (holding force)	: 1N Min. 10N Max
Contact pressure	: 0.5 ± 0.2 N / 1 pin (displacement $\delta = 0.2$ mm)
Contact resistance	: 40 m Ω max. at initial state 500 m Ω or less after endurance test
Movable range of contact	: 0.9 ~ 1.1 mm from reference plane of Memory Stick body Shall not touch the outer case
Contact surface treatment	: Au plating
Others	: Shall not damage Memory Stick electrode except contact area. Self cleaning function is required for contact terminal.

2.2.5. Connector Configuration

2.2.5.1. Contact Timing

- When putting the Memory Stick in, either Pin 1(VSS) or Pin 10(VSS) shall touch the contact of connector at first. (Shown in Fig. 4.2.1.) When taking the Memory Stick out, either Pin 1 or Pin 10 shall be kept in touch with the contact of connector until it is completely pulled out.
- It is recommended that when putting the Memory Stick in, Pin 6(INS) shall touch the contact of connector at last. (Shown in Fig.4.2.1.)

2.2.5.2. Shape of Stopper

The stopper against inverted insertion shall be as specified in *a of below figure for future compatibility.

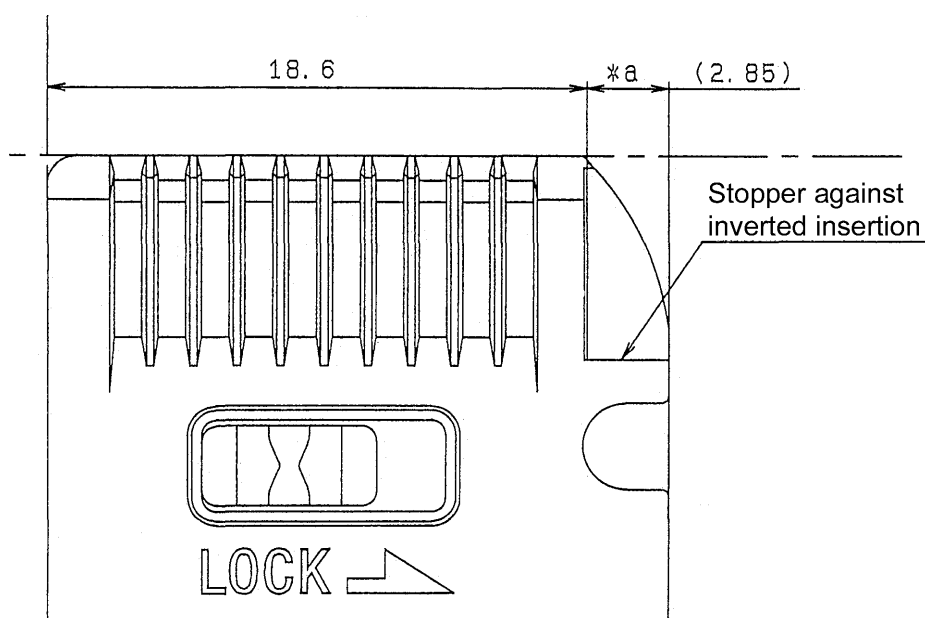


Fig. 2.2.5.2

2.2.5.3. Holding Area

The holding area of Memory Stick shall be restricted as shown in the drawing on pages 2-7 and 2-8 (hatched area). (The play shall be included.)

2.3. Option

2.3.1. Label

Material : High quality paper of 0.15mm max. in total thickness

Peel strength : Shall not be detached partly or wholly, in the storage environment.

Attached area : Within the designated area

Number of label : One piece (More than one piece shall not be attached in layers.)