**SD Memory Card Connectors**

**DM1 Series**

- **Features**
  1. **Withstands higher force of card insertion**
     Metal cover extends over the back of the connector allowing it to withstand force of up to 400N (static load) when dropped or accidentally hit. (Fig.1)
  2. **No damage to the card when accidentally pulled-out**
     The connectors will release the card when a moderate pull-out force of about 4N is applied. There will be no damage to the lock components and all connector functions will not be affected. (Fig.2)
  3. **Accidental card fall-out prevention**
     Built-in lock feature holds the card securely in place. (Fig.3)
  4. **Reliable Card Insertion and Withdrawal**
     Built-in Push-in / Push-out ejection mechanism assures simple and reliable card insertion and withdrawal.
  5. **Designed to accept Secure Digital I/O card (Built-in Ground Contact)**
     The connector allows use of various expansion modules, including the Bluetooth communication modules.

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In cases where the application will demand a high level of reliability, such as automotive, please contact a company representative for further information.

2020.3
## Product Specifications

<table>
<thead>
<tr>
<th>Item</th>
<th>Specification</th>
<th>Conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Insulation resistance</td>
<td>1000MΩ min. (Initial value)</td>
<td>500V DC / one minute</td>
</tr>
<tr>
<td>2. Withstanding voltage</td>
<td>No flashover or insulation breakdown</td>
<td>500V AC / one minute</td>
</tr>
<tr>
<td>3. Contact resistance</td>
<td>100mΩ max. (Initial value)</td>
<td>100mA DC</td>
</tr>
<tr>
<td>4. Humidity</td>
<td>Contact resistance : 40mΩ max. from initial value Insulation resistance : 100MΩ min.</td>
<td>96 hours at temperature of 40°C ± 2°C and humidity of 90% to 95%</td>
</tr>
<tr>
<td>5. Temperature cycle</td>
<td>Contact resistance : 40mΩ max. from initial value Insulation resistance : 100MΩ min.</td>
<td>Temperature : -55°C → +5°C to +35°C → +85°C → +5°C to +35°C Duration : 30 → 5 → 30 → 5 (Minutes) 5 cycles</td>
</tr>
<tr>
<td>6. Durability (mating/un-mating)</td>
<td>Contact resistance : 40mΩ max. from initial value</td>
<td>10000 cycles at 400 to 600 cycles per hour</td>
</tr>
<tr>
<td>7. Resistance to soldering heat</td>
<td>No deformation of components affecting performance.</td>
<td>Reflow : At the recommended temperature profile Manual soldering : 350°C for 3 seconds</td>
</tr>
</tbody>
</table>

Note1: Includes temperature rise caused by current flow.

Note2: The term "storage" refers to products stored for long period of time prior to mounting and use. Operating Temperature Range and Humidity range covers non-conducting condition of installed connectors in storage, shipment or during transportation.

## Materials / Finish

<table>
<thead>
<tr>
<th>Component</th>
<th>Material</th>
<th>Finish</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulator</td>
<td>Heat resistant thermoplastic compound</td>
<td>Color : Black UL94V-0</td>
<td></td>
</tr>
<tr>
<td>Contacts</td>
<td>Phosphor bronze</td>
<td>Contact area : Gold plating Termination area : Tinned copper plating</td>
<td></td>
</tr>
<tr>
<td>Cover</td>
<td>Stainless steel</td>
<td>Termination area : Tinned copper plating</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>Stainless steel Piano wire</td>
<td>Nickel plating</td>
<td></td>
</tr>
</tbody>
</table>

## Product Number Structure

Refer to the chart below when determining the product specifications from the product number.

Please select from the product numbers listed in this catalog when placing orders.

DM1 AA - SF - PEJ

- **Series name**: DM1
- **Connector type**: AA : Standard receptacle B : Reverse receptacle
- **Terminal type**: SF : Right angle surface mount DSF : Reverse right angle surface mount
- **Eject mechanism codes**: PEJ : Card Push insert/Push withdraw
### Standard type

<table>
<thead>
<tr>
<th>Part No.</th>
<th>HRS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM1AA-SF-PEJ(82)</td>
<td>609-0004-8 82</td>
</tr>
</tbody>
</table>

### PCB mounting pattern

- **Part No.:** DM1AA-SF-PEJ(82)  
  - **HRS No.:** 609-0004-8 82

### Card insertion/withdrawal dimensions

- **Card pushed-in for insertion**
- **Card fully inserted**
- **Card ejected**

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### Reverse type

<table>
<thead>
<tr>
<th>Part No.</th>
<th>HRS No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DM1B-DSF-PEJ(82)</td>
<td>609-0003-5 82</td>
</tr>
</tbody>
</table>

### PCB mounting pattern

- **CARD DETECT**
  - Common for CD & WP

- **A(5:1)**
  - 1.7 ±0.1
  - 0 (Land)
  - 1.2 ±0.1
  - 0 (Through hole)

- **B(5:1)**
  - 1.3 ±0.1
  - 0 (Through hole)
  - 1.5 ±0.1
  - 0 (Land)

- **C(5:1)**
  - 1.9 ±0.1
  - 0.1 (Land)
  - 1.2 ±0.1
  - 0 (Land)

**Center of Card dimension**

- **DM1 Series SD Memory Card Connectors**

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- **SD Card**
  - 29.9
  - 9.47±0.05
  - 12.8±0.05

- **Weight:** 2.1g
[Image of packaging specifications]

**Packaging specifications**

- **Embossed Carrier Tape Dimensions (Standard type)** 450 pcs/reel
  - [Diagram of embossed carrier tape dimensions]

- **Embossed Carrier Tape Dimensions (Reverse type)** 450 pcs/reel
  - [Diagram of embossed carrier tape dimensions]

- **Reel dimensions**
  - [Diagram of reel dimensions]

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**Recommended Temperature Profile**

**HRS test condition**

- **Solder method**: Reflow, IR/hot air
- **Environment**: Room air
- **Solder composition**: Paste, 96.5%Sn/3.0%Ag/0.5%Cu (Senju Metal Industry, Co., Ltd.'s Part Number:M705-GRN360-K2-V)
- **Test board**: Glass epoxy 60mm×100mm×1.0mm thick
- **Metal mask**: 0.15mm thick
- **Number of reflow cycles**: 2cycles max.

The temperature profiles shown are based on the above conditions. In individual applications the actual temperature may vary, depending on solder paste type, volume / thickness and board size / thickness. Consult your solder paste and equipment manufacturer for specific recommendations.