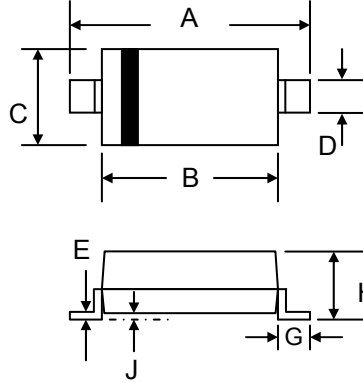


### Features

- Silicon Epitaxial Planar Die Construction
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0



| SOD-123              |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 3.60 | 3.90 |
| B                    | 2.50 | 2.80 |
| C                    | 1.40 | 1.80 |
| D                    | 0.50 | 0.70 |
| E                    | —    | 0.20 |
| G                    | 0.25 | —    |
| H                    | 0.95 | 1.35 |
| J                    | —    | 0.12 |
| All Dimensions in mm |      |      |

### Mechanical Data

- Case: SOD-123, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.01 grams (approx.)
- Marking: JS
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**

### Maximum Ratings @T<sub>A</sub>=25°C unless otherwise specified

| Characteristic                                                                         | Symbol                                                 | Value       | Unit |
|----------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 250         | V    |
| Forward Continuous Current                                                             | I <sub>F</sub>                                         | 200         | mA   |
| Non-Repetitive Peak Forward Surge Current                                              | I <sub>FSM</sub>                                       | 625         | mA   |
| Operating and Storage Temperature Range                                                | T <sub>J</sub> , T <sub>STG</sub>                      | -55 to +150 | °C   |

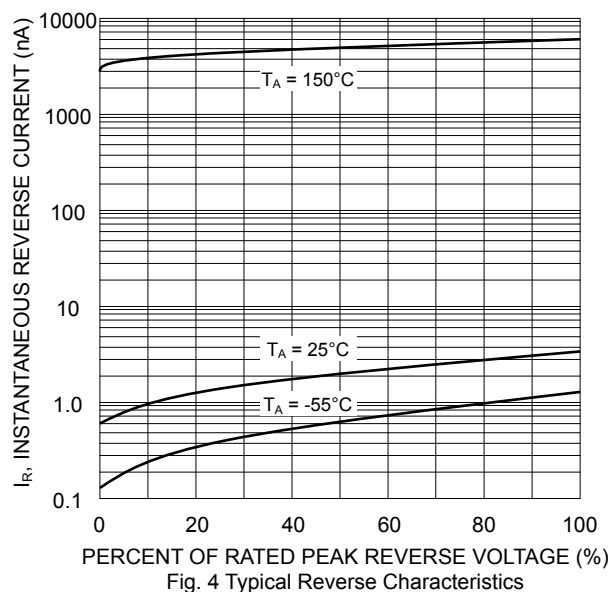
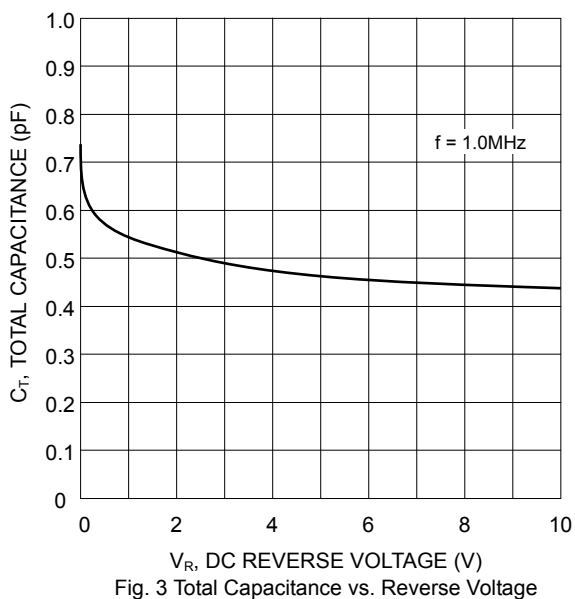
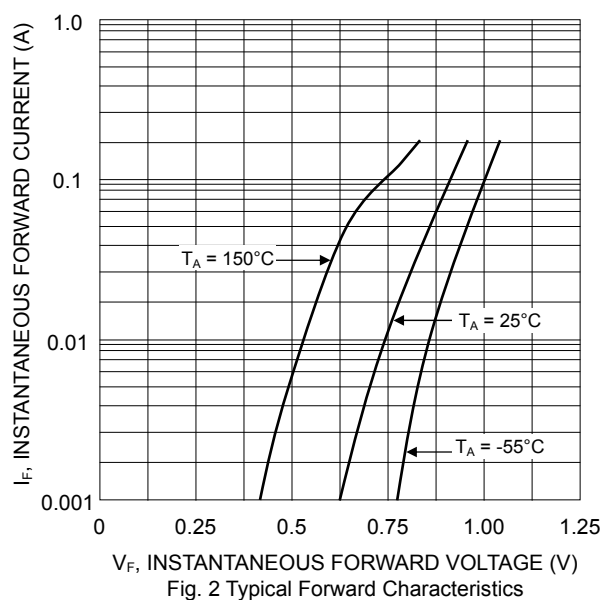
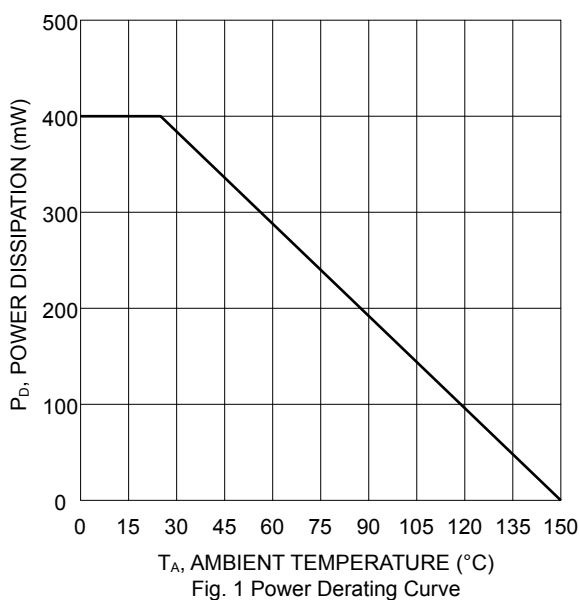
### Thermal Characteristics

| Characteristic                                   | Symbol           | Value | Unit |
|--------------------------------------------------|------------------|-------|------|
| Power Dissipation (Note 1)                       | P <sub>D</sub>   | 400   | mW   |
| Thermal Resistance, Junction to Ambient (Note 1) | R <sub>θJA</sub> | 492   | °C/W |
| Thermal Resistance, Junction to Lead (Note 1)    | R <sub>θJL</sub> | 174   |      |

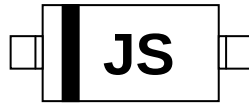
Note: 1. Mounted on FR-5 PC board with 25.4 x 25.4mm copper pads.

## Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

| Characteristic                                                                                                                   | Symbol     | Min. | Typ. | Max.        | Unit          |
|----------------------------------------------------------------------------------------------------------------------------------|------------|------|------|-------------|---------------|
| Reverse Breakdown Voltage @ $I_R = 100\mu\text{A}$                                                                               | $V_{(BR)}$ | 250  |      |             | V             |
| Forward Voltage Drop @ $I_F = 100\text{mA}$<br>@ $I_F = 200\text{mA}$                                                            | $V_{FM}$   |      |      | 1.0<br>1.25 | V             |
| Peak Reverse Leakage Current @ $V_R = 200\text{V}, T_A = 25^{\circ}\text{C}$<br>@ $V_R = 200\text{V}, T_A = 150^{\circ}\text{C}$ | $I_{RM}$   |      |      | 1.0<br>100  | $\mu\text{A}$ |
| Diode Capacitance ( $V_R = 0\text{V}, f = 1.0\text{MHz}$ )                                                                       | $C_D$      |      |      | 5.0         | pF            |
| Reverse Recovery Time ( $I_F = I_R = 30\text{mA}, R_L = 100\Omega$ )                                                             | $t_{rr}$   |      |      | 50          | nS            |

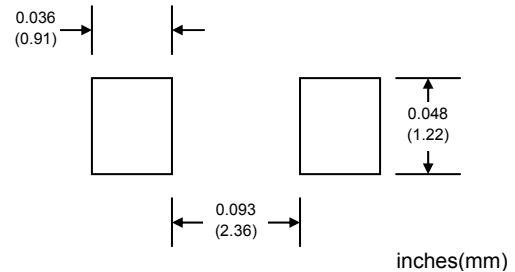


## MARKING INFORMATION



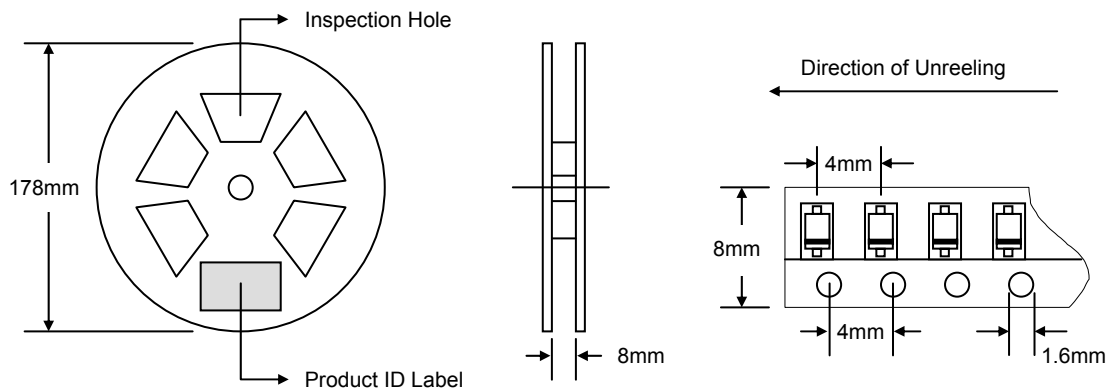
Cathode = Polarity Band  
JS = Device Code

## RECOMMENDED FOOTPRINT



## PACKAGING INFORMATION

### TAPE & REEL



| Reel Diameter (mm) | Quantity (PCS) | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|--------------------|----------------|-------------------------------|----------------|----------------------------|----------------|---------------------------|
| 178                | 3,000          | 187 x 187 x 65                | 15,000         | 390 x 240 x 420            | 150,000        | 10.0                      |

**Note:** 1. Anti-static plastic reel, white, water clear or blue color. Inspection hole might be varied in different alignment.  
2. Components are packed in accordance with EIA standard 481-1 and 481-2.

## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| MMSD103-T1  | SOD-123      | 3000/Tape & Reel  |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, MMSD103-T1-LF.**

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