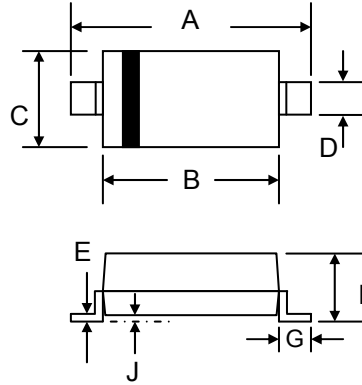


### Features

- Low Turn-On Voltage
- Fast Switching Speed
- PN Junction Guard Ring for Transient and ESD Protection
- For General Purpose Switching Applications
- Plastic Material – UL Recognition Flammability Classification 94V-0



| SOD-323              |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 2.30 | 2.75 |
| B                    | 1.60 | 1.80 |
| C                    | 1.20 | 1.40 |
| D                    | 0.25 | 0.40 |
| E                    | 0.05 | 0.15 |
| G                    | 0.20 | 0.40 |
| H                    | —    | 1.10 |
| J                    | —    | 0.10 |
| All Dimensions in mm |      |      |

### Mechanical Data

- Case: SOD-323, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.004 grams (approx.)
- Marking: Device Code, See Page 3
- **Lead Free: For RoHS / Lead Free Version, Add “-LF” Suffix to Part Number, See Page 4**

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

| Characteristic   | Symbol                          | Value       | Unit             |
|--|---------------------------------|-------------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 30          | V                |
| Forward Continuous Current   | $I_F$                           | 200         | mA               |
| Repetitive Peak Forward Current  | $I_{FRM}$                       | 300         | mA               |
| Non-Repetitive Peak Forward Surge Current @ $t < 1.0\text{s}$                          | $I_{FSM}$                       | 600         | mA               |
| Operating and Storage Temperature Range  | $T_J, T_{STG}$                  | -55 to +150 | $^\circ\text{C}$ |

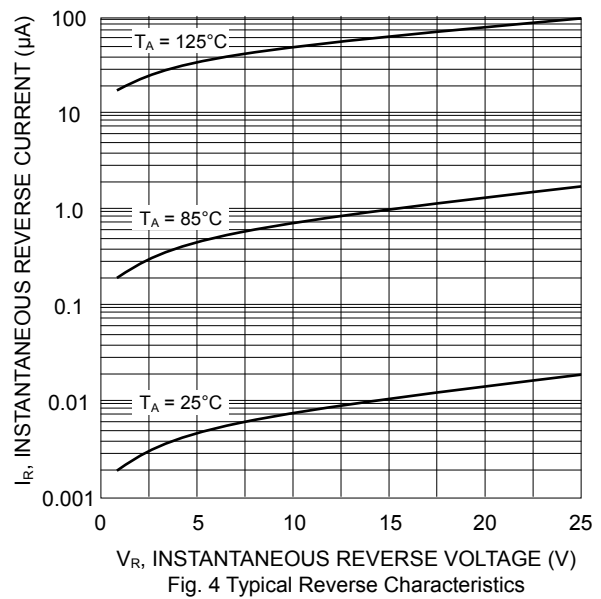
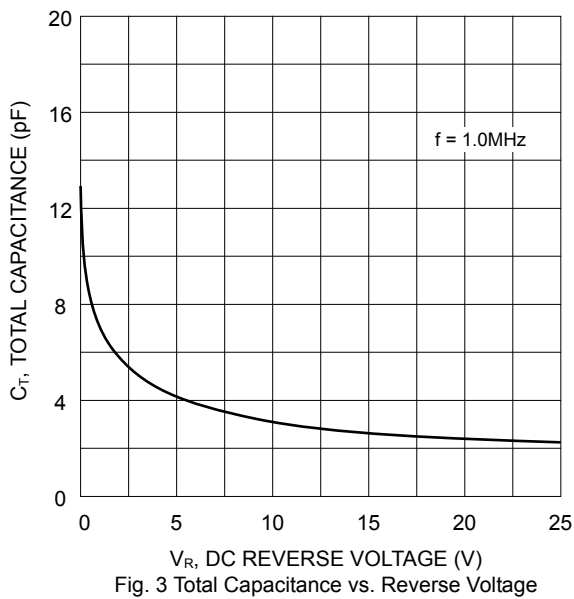
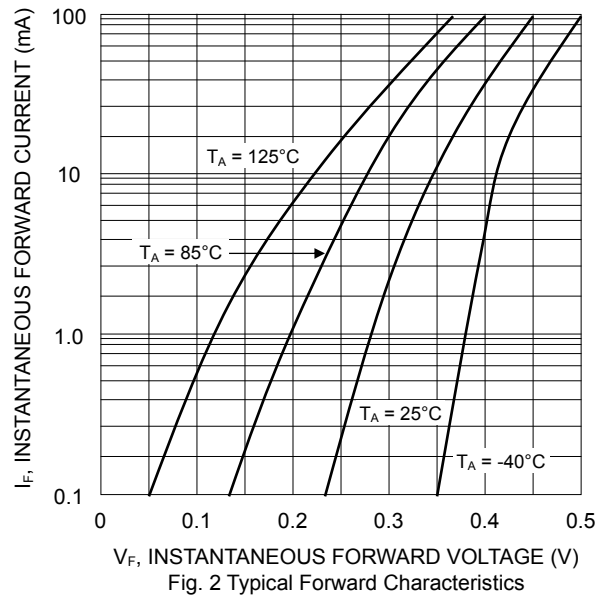
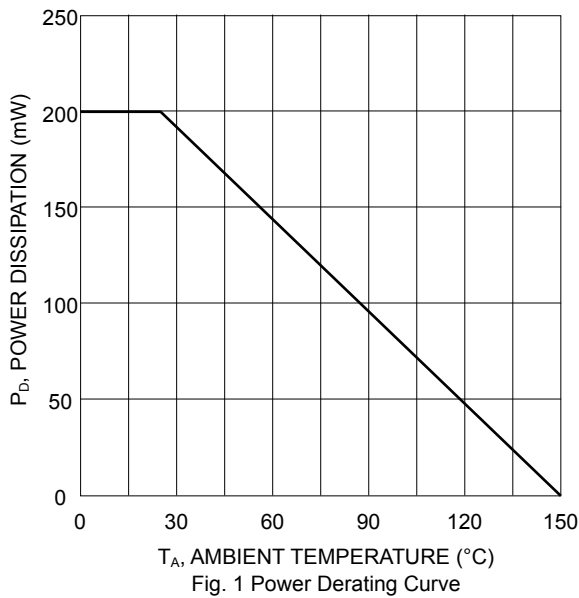
### Thermal Characteristics

| Characteristic                                   | Symbol   | Value | Unit               |
|--|----------|-------|--------------------|
| Power Dissipation (Note 1)                       | $P_D$    | 200   | mW                 |
| Thermal Resistance, Junction to Ambient (Note 1) | $R_{JA}$ | 625   | $^\circ\text{C/W}$ |


Note: 1. Mounted on FR-4 PC board with minimum recommended pad layout.

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

| Characteristic  | Symbol     | Min. | Typ. | Max.                                 | Unit          |
|---|------------|------|------|--------------------------------------|---------------|
| Reverse Breakdown Voltage @ $I_R = 100\mu\text{A}$  | $V_{(BR)}$ | 30   |      |                                      | V             |
| Forward Voltage Drop @ $I_F = 0.1\text{mA}$<br>@ $I_F = 1.0\text{mA}$<br>@ $I_F = 10\text{mA}$<br>@ $I_F = 30\text{mA}$<br>@ $I_F = 100\text{mA}$ | $V_F$      |      |      | 0.24<br>0.32<br>0.40<br>0.50<br>1.00 | V             |
| Reverse Leakage Current @ $V_R = 25\text{V}$  | $I_R$      |      |      | 2.0                                  | $\mu\text{A}$ |
| Diode Capacitance ( $V_R = 1.0\text{V}$ , $f = 1.0\text{MHz}$ )   | $C_D$      |      |      | 10                                   | pF            |
| Reverse Recovery Time ( $I_F = I_R = 10\text{mA}$ , $I_{RR} = 0.1 \times I_R$ , $R_L = 100\Omega$ )   | $t_{rr}$   |      |      | 5.0                                  | nS            |



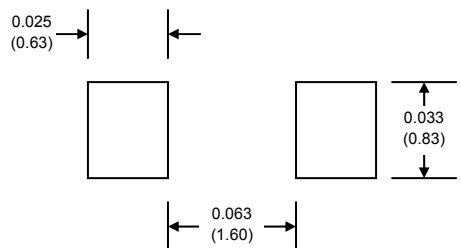
## MARKING INFORMATION



xx = Device Code, See Table Below

| Mfg Site | Device Code |
|----------|-------------|
| TW Plant | L4          |
| CN Plant | L9          |

## RECOMMENDED FOOTPRINT



0.025 (0.63)

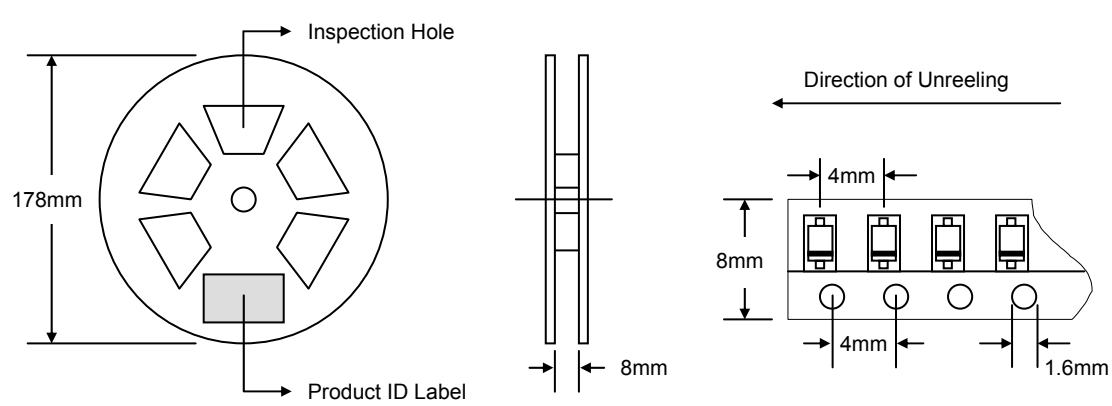
0.063 (1.60)

0.033 (0.83)

inches(mm)

## 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        | 7.0                       |

**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 |
|-------------|--------------|-------------------|
| BAT54WS-T1  | SOD-323      | 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, BAT54WS-T1-LF.**

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