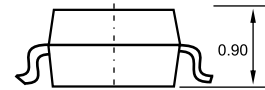
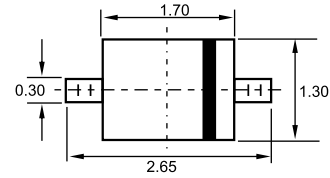




### SOD-323



Dimensions in inches and (millimeters)

### Features

- ✧ Low Forward Voltage Drop
- ✧ Guard Ring Construction for Transient Protection
- ✧ Negligible Reverse Recovery Time
- ✧ Low Reverse Capacitance
- ✧ Ultra-Small Surface Mount Package

### Mechanical Data

- ✧ Case: SOD-323, Plastic
- ✧ Case material - UL Flammability Rating Classification 94V-0
- ✧ Polarity: Cathode Band
- ✧ Weight: 0.004 grams (approx.)

### Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

#### Maximum Ratings

| Type Number   | Symbol          | SD103AWS    | SD103BWS | SD103CWS | Unit |
|---|-----------------|-------------|----------|----------|------|
| Peak Repetitive Reverse Voltage                           | $V_{RRM}$       | 40          | 30       | 20       | V    |
| Working Peak Reverse Voltage                              | $V_{RWM}$       |             |          |          |      |
| DC Blocking Voltage                                       | $V_R$           |             |          |          |      |
| RMS Reverse Voltage                                       | $V_{R(RMS)}$    | 28          | 21       | 14       | V    |
| Forward Continuous Current                                | $I_{FM}$        | 350         |          |          | mA   |
| Non-Repetitive Peak Forward Surge Current @ $t \leq 1.0s$ | $I_{FSM}$       | 1.5         |          |          | A    |
| Power Dissipation   | $P_d$           | 200         |          |          | mW   |
| Thermal Resistance, Junction to Ambient Air               | $R_{\theta JA}$ | 625         |          |          | °C/W |
| Operating and Storage Temperature Range                   | $T_j, T_{STG}$  | -65 to +125 |          |          | °C   |

#### Electrical Characteristics

| Characteristic                     | Symbol      | Min            | Typ | Max          | Unit    | Test Condition   |
|------------------------------------|-------------|----------------|-----|--------------|---------|--|
| Reverse Breakdown Voltage (Note 1) | $V_{(BR)R}$ | 40<br>30<br>20 | —   | —            | V       | $I_R = 10\mu A$<br>$I_R = 10\mu A$<br>$I_R = 10\mu A$              |
| Forward Voltage Drop (Note 1)      | $V_{FM}$    | —              | —   | 0.37<br>0.60 | V       | $I_F = 20mA$<br>$I_F = 200mA$                                      |
| Peak Reverse Current (Note 1)      | $I_{RM}$    | —              | —   | 5.0          | $\mu A$ | $V_R = 30V$<br>$V_R = 20V$<br>$V_R = 10V$                          |
| Total Capacitance                  | $C_T$       | —              | 50  | —            | pF      | $V_R = 0V, f = 1.0MHz$   |
| Reverse Recovery Time              | $t_{rr}$    | —              | 10  | —            | ns      | $I_F = I_R = 200mA,$<br>$I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ |

Notes: 1. Short duration test pulse used to minimize self-heating effect.

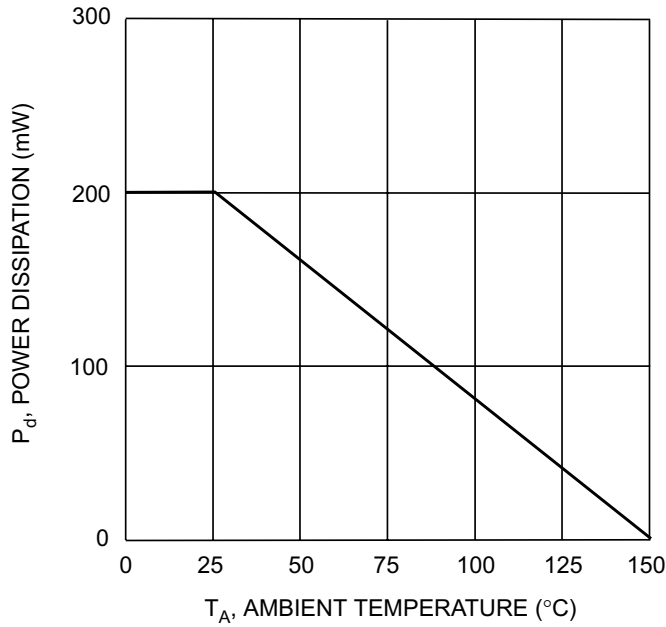


Fig. 1 Power Derating Curve

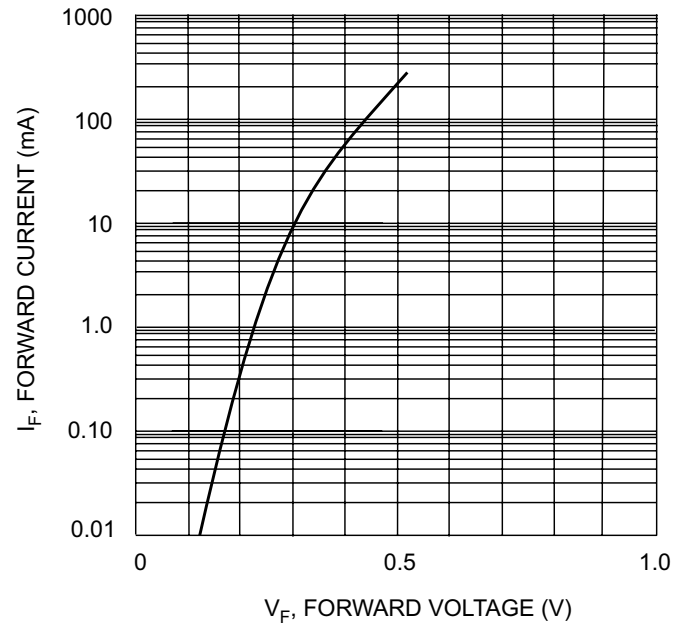


Fig. 2 Typical Forward Characteristics

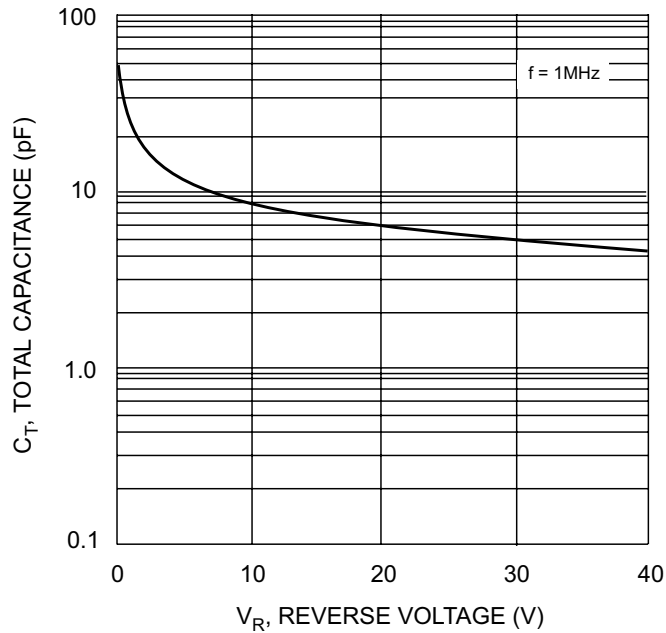


Fig. 3 Total Capacitance vs Reverse Voltage

### Ordering Information

| Device     | Packaging | Shipping         |
|------------|-----------|------------------|
| SD103AWS-7 | SOD-323   | 3000/Tape & Reel |
| SD103BWS-7 | SOD-323   | 3000/Tape & Reel |
| SD103CWS-7 | SOD-323   | 3000/Tape & Reel |