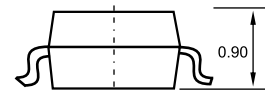
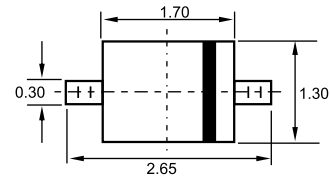




SOD-323



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 30 20 | — | — | V | $I_R = 10\mu A$ $I_R = 10\mu A$ $I_R = 10\mu A$ |
| Forward Voltage Drop (Note 1) | V_{FM} | — | — | 0.37 0.60 | V | $I_F = 20mA$ $I_F = 200mA$ |
| Peak Reverse Current (Note 1) | I_{RM} | — | — | 5.0 | μA | $V_R = 30V$ $V_R = 20V$ $V_R = 10V$ |
| Total Capacitance | C_T | — | 50 | — | pF | $V_R = 0V, f = 1.0MHz$ |
| Reverse Recovery Time | t_{rr} | — | 10 | — | ns | $I_F = I_R = 200mA,$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ |

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

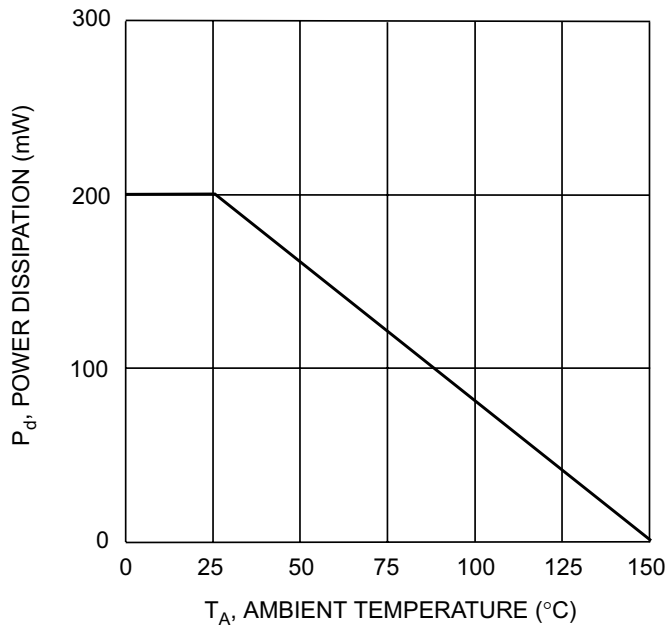


Fig. 1 Power Derating Curve

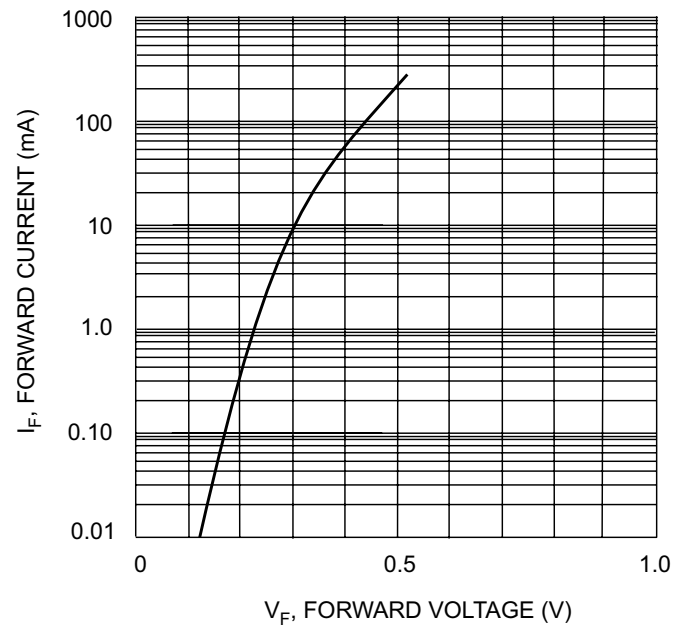


Fig. 2 Typical Forward Characteristics

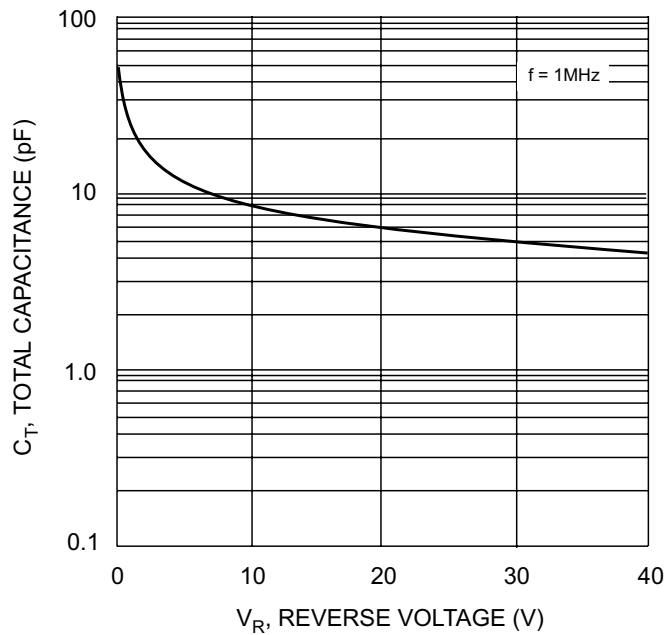


Fig. 3 Total Capacitance vs Reverse Voltage

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 |