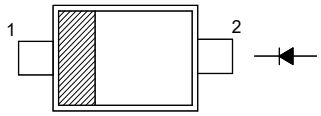
## Silicon Epitaxial Planar Switching Diode

PINNING

| PIN | DESCRIPTION |
|---|---|
| 1 | Cathode |
| 2 | Anode |




Top View
Simplified outline SOD-323 and symbol

### Features

- AEC-Q101 Qualified
- High-speed switching
- Halogen and Antimony Free(HAF), RoHS compliant

### Absolute Maximum Ratings ($T_a$ = 25 °C)

| Parameter | | Symbol | Value | Unit |
|---|---|---|---|---|
| Repetitive Peak Reverse Voltage | | $V_{RRM}$ | 100 | V |
| Reverse Voltage | | $V_R$ | 100 | V |
| Continuous Forward Current | | $I_F$ | 250 | mA |
| Repetitive Peak Forward Current | | $I_{FRM}$ | 500 | mA |
| Non-Repetitive Peak Forward Current | t = 1 μs<br>t = 1 ms<br>t = 1 s | $I_{FSM}$ | 4<br>1<br>0.5 | A |
| Power Dissipation [1)] | | $P_D$ | 200 | mW |
| Junction Temperature | | $T_j$ | 150 | ℃ |
| Storage Temperature Range | | $T_{stg}$ | - 55 to + 150 | ℃ |

### Thermal Characteristics

| Parameter | Symbol | Max. | Unit |
|---|---|---|---|
| Thermal Resistance from Junction to Ambient [1)] | $R_{\theta JA}$ | 625 | ℃/W |

[1)] Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

**Characteristics at $T_a$ = 25 °C**

| Parameter | Symbol | Min. | Max. | Unit |
|---|---|---|---|---|
| Reverse Breakdown Voltage<br>at $I_R$ = 100 µA | $V_{(BR)R}$ | 100 | - | V |
| Forward Voltage<br>at $I_F$ = 1 mA<br>at $I_F$ = 10 mA<br>at $I_F$ = 50 mA<br>at $I_F$ = 150 mA | $V_F$ | <br>-<br>-<br>-<br>- | <br>0.715<br>0.855<br>1<br>1.25 | V |
| Reverse Current<br>at $V_R$ = 25 V<br>at $V_R$ = 75 V<br>at $V_R$ = 25 V, $T_J$ = 150 °C<br>at $V_R$ = 75 V, $T_J$ = 150 °C | $I_R$ | <br>-<br>-<br>-<br>- | <br>30<br>1<br>30<br>50 | <br>nA<br>µA<br>µA<br>µA |
| Diode Capacitance<br>at $V_R$ = 0 V, f = 1 MHz | $C_{tot}$ | - | 1.5 | pF |
| Reverse Recovery Time<br>at $I_F$ = 10 mA, $V_R$ = 6 V, $R_L$ = 100 Ω, $I_{rr}$ = 0.1 X $I_R$ | $t_{rr}$ | - | 4 | ns |

## Electrical Characteristics Curves

Fig 1. Power Derating Curve

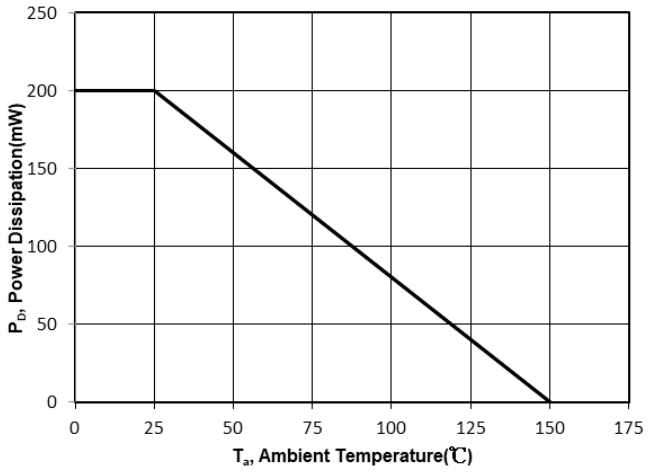



Fig 2. Capacitance Characteristics

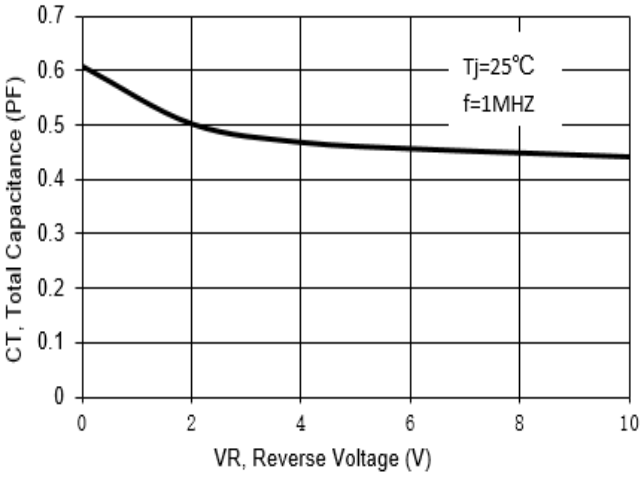



Fig 3. Reverse Characteristics

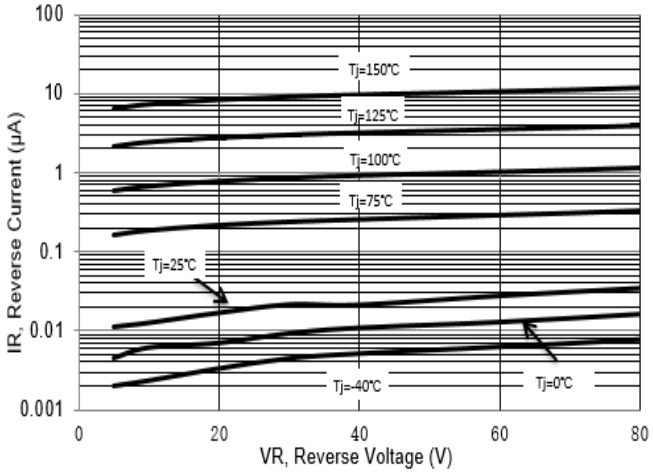
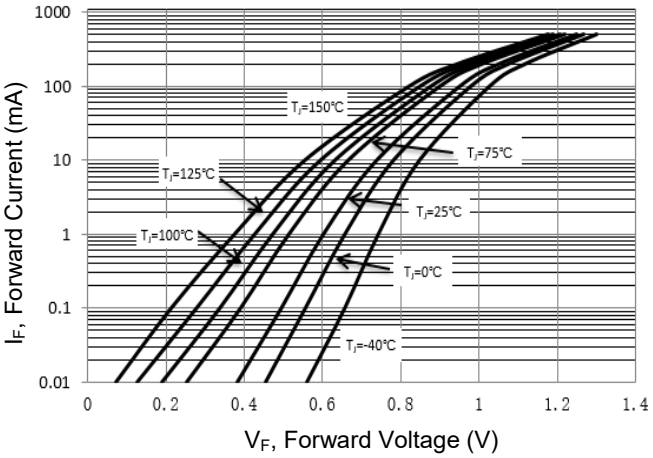
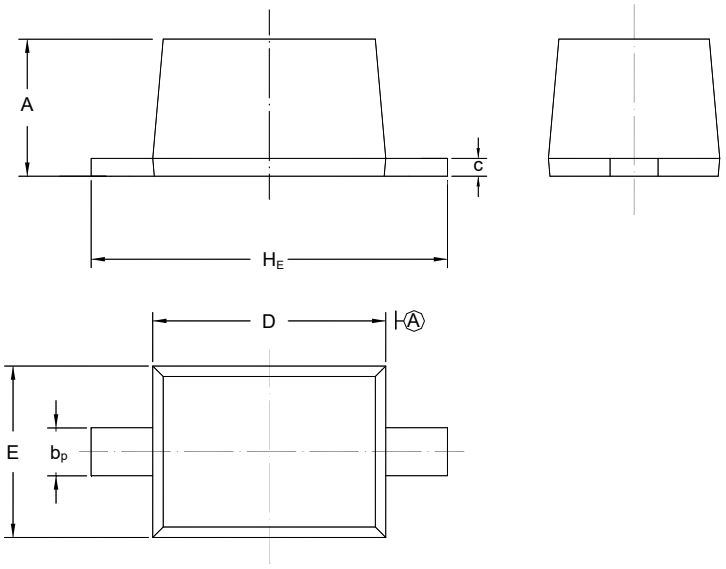



Fig 4. Forward Characteristics



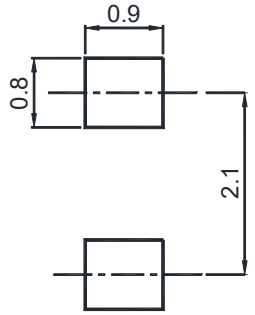
## PACKAGE OUTLINE

### Plastic surface mounted package; 2 leads SOD-323




| UNIT | A | $b_p$ | C | D | E | $H_E$ |
|---|---|---|---|---|---|---|
| mm | 1.10<br>0.80 | 0.40<br>0.25 | 0.15<br>0.10 | 1.80<br>1.60 | 1.35<br>1.15 | 2.80<br>2.30 |

### Recommended Soldering Footprint




### Packing information

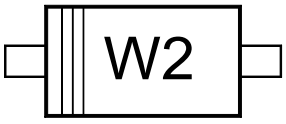
| Package | Tape Width (mm) | Pitch | | Reel Size | | Per Reel Packing Quantity |
|---|---|---|---|---|---|---|
| | | mm | inch | mm | inch | |
| SOD-323 | 8 | 4 ± 0.1 | 0.157 ± 0.004 | 178 | 7 | 3,000 |

### Marking information

" W2 " = Part No.

" III " = Cathode line

Font type: Arial




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