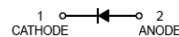


Silicon Epitaxial Planar Diode



Features:

- Fast Switching Speed : $t_{rr} = 4\text{ns(Typ)}$
- Surface Mount Package Ideally Suited For Automatic Insertion
- For General Purpose Switching Applications
- High Conductance
- Available in Lead Free Version



Applications:

Surface mount fast switching diode

Maximum Rating @ $T_a = 25^\circ\text{C}$ unless otherwise specified

| Characteristic | Symbol | Value | Unit |
|---|-----------------|-------------|--------------------|
| Non-Repetitive Peak Reverse Voltage | V_{RM} | 100 | V |
| Peak Repetitive Reverse Voltage | V_{RRM} | 75 | V |
| Working Peak Reverse Voltage | V_{RWM} | | |
| DC Reverse Voltage | V_R | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 53 | V |
| Forward Continuous Current | I_{FM} | 300 | mA |
| Average Rectified Output Current | I_o | 150 | mA |
| Non-Repetitive Peak Forward Surge Current @ $t = 1.0 \mu\text{s}$ @ $t = 1.0 \text{s}$ | I_{FSM} | 2 1 | A |
| Power Dissipation | P_d | 200 | mW |
| Thermal Resistance Junction to Ambient Air | $R_{\theta JA}$ | 625 | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_j, T_{STG} | -65 to +150 | $^\circ\text{C}$ |

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

| Characteristic | Symbol | Min. | Max. | Unit | Test Condition |
|-------------------------------|-------------|------|-----------------------------|---------------------|--|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | 75 | - | V | $I_R = 1\mu\text{A}$ |
| Forward Voltage | V_F | - | 0.715 0.855 1 1.25 | V | $I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$ |
| Reverse Current | I_R | - | 1 25 | μA nA | $V_R = 75\text{V}$ $V_R = 20\text{V}$ |
| Capacitance between terminals | C_T | - | 2 | pF | $V_R = 0, f = 1\text{MHz}$ |
| Reverse Recovery Time | t_{rr} | - | 4 | ns | $I_F = I_R = 10\text{mA}$, $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$ |

Silicon Epitaxial Planar Diode

Typical Characteristics @ $T_a = 25^\circ\text{C}$ unless otherwise specified

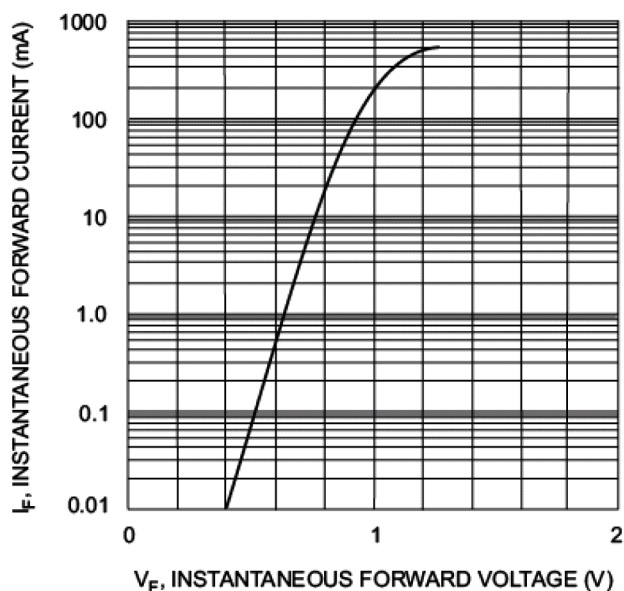


Fig. 1 Forward Characteristics

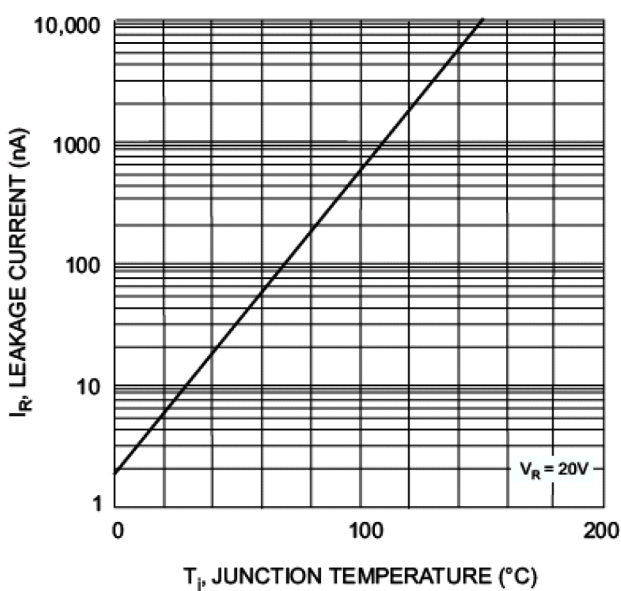
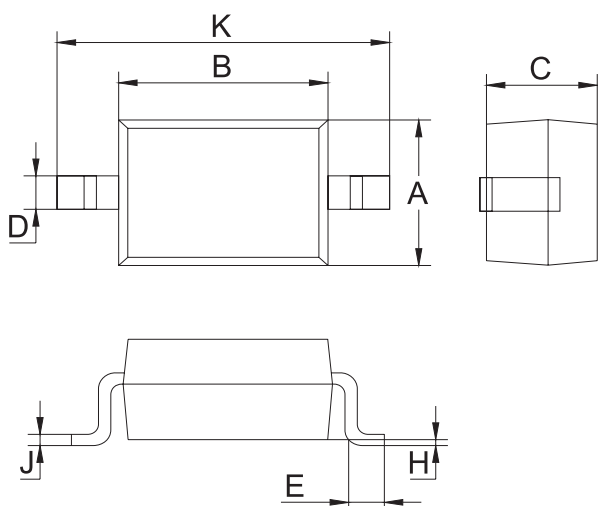


Fig. 2 Leakage Current vs Junction Temperature

Package Outline

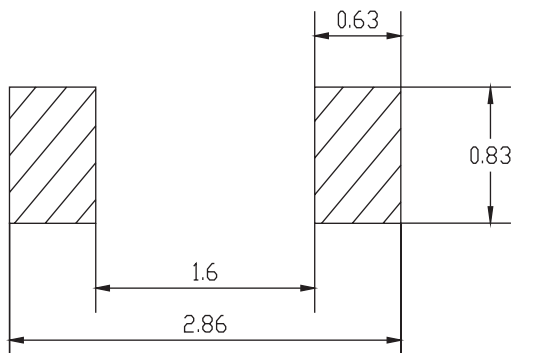
Plastic surface mounted package



| SOD-323 | | |
|----------------------|-------------|-------|
| Dim | Min | Max |
| A | 1.275 | 1.325 |
| B | 1.675 | 1.725 |
| C | 0.9 Typical | |
| D | 0.25 | 0.35 |
| E | 0.27 | 0.37 |
| H | 0.02 | 0.1 |
| J | 0.1 Typical | |
| K | 2.6 | 2.7 |
| All Dimensions in mm | | |

Silicon Epitaxial Planar Diode

Soldering Foot print



Unit : mm

Package Information

| Device | Package | Shipping |
|----------|---------|---------------------|
| 1N4148WS | SOD-323 | 3,000 / Tape & Reel |

Part Number Table

| Description | Part Number |
|--------------------------------|-------------|
| Silicon Epitaxial Planar Diode | 1N4148WS |

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