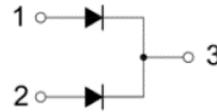


Features

- High switching speed: $t_{rr} \leq 6$ ns
- Low leakage current
- Small SMD plastic packages
- High stability and high reliability

Applications

- High-speed switching
- General-purpose switching



Schematic Diagram



SOT-23

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Max. | Unit |
|--|-----------------|-------------|--------------------|
| Reverse Voltage | V_R | 70 | V |
| Power Dissipation | P_D | 225 | mW |
| Average Rectified Current | I_O | 200 | mA |
| Non-repetitive Peak Forward Current | I_{FM} | 400 | mA |
| Peak Forward Surge Current @ $t_p=1\mu\text{s}$; $T_A=25^\circ\text{C}$ | I_{FSM} | 2.0 | A |
| Thermal Resistance, Junction-to-Ambient | $R_{\theta JA}$ | 500 | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range | T_J | -55 to +150 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -65 to +150 | $^\circ\text{C}$ |

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Conditions | Min. | Max. | Unit |
|-------------------------|----------|---|------|-------|---------------|
| Reverse Voltage | V_{RB} | $I_B=100\mu\text{A}$ | 70 | - | V |
| Reverse Leakage Current | I_R | $V_R=70\text{V}$ | - | 2.5 | μA |
| Forward Voltage | V_F | $I_F=1\text{mA}$ | - | 0.715 | V |
| | | $I_F=10\text{mA}$ | - | 0.855 | |
| | | $I_F=50\text{mA}$ | - | 1.00 | |
| | | $I_F=150\text{mA}$ | - | 1.25 | |
| Reverse Recovery Time | T_{RR} | $I_F=I_R=10\text{mA}$, $R_L=100\Omega$, $I_{RR}=0.1 \times I_R$ | - | 6 | nS |
| Capacitance | C_T | $V_R=0\text{V}$, $f=1\text{MHZ}$ | - | 1.5 | pF |

Ratings and Characteristic Curves

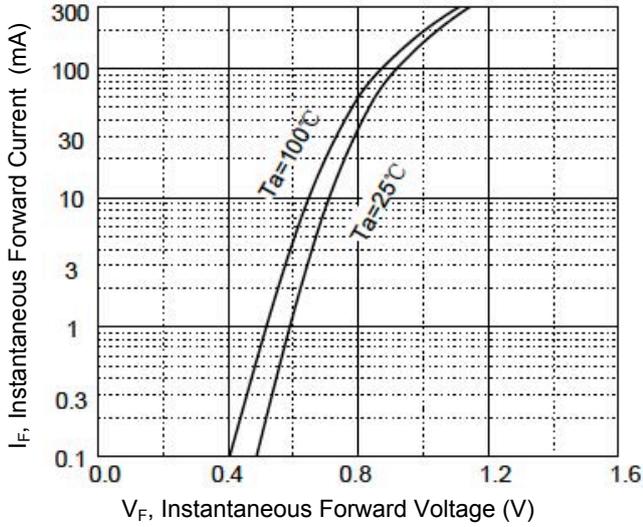


Figure 1. Forward Characteristics

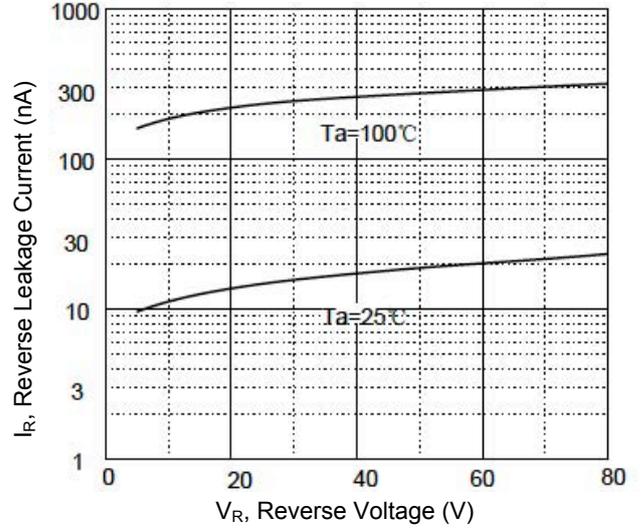


Figure 2. Reverse Characteristics

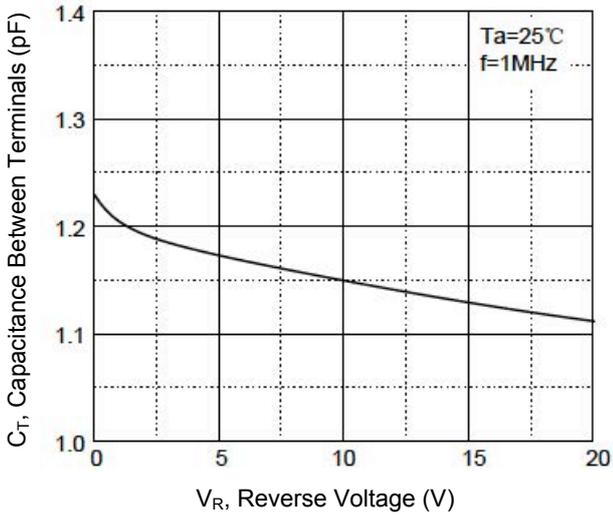


Figure 3. Capacitance Characteristics

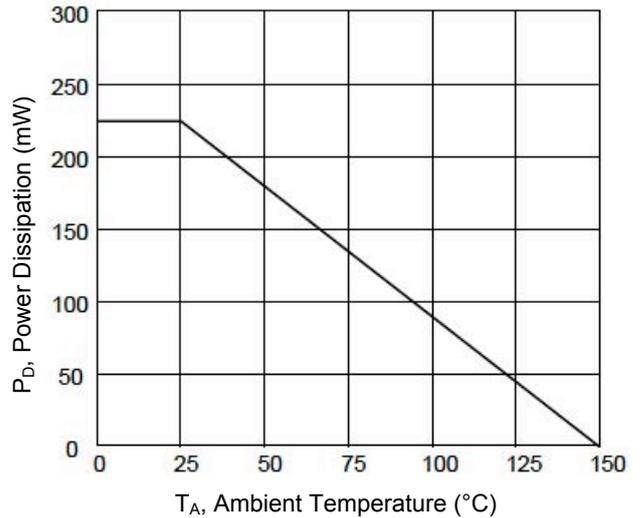
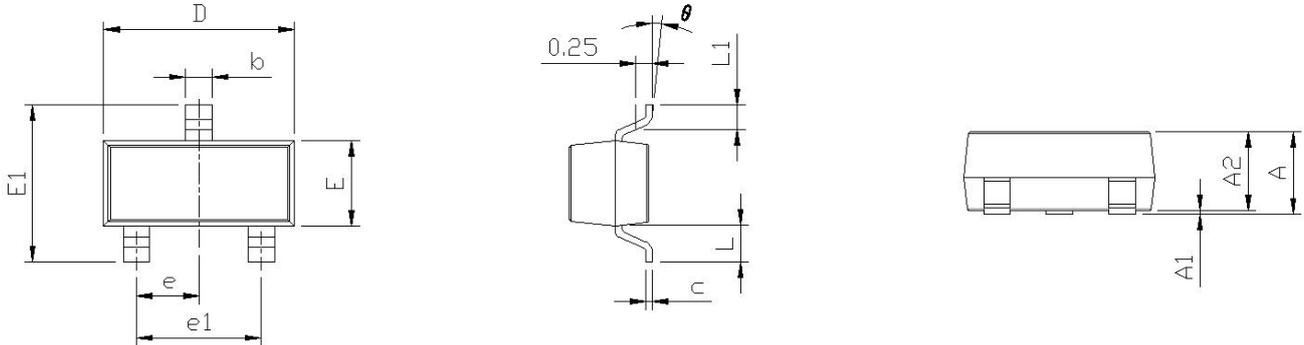


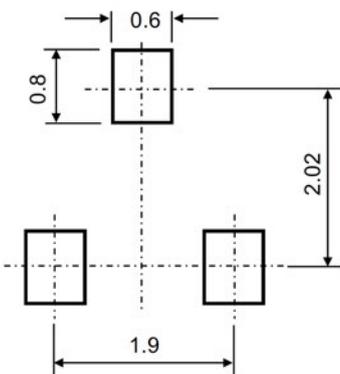
Figure 4. Power Derating Curve

Package Outline Dimensions (SOT-23)



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP | | 0.037 TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF | | 0.022 REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

Suggested Pad Layout



Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.