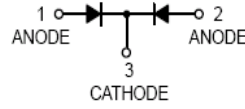
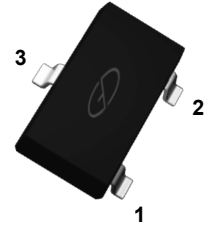


Features

- Low turn-on voltage
- Fast switching
- PN junction guard ring for transient and ESD protection



Schematic Diagram



SOT-523

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

| Parameter | Symbol | Value | Unit |
|--|-----------------|-------------|--------------------|
| Peak Repetitive Peak Reverse Voltage | V_{RRM} | 70 | V |
| Working Peak Reverse Voltage | V_{RWM} | 70 | |
| DC Reverse Voltage | V_R | 70 | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 49 | V |
| Forward Continuous Current ¹ | I_{FM} | 70 | mA |
| Forward Surge@8.3ms | I_{FSM} | 100 | mA |
| Power Dissipation ¹ | P_d | 150 | mW |
| Thermal Resistance, Junction to Ambient ¹ | $R_{\theta JA}$ | 667 | $^\circ\text{C/W}$ |
| Junction Temperature Range | T_j | -55 to +125 | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to +150 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Conditions | Max | Unit |
|--------------------------------------|----------|---|------|------|
| Forward Voltage ² | V_F | $I_F=1\text{mA}$ | 0.41 | V |
| | | $I_F=15\text{mA}$ | 1.00 | V |
| Reverse Leakage Current ³ | I_R | $V_R=50\text{V}$ | 100 | nA |
| Capacitance Between Terminals | C_T | $V_R=0\text{V}$, $f=1\text{MHz}$ | 2 | pF |
| Reverse Recovery Time | t_{rr} | $I_F=I_R=10\text{mA}$, $I_{rr}=0.1 \cdot I_R$, $R_L=100\Omega$ | 5 | ns |

Note:

1. Part mounted on FR-4 board with recommended pad layout.
2. pulse test, $t_p \leq 300\mu\text{s}$
3. pulse test, $t_p \leq 5\text{ms}$

Typical Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

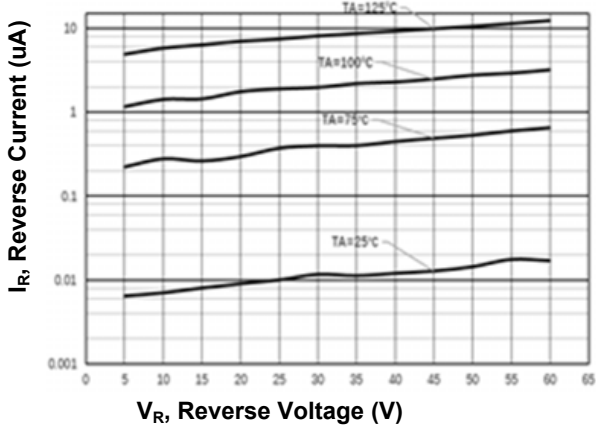


Figure 1. Typical Reverse Characteristic

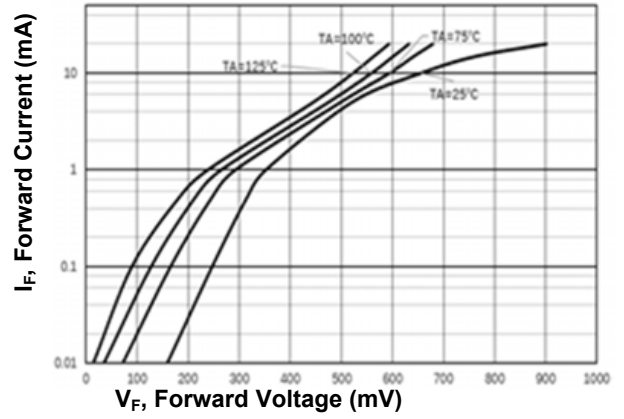


Figure 2. Typical Forward Characteristic

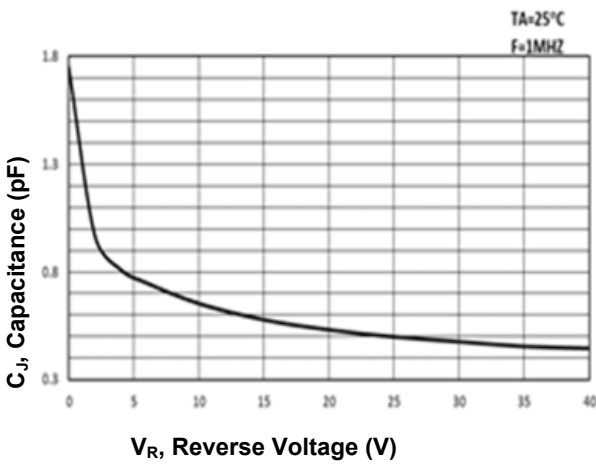


Figure 3. Capacitance VS Reverse Voltage

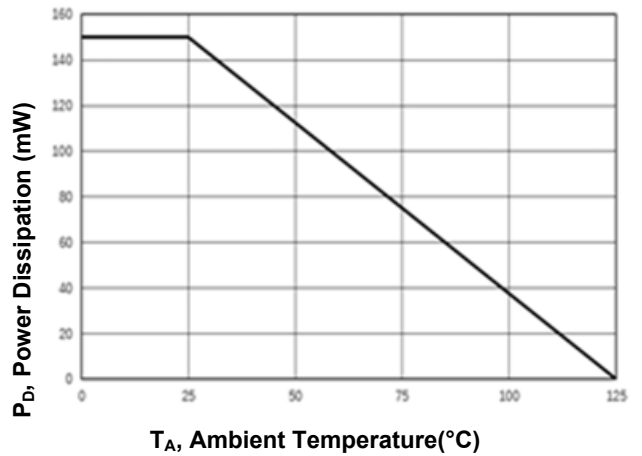
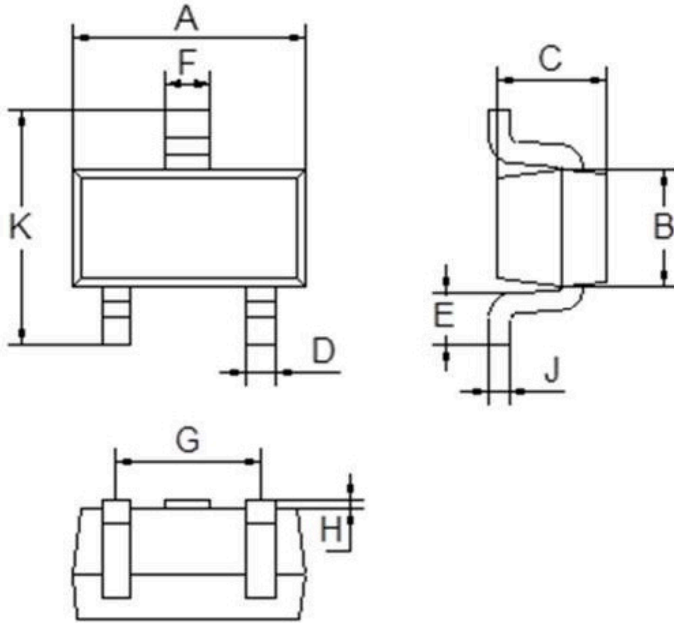


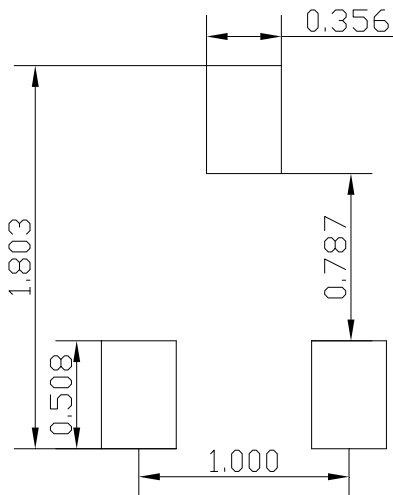
Figure 4. Derating Curve (P_d - T_A)

Package Outline Dimensions (SOT-523)



| SOT-523 (unit:mm) | | |
|-------------------|------|------|
| Dim | Min | Max |
| A | 1.50 | 1.70 |
| B | 0.75 | 0.85 |
| C | 0.60 | 0.80 |
| D | 0.15 | 0.30 |
| E | 0.30 | 0.40 |
| F | 0.25 | 0.40 |
| G | 0.90 | 1.10 |
| H | 0.02 | 0.10 |
| J | 0.08 | 0.18 |
| K | 1.45 | 1.75 |

Recommended Pad Layout



Unit : mm

Order Information

| Device | Package | Marking | Carrier | Quantity |
|--------------|---------|---------|-------------|----------|
| GSBAS70-05AT | SOT-523 | 7E | Tape & Reel | 3,000pcs |