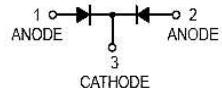


## Features

- Fast switching
- Surface mount package ideally suited for Automatic insertion.
- For general purpose switching applications.
- High conductance.



Schematic Diagram



SOT-23

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

| Parameter   | Symbol          | Value       | Unit |
|---|-----------------|-------------|------|
| Peak Repetitive Reverse Voltage                                 | $V_{RRM}$       | 250         | V    |
| Working Peak Reverse Voltage                                    | $V_{RWM}$       | 200         | V    |
| DC Reverse Voltage  | $V_R$           | 200         | V    |
| RMS Reverse Voltage   | $V_{R(RMS)}$    | 141         | V    |
| Forward Continuous Current                                      | $I_F$           | 200         | mA   |
| Non-Repetitive Peak Forward Surge Current<br>@ $t=8.3\text{ms}$ | $I_{FSM}$       | 2           | A    |
| @ $t=1.0 \text{ ms}$  |                 | 2.5         |      |
| Power Dissipation   | $P_d$           | 250         | mW   |
| Thermal Resistance Junction to Ambient                          | $R_{\theta JA}$ | 500         | °C/W |
| Thermal Resistance Junction to Case                             | $R_{\theta JC}$ | 310         | °C/W |
| Operating Junction Temperature Range                            | $T_J$           | 150         | °C   |
| Storage Temperature Range                                       | $T_{STG}$       | -65 to +150 | °C   |

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

| Parameter                 | Symbol      | Test Condition                           | Min | Max  | Unit          |
|---------------------------|-------------|--|-----|------|---------------|
| Reverse breakdown Voltage | $V_{(BR)R}$ | $I_R=100\mu\text{A}$                     | 250 | -    | V             |
| Reverse Leakage Current   | $I_R$       | $V_R=200\text{V}, T_J=25^\circ\text{C}$  | -   | 0.1  | $\mu\text{A}$ |
|                           |             | $V_R=200\text{V}, T_J=100^\circ\text{C}$ | -   | 15   |               |
| Forward voltage           | $V_F$       | $I_F=100\text{mA}$                       | -   | 1000 | mV            |
|                           |             | $I_F=200\text{mA}$                       |     | 1250 |               |
| Diode Capacitance         | $C_D$       | $V_R=0\text{V}, f=1.0\text{MHz}$         | -   | 5.0  | pF            |
| Reverse Recovery Time     | $t_{rr}$    | $I_F=I_R=10\text{mA}, I_{rr}=0.1*I_R$    | -   | 50   | ns            |

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

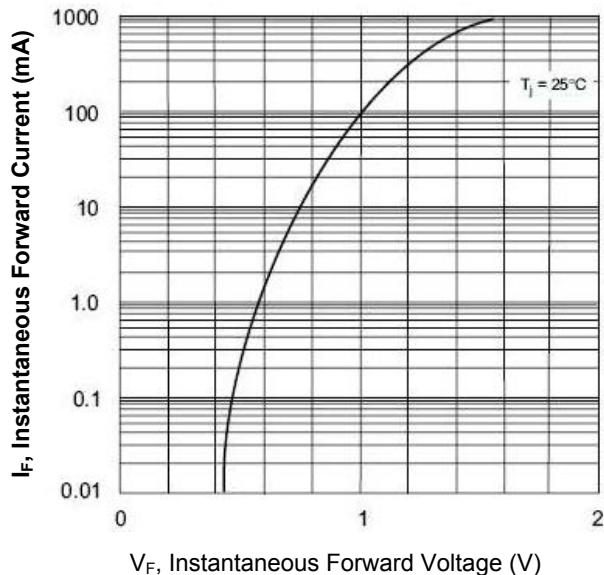


Figure 1. Forward Characteristics

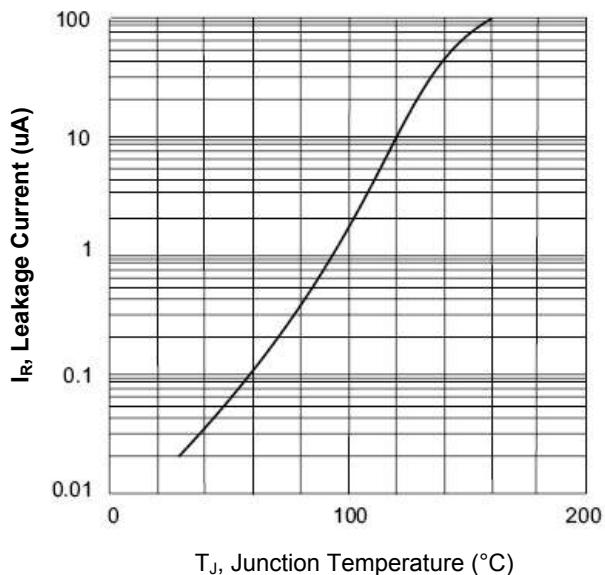
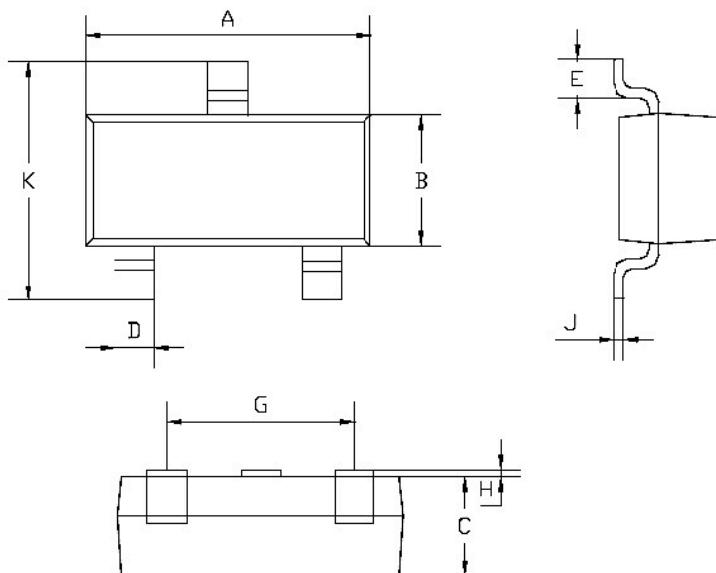


Figure 2. Leakage Current vs. Junction Temperature

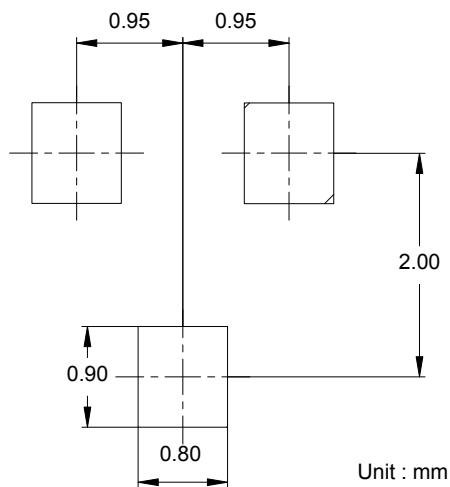
## Package Outline Dimensions (SOT-23)



| SOT-23 |      |      |
|--------|------|------|
| Dim    | Min  | Max  |
| A      | 2.70 | 3.10 |
| B      | 1.10 | 1.50 |
| C      | 0.90 | 1.10 |
| D      | 0.30 | 0.50 |
| E      | 0.35 | 0.48 |
| G      | 1.80 | 2.00 |
| H      | 0.02 | 0.10 |
| J      | 0.05 | 0.15 |
| K      | 2.20 | 2.60 |

All Dimensions in mm

## Recommended Pad Layout



## Order Information

| Device   | Package | Marking | Carrier     | Quantity |
|----------|---------|---------|-------------|----------|
| GSBAS21C | SOT-23  | JS3     | Tape & Reel | 3,000pcs |