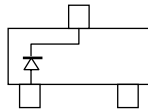
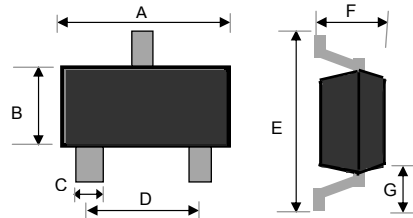


Small Signal Diode



SOT-23



Features

- ✧ Low power loss, high current capability, low V_f
- ✧ Surface device type mounting
- ✧ Moisture sensitivity level 1
- ✧ Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- ✧ Pb free version and RoHS compliant
- ✧ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

Mechanical Data

- ✧ Case : SOT- 23 small outline plastic package
- ✧ Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ High temperature soldering guaranteed: 260°C/10s
- ✧ Weight : 0.008gram (approximately)

| Dimensions | Unit (mm) | | Unit (inch) | |
|------------|-----------|------|-------------|-------|
| | Min | Max | Min | Max |
| A | 1.50 | 1.70 | 0.059 | 0.067 |
| B | 3.55 | 3.85 | 0.140 | 0.152 |
| C | 0.45 | 0.65 | 0.018 | 0.026 |
| D | 2.60 | 2.80 | 0.102 | 0.11 |
| E | 1.05 | 1.25 | 0.041 | 0.049 |
| F | 0.08 | 0.15 | 0.003 | 0.006 |
| G | 0.02 REF | | 0.50 REF | |

Ordering Information

| Part No. | Package | Packing |
|-----------|---------|---------------|
| BAS116 RF | SOT-23 | 3Kpcs/7" Reel |

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

| Type Number | Symbol | Value | Units |
|--|----------------|--------------|-------|
| Power Dissipation | P_D | 225 | mW |
| Repetitive Peak Reverse Voltage | V_{RRM} | 75 | V |
| Mean Forward Current | I_o | 200 | mA |
| Non-Repetitive Peak Forward Surge Current @ $t = 1.0s$ | I_{FSM} | 500 | mA |
| Thermal Resistance (Junction to Ambient) (Note 1) | $R\theta_{JA}$ | 330 | °C/W |
| Junction and Storage Temperature Range | T_J, T_{STG} | -55 to + 150 | °C |

Electrical Characteristics

| Type Number | Symbol | Min | Max | Units | |
|--------------------------------|------------|------------------|-----|-------|---|
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_R = 100\mu A$ | 75 | - | V |
| | | $I_F = 1.0mA$ | - | 0.9 | |
| | | $I_F = 10mA$ | - | 1.0 | |
| | | $I_F = 50mA$ | - | 1.1 | |
| | | $I_F = 150mA$ | - | 1.25 | |
| Forward Voltage | V_F | - | - | V | |
| Reverse Leakage Current | I_R | - | 5 | nA | |
| Junction Capacitance | C_J | - | 2.0 | pF | |
| Reverse Recovery Time (Note 2) | T_{rr} | - | 3.0 | ns | |

Notes:1. Valid provided that electrodes are kept at ambient temperature
 Notes:2. Reverse Recovery Test Conditions: $I_F = 10mA, I_R = 10mA, R_L = 100\Omega, I_{RR} = 1mA$

Small Signal Diode

Rating and Sharacteristic Curves

FIG 1 Typical Forward Characteristics

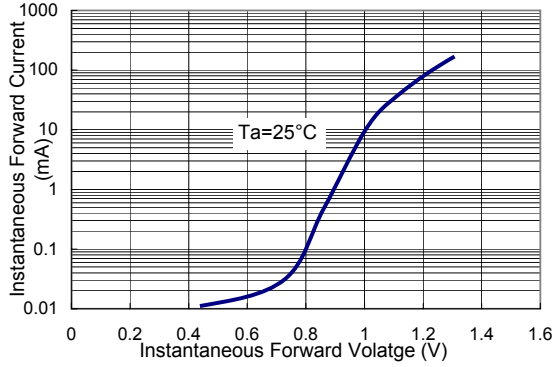


FIG 2 Reverse Current vs Reverse Voltage

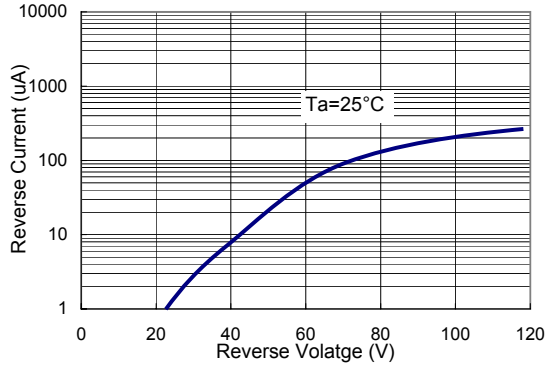


FIG 3 Admissible Power Dissipation Curve

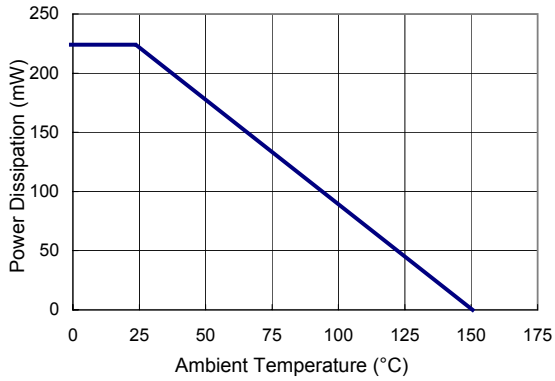


FIG 4 Typical Junction Capacitance

