

BAS16

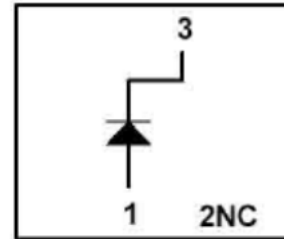
BAS16 Fast Switching Diode

General description

SOT-23 Plastic-Encapsulate Switching Diode

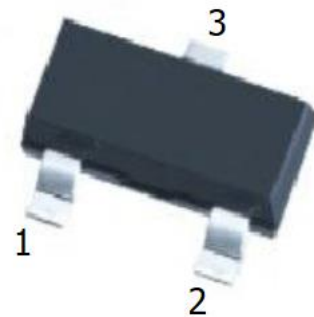
FEATURES

- Fast Switching Device (TRR <6.0 nS)
- Power Dissipation of 225mW
- High Stability and High Reliability Green EMC
- Low reverse leakage



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

| Symbol | Parameter | Value | Units |
|-----------|---|-------------|------------------|
| P_D | Power Dissipation | 225 | mW |
| T_{STG} | Storage Temperature Range | -65 to +150 | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | +150 | $^\circ\text{C}$ |
| V_{RSM} | Non-Repetitive Peak Reverse Voltage | 100 | V |
| V_{RRM} | Repetitive Peak Reverse Voltage | 75 | V |
| I_{FRM} | Repetitive Peak Forward Current | 300 | mA |
| I_O | Continuous Forward Current | 150 | mA |
| I_{FSM} | Peak Forward Surge Current (Pulse Width=1us) | 2 | A |



DEVICE MARKING CODE:

| Device Type | Device Marking |
|-------------|----------------|
| BAS16 | A6 or 5D |

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

| Symbols | Parameter | Test Condition | Limits | | Unit |
|------------|-------------------------|-------------------------|--------|-------|---------------|
| | | | Min | Max | |
| $V_{(BR)}$ | Reverse Voltage | $I_R=100\mu\text{A}$ | 75 | | V |
| I_R | Reverse Leakage Current | $V_R=75$ | --- | 1 | μA |
| V_F | Forward Voltage | $I_F=1.0\text{mA}$ | --- | 0.715 | V |
| | | $I_F=10\text{mA}$ | --- | 0.855 | |
| | | $I_F=50\text{mA}$ | --- | 1.00 | |
| | | $I_F=150\text{mA}$ | --- | 1.25 | |
| TRR | Reverse Recovery Time | $I_F= I_R=10\text{mA}$ | --- | 6 | nS |
| | | $RL=100\Omega$ | | | |
| | | $IRR=0.1 \times I_R$ | | | |
| CT | Capacitance | $V_R=0V, f=1\text{MHZ}$ | --- | 2 | pF |

Typical Performance Characteristics

Fig. 1 Typical Forward Characteristics

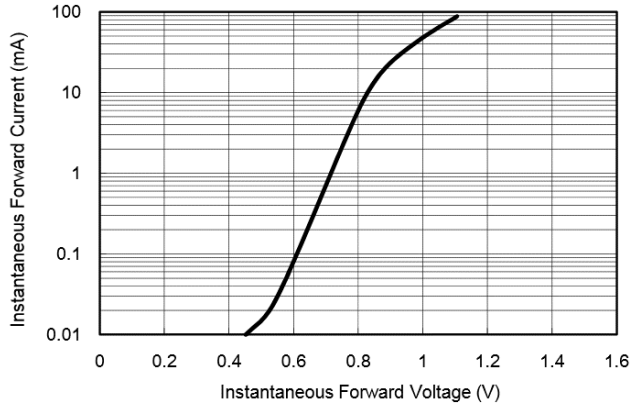


Fig. 2 Reverse Current VS. Reverse Voltage

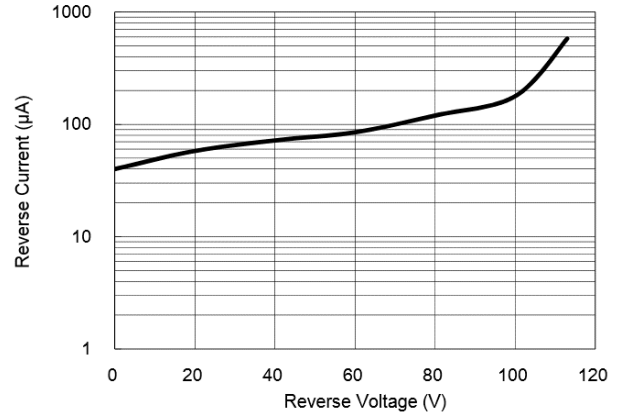


Fig. 3 Admissible Power Dissipation Curve

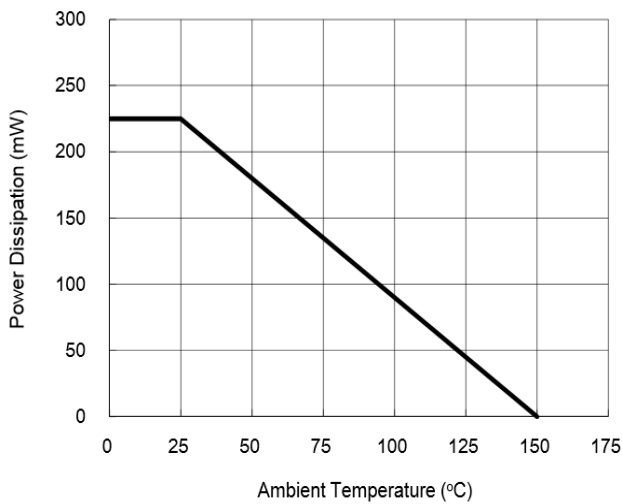
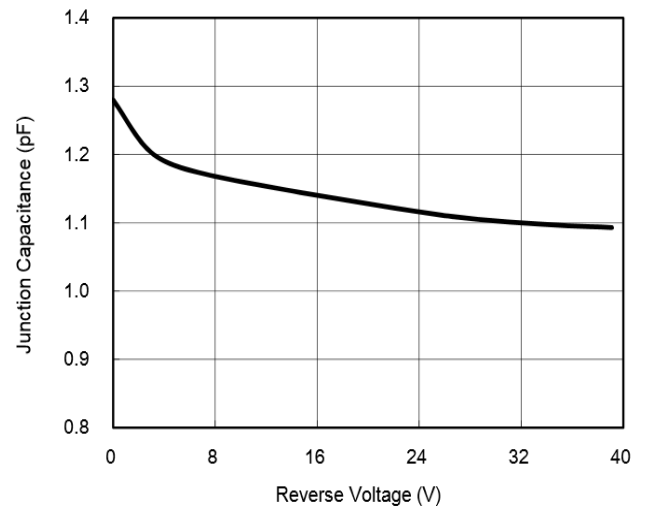
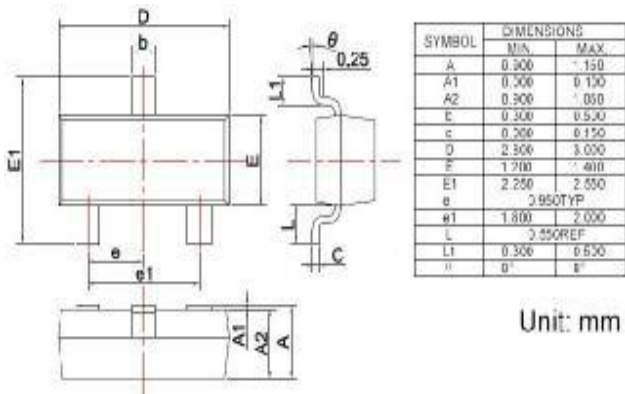


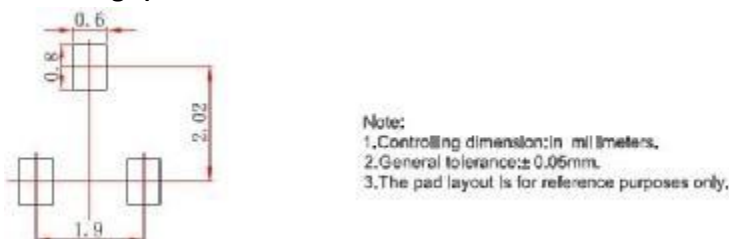
Fig. 4 Typical Junction Capacitance



SOT-23 PACKAGE OUTLINE



PCB Design(Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs)



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