



SMALL SIGNAL SWITCHING DIODES

Pb Lead(Pb)-Free

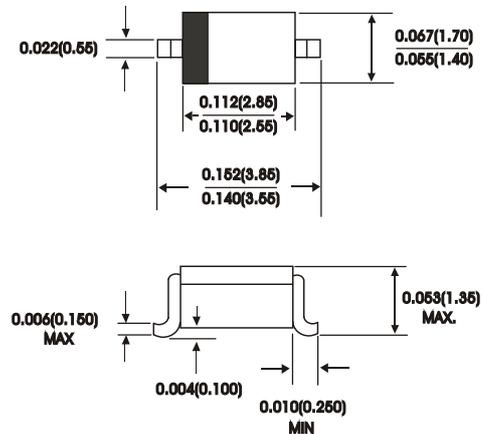
Features:

- *Fast Switching Speed
- *Surface Mount Package Ideally Suited for Automatic Insertion
- *For General Purpose Switching Applications

Description:

- *Case: SOD-123, Molded Plastic
- *Case Material: UL Flammability Rating Classification 94V-0
- *Terminals: Solderable per MIL-STD-202, Method 208
- *Polarity: Cathode Band
- *Weight: 0.01 grams(approx.)

SOD-123



Dimensions in inches and (millimeters)

Maximum Ratings (TA=25 °C Unless otherwise noted)

| Characteristic | Symbol | BAV19W | BAV20W | BAV21W | Unit |
|---------------------------------------------------------------|-----------------------------------|-------------|--------|--------|------|
| Non-Repetitive Peak Reverse Voltage | V _{RM} | 120 | 200 | 250 | V |
| Peak Repetitive Reverse Voltage | V _{RRM} | 100 | 150 | 200 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | | |
| DC Blocking Voltage | V _R | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 71 | 106 | 141 | V |
| Forward Continuous Current | I _{FM} | 400 | | | mA |
| Average Rectified Output Current | I _o | 200 | | | mA |
| Non-Repetitive Peak Forward Surge Current @t=1.0ms @t=1.0s | I _{FSM} | 2.5 0.5 | | | A |
| Power Dissipation | PD | 250 | | | mW |
| Thermal Resistance junction to Ambient Air (1) | R _{θJA} | 500 | | | °C/W |
| Operating & Storage Temperature Range | T _J , T _{STG} | -55 to +150 | | | °C |



RATINGS AND CHARACTERISTIC CURVES

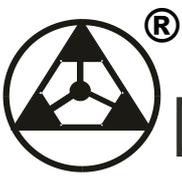
Electrical Characteristics (TA=25 °C Unless otherwise noted)

| Characteristic | Symbol | Min | Max | Unit |
|-----------------------------------------------------------------------------|----------------------------|--------|-------------------|------------------|
| Reverse Reverse Breakdown Voltage (IR=100 uA) | BAV19W BAV20W BAV21W | V(BR)R | 120 200 250 | - - - V |
| Forward Voltage (IF=100 mA) (IF=200 mA) | VF | - - | 1.0 1.5 | V |
| Peak Reverse Current @Rated DC Blocking Voltage Tj=25 °C Tj=100 °C | IR | - - | 100 15 | nA uA |
| Total Capacitance (VR=0, f=1.0MHz) | CT | - | 5.0 | PF |
| Rverse Recovery Time (IF=IR=30mA) (Irr=0.1 x IR, RL=100Ω) | trr | - | 50 | ns |

Note:
1. Valid provided that terminals are kept at ambient temperature.

Device Marking

| Item | Marking | Equivalent Circuit diagram |
|--------|---------|----------------------------|
| BAV19W | A8 | |
| BAV20W | T2 | |
| BAV21W | T3 | |



RATINGS AND CHARACTERISTIC CURVES

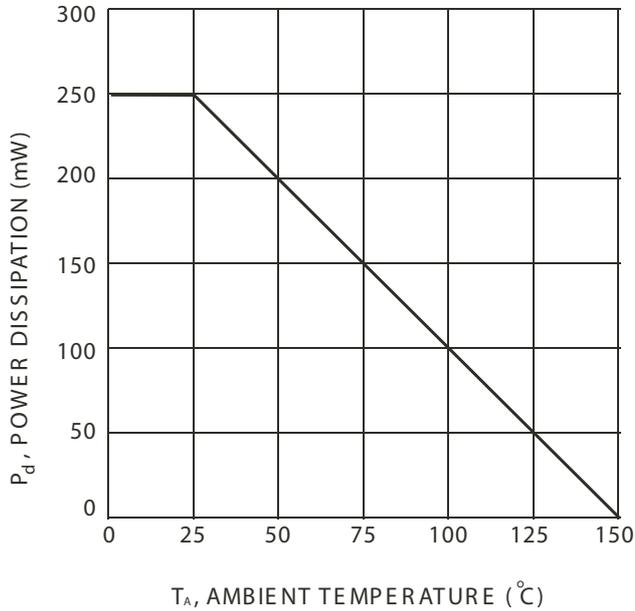


FIG. 1 Power Derating Curve

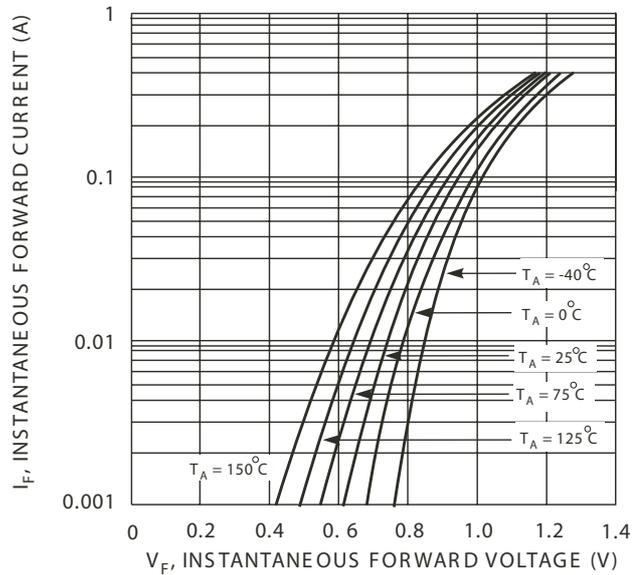


FIG. 2 Typical Forward Characteristics

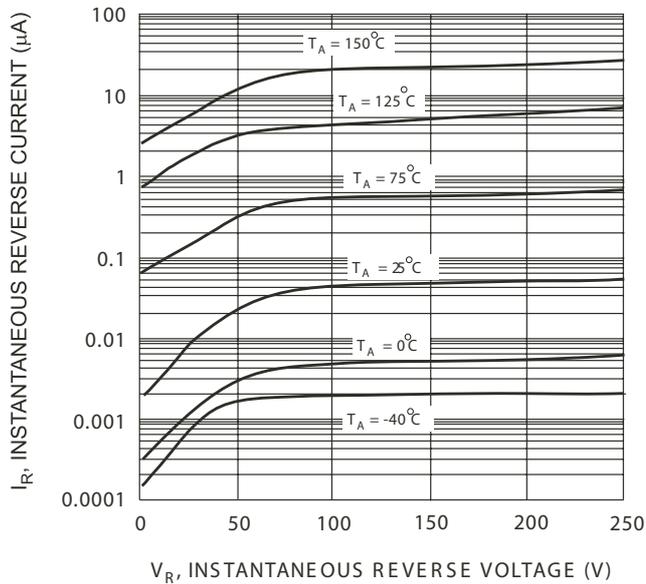


FIG. 3 Typical Reverse Characteristics

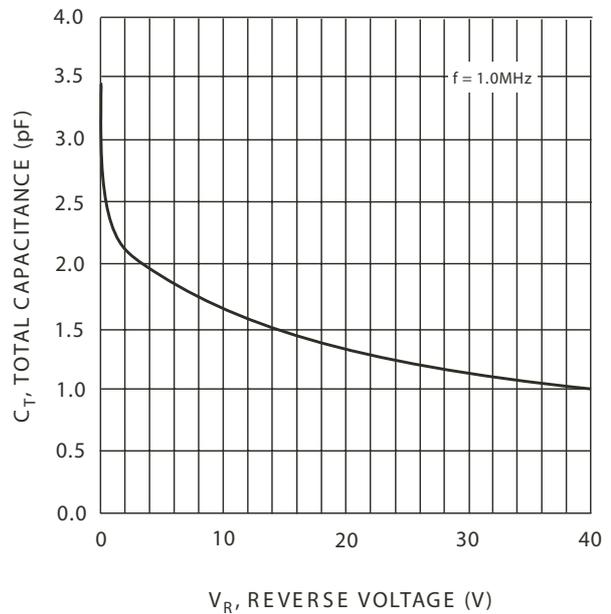


FIG. 4 Typical Capacitance vs. Reverse Voltage



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