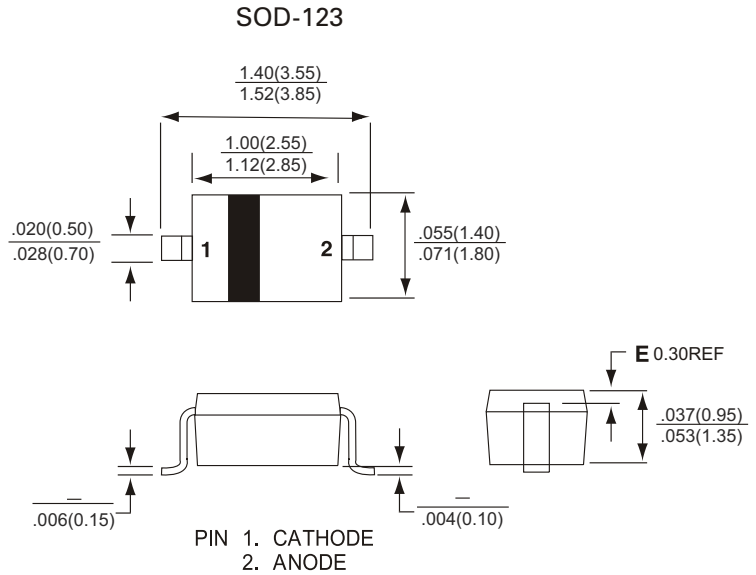


BAV19W/BAV20W/BAV21W

SURFACE MOUNT SWITCHING DIODES

SWITCHING DIODE 200mAMPERS 120-250VOLTS



FEATURES

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

MACHANICAL DATA

- *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.)

BAV19W/BAV20W/BAV21W

SURFACE MOUNT SWITCHING DIODES

➔ Maximum Ratings T_A = 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 Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 100 | 150 | 200 | V |
| 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 |

➔ ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

| Characteristic | Symbol | Min | Max | Unit |
|---|--------------------|-------------------|-------------|----------|
| Reverse Reverse Breakdown Voltage (I _R =100 μA) | V _{(BR)R} | 120 200 250 | - - - | V |
| Forward Voltage (I _F =100 mA) (I _F =200 mA) | V _F | - - | 1.0 1.25 | V |
| Peak Reverse Current @Rated DC Blocking Voltage T _j =25°C T _j =100°C | I _R | - - | 100 15 | nA μA |
| Total Capacitance (V _R =0, f=1.0MHz) | C _T | - | 5.0 | PF |
| Reverse Recovery Time (I _F =I _R =30mA) (I _{rr} =0.1×I _R , R _L =100Ω) | t _{rr} | - | 50 | ns |

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

➔ MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

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

BAV19W/BAV20W/BAV21W

SURFACE MOUNT SWITCHING DIODES

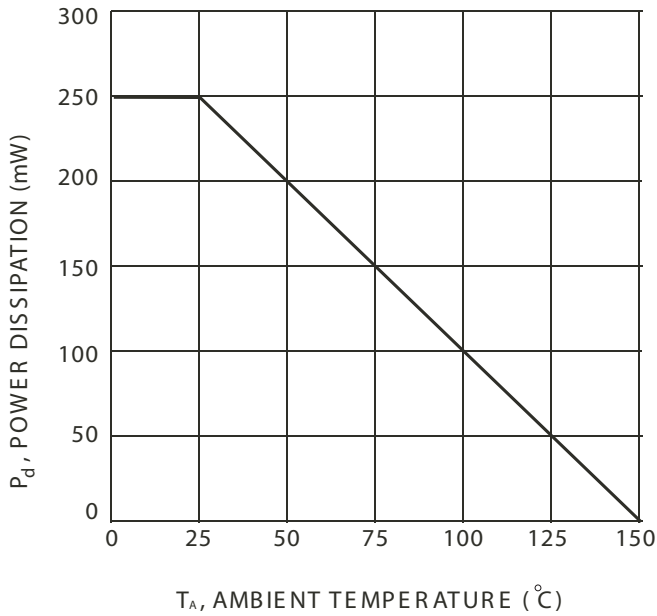


FIG. 1 Power Derating Curve

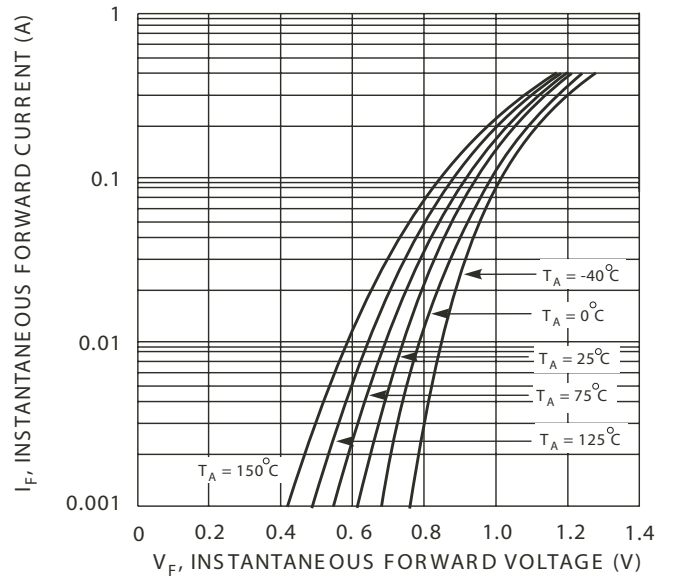


FIG. 2 Typical Forward Characteristics

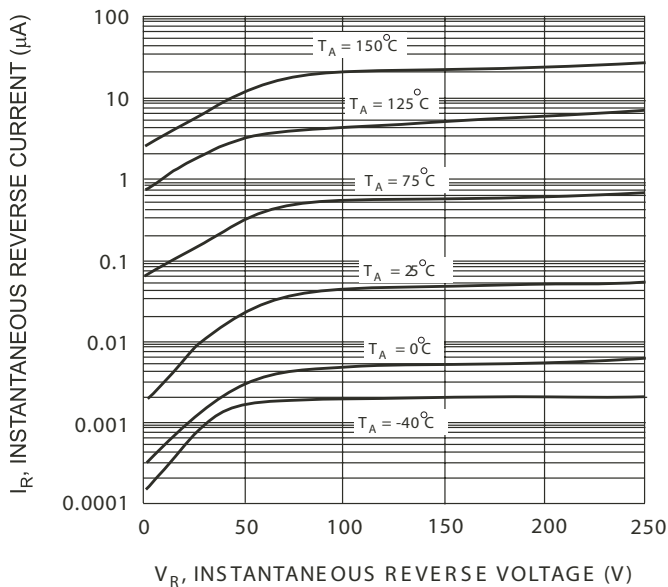


FIG. 3 Typical Reverse Characteristics

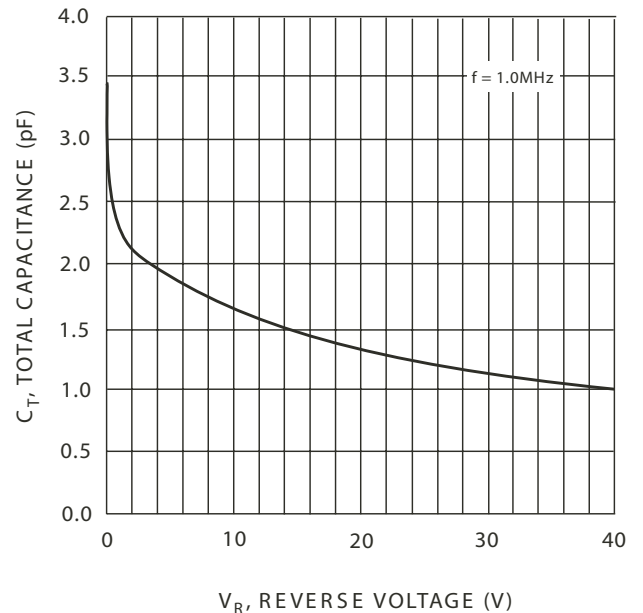


FIG. 4 Typical Capacitance vs. Reverse Voltage