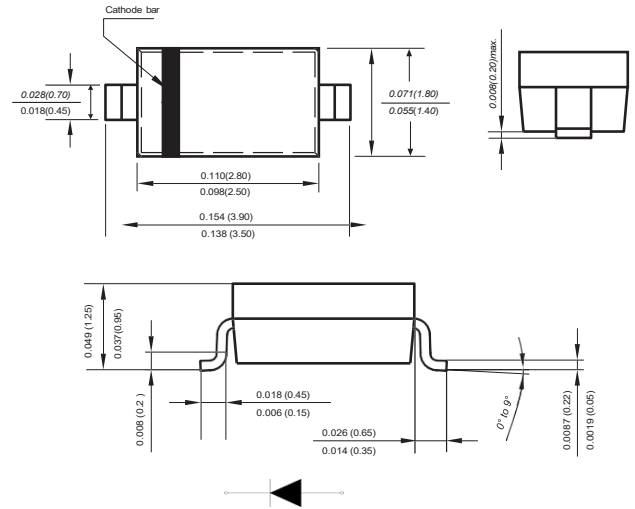


## FAST SWITCHING DIODES

### Features

- ◆ Fast switching speed
- ◆ Surface mount package ideally suited
- ◆ for automatic insertion
- ◆ For general purpose switching applications High
- ◆ conductance

### SOD-123



### Absolute Maximum Ratings at 25 °C

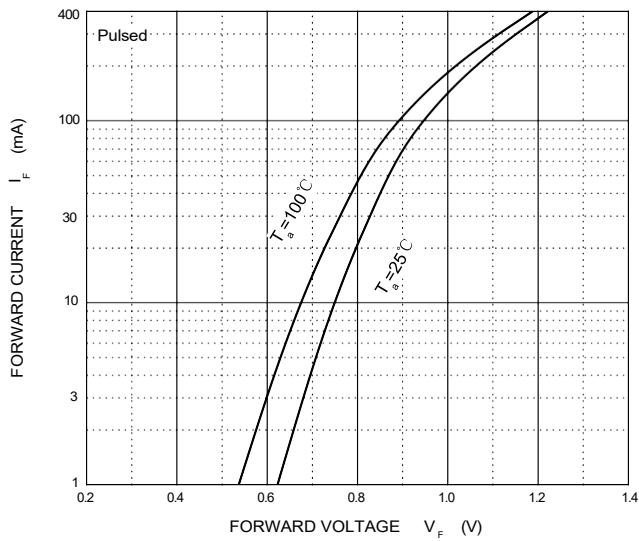
| PARAMETER                                         | SYMBOLS         | BAV19W      | BAV20W | BAV21W | UNITS |
|---------------------------------------------------|-----------------|-------------|--------|--------|-------|
| Non-Repetitive Peak Reverse Voltage               | $V_{RM}$        | 120         | 200    | 250    | V     |
| Working Peak Reverse Voltage                      | $V_{RWM}$       | 100         | 150    | 200    | V     |
| Peak Repetitive Reverse Voltage                   | $V_{RRM}$       |             |        |        |       |
| RMS Reverse voltage                               | $V_{R(RMS)}$    | 71          | 106    | 141    | V     |
| Forward continuous current                        | $I_{FM}$        | 250         |        |        | mA    |
| Average rectified output current                  | $I_o$           | 200         |        |        | mA    |
| Peak forward surge current @=1s<br>@=1ms<br>@=1us | $I_{FSM}$       | 1<br>3<br>9 |        |        | A     |
| Repetitive peak forward current                   | $I_{FRM}$       | 625         |        |        | mA    |
| Power dissipation                                 | $P_d$           | 500         |        |        | mW    |
| Thermal resistance junction to ambient            | $R_{\theta JA}$ | 500         |        |        | K/W   |
| Junction Temperature                              | $T_J$           | -55 to +150 |        |        | °C    |
| Storage Temperature                               | $T_{STG}$       | -55 to +150 |        |        | °C    |
| Non-Repetitive peak reverse voltage               | $V_{RM}$        | 120         | 200    | 250    | V     |

### Characteristics at Ta= 25 °C

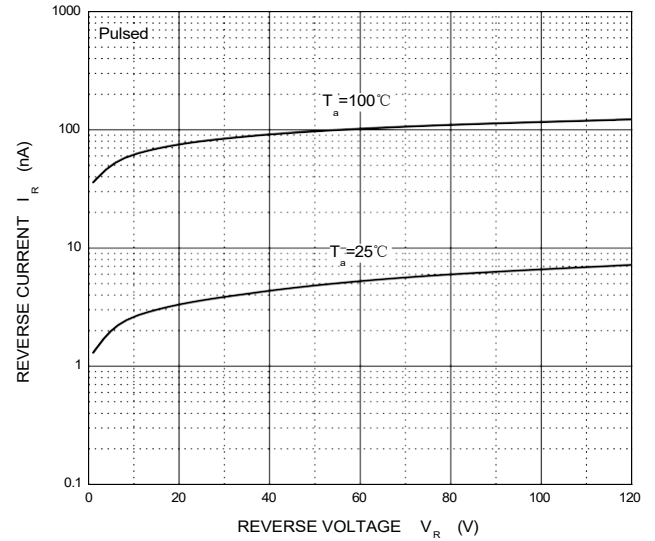
| PARAMETER                     | SYMBOLS  | Min. | Typ. | Max. | Unit | Conditions                                       |
|-------------------------------|----------|------|------|------|------|--------------------------------------------------|
| Forward voltage               | $V_{F1}$ |      |      | 1.0  | V    | $I_F=0.1A$                                       |
|                               | $V_{F2}$ |      |      | 1.25 | V    | $I_F=0.2A$                                       |
| Reverse current               | $I_R$    |      |      | 0.1  | uA   | $V_R=100V$                                       |
|                               |          |      |      | 0.1  | uA   | $V_R=150V$                                       |
|                               |          |      |      | 0.1  | uA   | $V_R=200V$                                       |
| Capacitance between terminals | $C_T$    |      |      | 5    | pF   | $V_R=0V, f=1.0MHz$                               |
| Reverse recovery time         | $t_{rr}$ |      |      | 50   | ns   | $I_F=I_R=10mA$<br>$I_{rr}=0.1I_R, R_L=100\Omega$ |

## Typical Characteristics

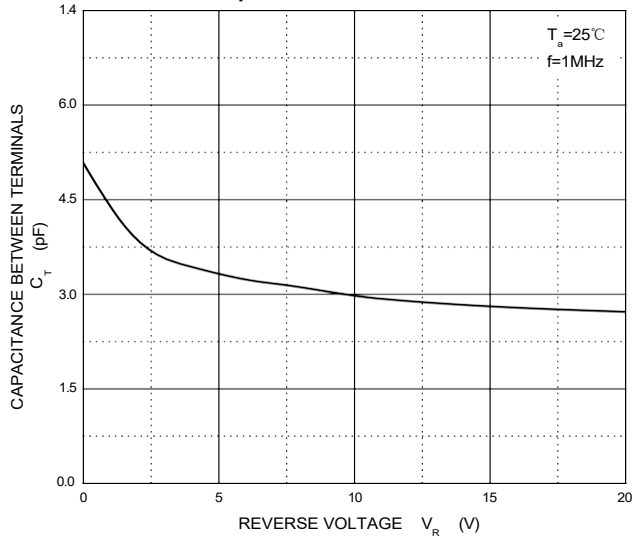
Forward Characteristics



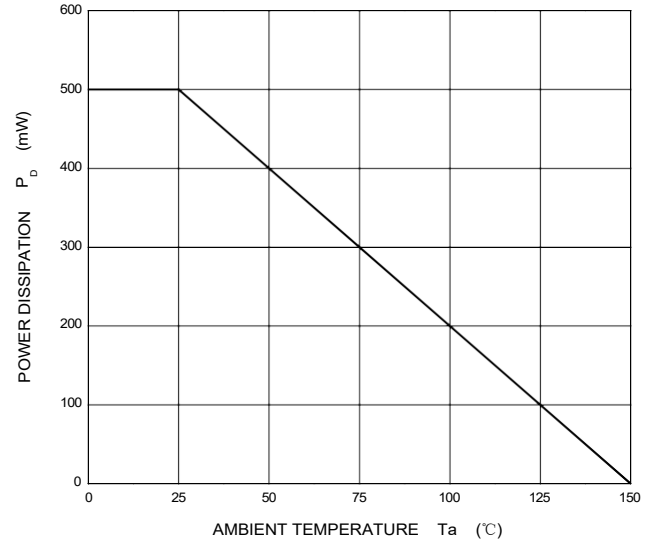
Reverse Characteristics



Capacitance Characteristics



Power Derating Curve



The curve above is for reference only.