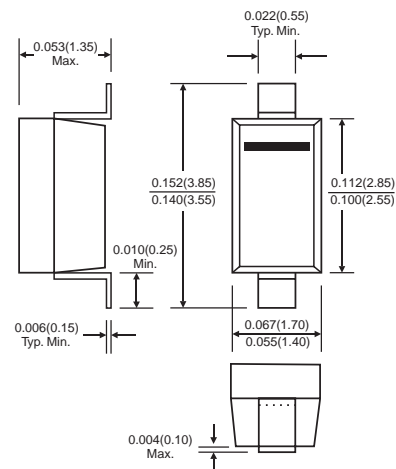




## SOD-123



Dimensions in inches and (millimeters)

## Features

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

## Mechanical Data

- ✧ Case: SOD-123, Molded Plastic
- ✧ Case Material: UL Flammability Rating Classification 94V-0
- ✧ Polarity: Cathode Band
- ✧ Type Code: T6, T4
- ✧ Weight: 0.01 grams (approx.)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

### Maximum Ratings

Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	$I_{FM}$	300	mA
Average Rectified Output Current	$I_O$	150	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu s$ @ $t = 1.0s$	$I_{FSM}$	2.0 1.0	A
Power Dissipation (Note 2)	$P_d$	400	mW
Thermal Resistance Junction to Ambient Air (Note 2)	$R_{\theta JA}$	315	°C /W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	°C

### Electrical Characteristics

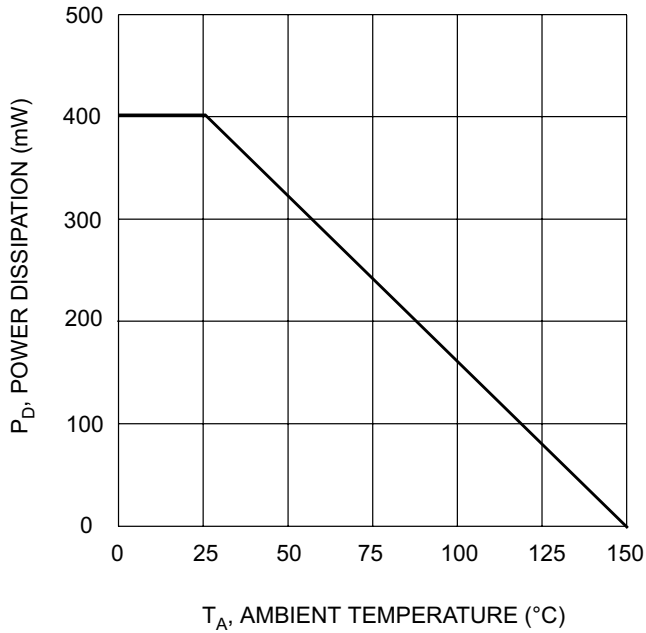
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	75	—	V	$I_R = 1.0\mu A$
Forward Voltage (Note 1)	$V_{FM}$	—	0.715 0.855 1.0 1.25	V	$I_F = 1.0mA$ $I_F = 10mA$ $I_F = 50mA$ $I_F = 150mA$
Peak Reverse Current (Note 1)	$I_{RM}$	—	1.0 50 30 25	$\mu A$ $\mu A$ $\mu A$ nA	$V_R = 75V$ $V_R = 75V, T_J = 150^\circ C$ $V_R = 25V, T_J = 150^\circ C$ $V_R = 20V$
Total Capacitance	$C_T$	—	2.0	pF	$V_R = 0, f = 1.0MHz$
Reverse Recovery Time	$t_{rr}$	—	4.0	ns	$I_F = I_R = 10mA,$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

Notes: 1. Short duration pulse test used to minimize self-heating effect.



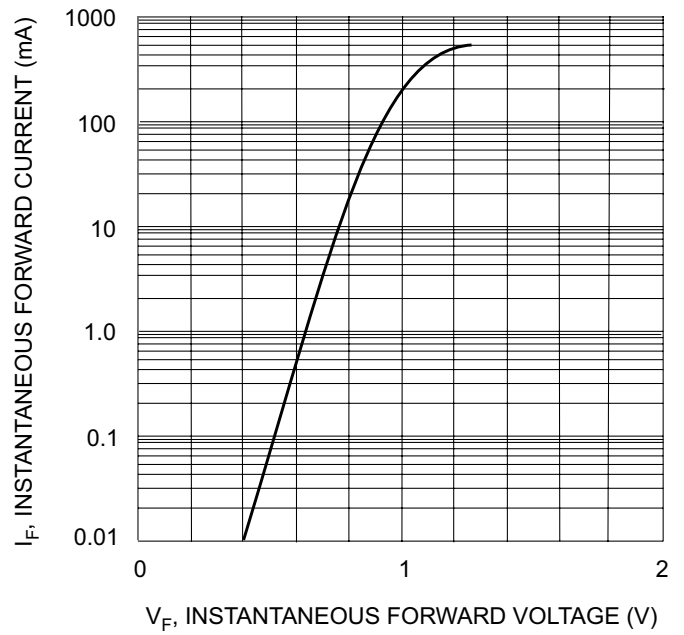
# BAV16W/1N4148W

Surface Mount Fast Switching Diode



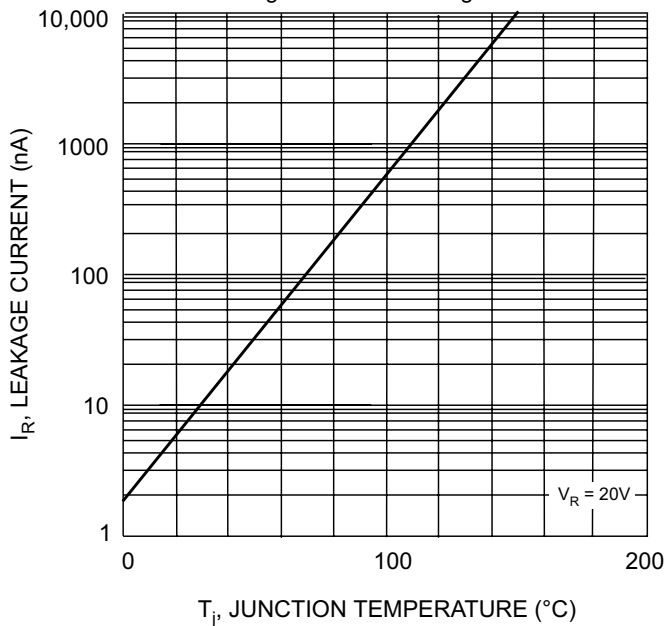
$T_A$ , AMBIENT TEMPERATURE (°C)

Fig. 1 Power Derating Curve



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)

Fig. 2 Forward Characteristics



$T_j$ , JUNCTION TEMPERATURE (°C)

Fig. 3 Leakage Current vs Junction Temperature