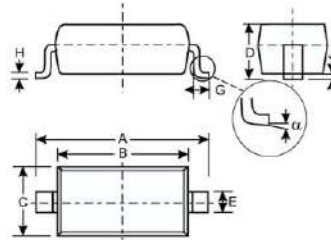


## ● Features

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  
 Moisture Sensitivity: Level 1 per J-STD-020A  
 Terminals: Solderable per MIL-STD-202, Method 208  
 Polarity: Cathode Band  
 Marking: T6, T4



SOD-123		
Dim	Min	Max
A	3.55	3.85
B	2.55	2.85
C	1.40	1.70
D	—	1.35
E	0.55 Typical	
G	0.25	—
H	0.11 Typical	
J	—	0.10
$\alpha$	0°	8°
All Dimensions in mm		

Weight: 0.01 grams (approx.)  
 Ordering Information: See Page 2

## ● Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

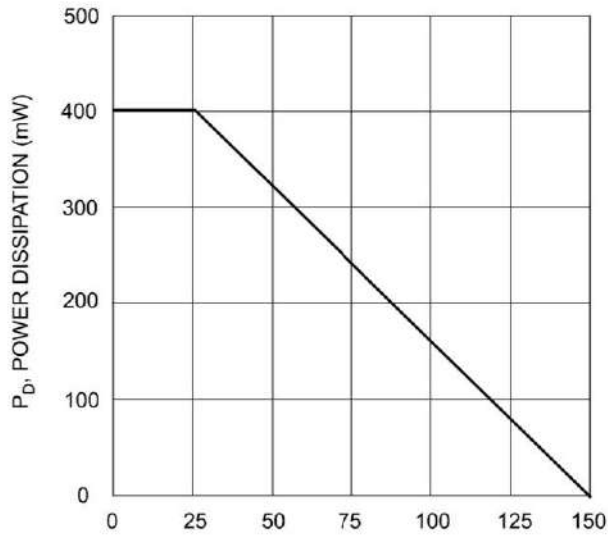
Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current	$I_{FM}$	300	mA
Average Rectified Output Current	$I_O$	150	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{s}$	$I_{FSM}$	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	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150	$^\circ\text{C}$

## ● Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

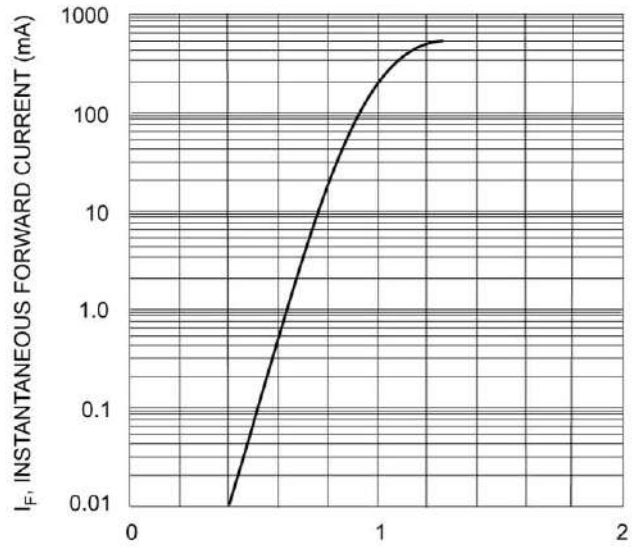
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 1)	$V_{(BR)R}$	75	—	V	$I_R = 1.0\mu\text{A}$
Forward Voltage (Note 1)	$V_{FM}$	—	0.715 0.855 1.0 1.25	V	$I_F = 1.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$
Peak Reverse Current (Note 1)	$I_{RM}$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

Notes: 1. Short duration pulse test used to minimize self-heating effect.  
 2. Part mounted on FR-4 PC board with minimum recommended pad layout.

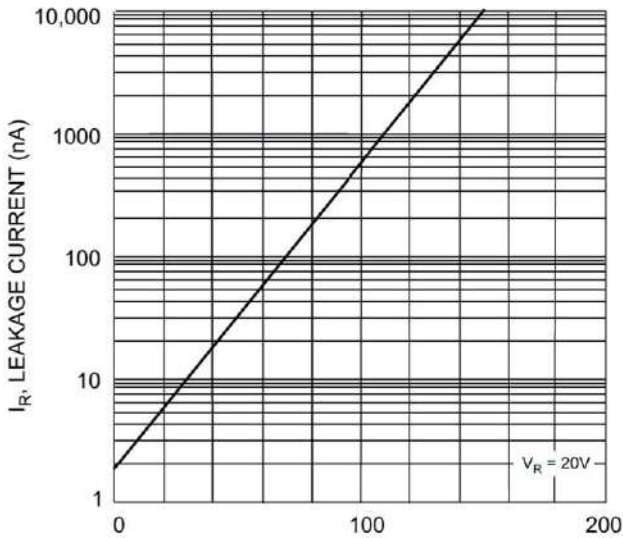
# BAV16W-1N4148W



$T_A$ , 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

## Ordering Information (Note 3)

Device	Packaging	Shipping
BAV16W	SOD-123	3000/Tape & Reel
1N4148W	SOD-123	3000/Tape & Reel