WEITRON

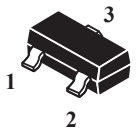
BAV199

Surface Mount Switching Diode

Lead(Pb)-Free

SWITCHING DIODE
160m AMPERES
75 VOLTS

Features:
*Surface Mount Package Ideally Suited for Automatic Insertion
*Fast Switching Speed
*Very Low Leakage Current

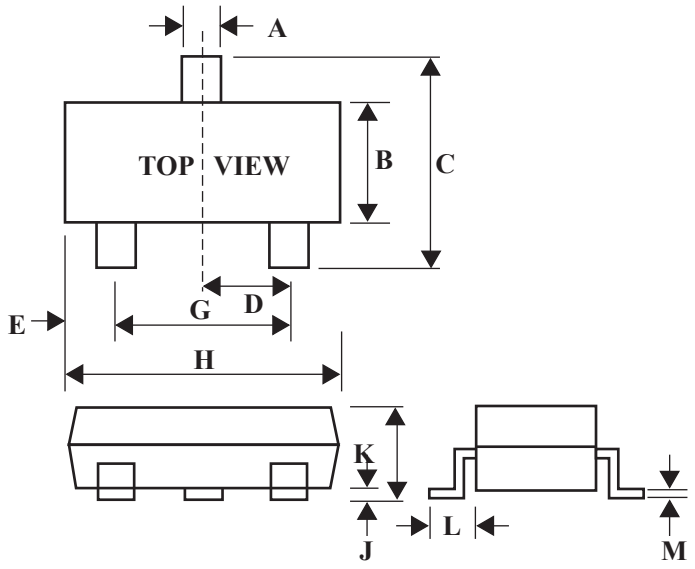


SOT-23

Mechanical Data:
*Case: SOT-23, Molded Plastic
*Terminals: Solderable per MIL-STD-202, Method 208
*Polarity: See diagram
*Weight: 0.008 grams

SOT-23 Outline Dimensions

Uint:mm



Dim	Min	Max
A	0.35	0.51
B	1.19	1.40
C	2.10	3.00
D	0.85	1.05
E	0.46	1.00
G	1.70	2.10
H	2.70	3.10
J	0.01	0.13
K	0.89	1.10
L	0.30	0.61
M	0.076	0.25

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 (1) Single Diode Double Diode	I_{FM}	160 140	mA
Non-Repetitive Peak Forward Surge Current @ t=1.0ms @ t=1.0s	I_{FSM}	1.0 0.5	A
Power Dissipation	P_D	225	mW
Thermal Resistance Junction to Ambient Air (1)	$R_{\theta JA}$	556	°C/W
Operating and Storage Temperature Range	Tj, T_{STG}	-55 to + 150	°C

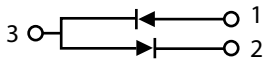
Electrical Characteristics (T_A=25°C Unless Otherwise Note) (Each Diode)

Characteristic	Symbol	Min	Max	Unit
Off Characteristics				
Reverse Breakdown Voltage I_R = 100μA	V_{BR}	75	-	V
Reverse Voltage Leakage Cur rent V_R=70 V	I_R	-	5	nA
Diode Capacitance (V_R = 0V, f = 1.0 MHz)	C_D	-	2.0	pF
Forward Voltage I_F = 1 mA I_F = 10 mA I_F = 50 mA I_F = 150 mA	V_F	 - - - -	 0.9 1.0 1.1 1.25	V
Reverse Recovery Time I_F = I_R = 10mA, I_{rr} = 0.1 x I_R, R_L=100Ω	t_{rr}	-	3	μs

Note:

1. Part mounted on FR-4 board with recommended pad layout.

Device Marking

Item	Marking	Eqivalent Circuit diagram
BAV199	JY	

Characteristics Curve

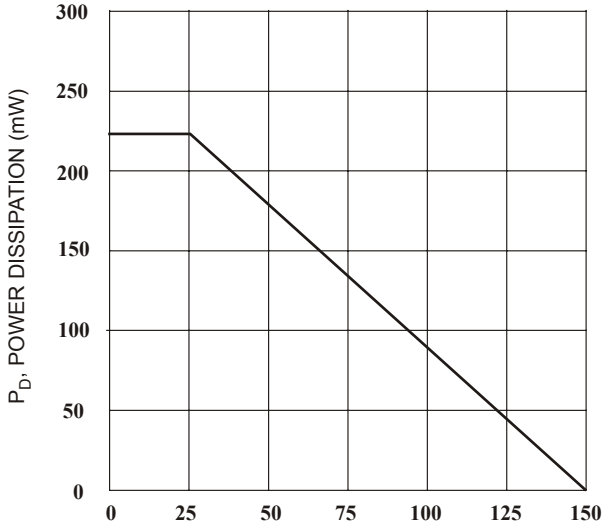


Fig. 1 Power Derating Curve

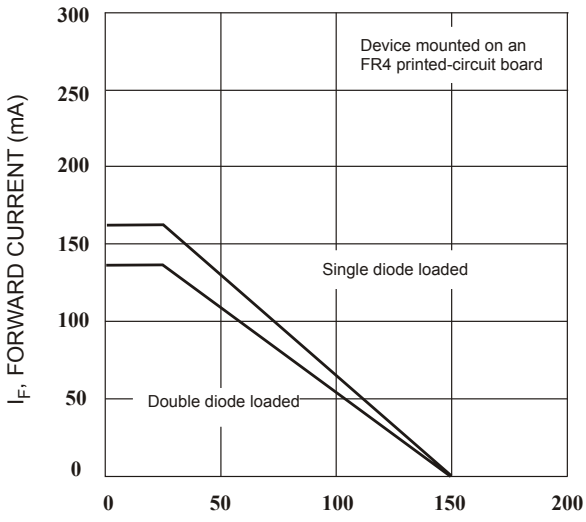


Fig. 2 Current Derating Curve

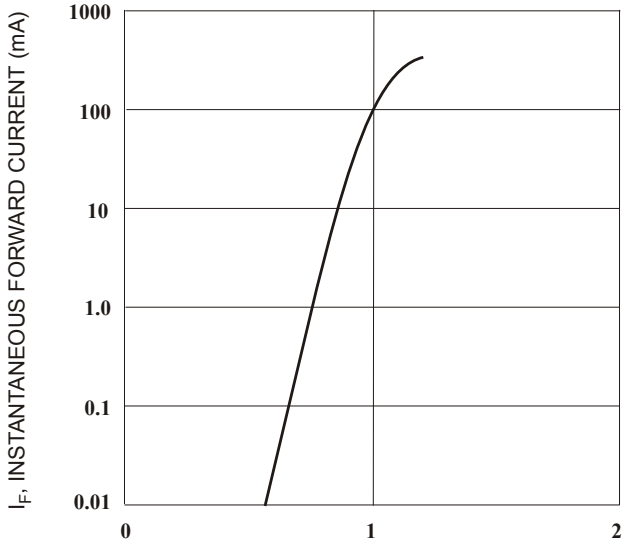


Fig. 3 Typical Forward Characteristics

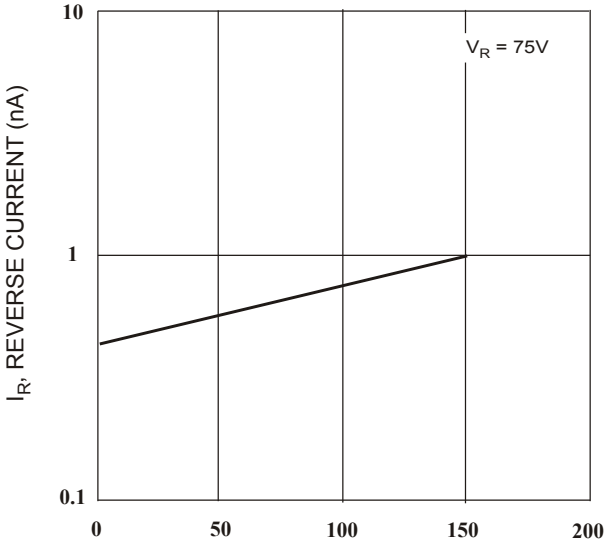


Fig. 4 Typical Reverse Characteristics