

Surface Mount Switching Diode

(Pb) Lead(Pb)-Free

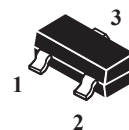
Features:

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

SWITCHING DIODE

160m AMPERES

75 VOLTS



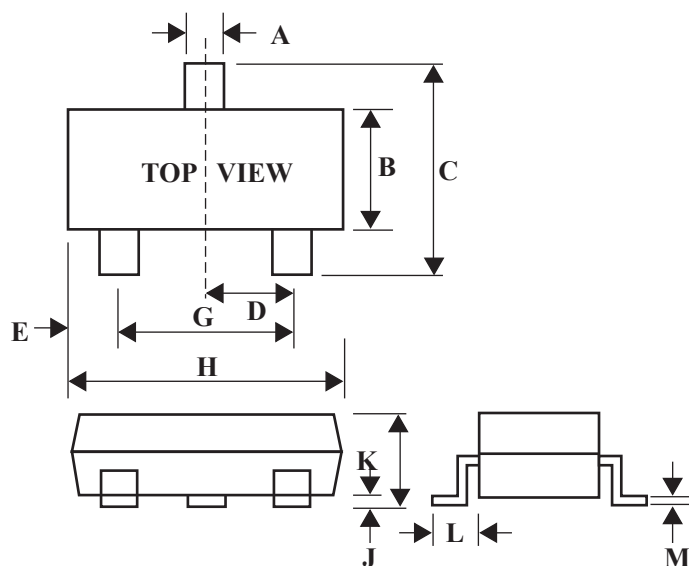
SOT-23

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

Unit: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 @ $t=1.0ms$ Surge Current @ $t=1.0s$	I_{FSM}	1.0 0.5	A
Power Dissipation	P_D	225	mW
Thermal Resistance Junction to Ambient Air ⁽¹⁾	$R_{\theta JA}$	556	$^{\circ}C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	$^{\circ}C$

Electrical Characteristics ($T_A=25^{\circ}C$ Unless Otherwise Note) (Each Diode)

Characteristic	Symbol	Min	Max	Unit
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Off Characteristics

Reverse Breakdown Voltage $I_R = 100\mu A$	V_{BR}	75	-	V
Reverse Voltage Leakage Current $V_R=70V$	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 $I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R, R_L=100\Omega$	t_{rr}	-	3	μs

Note:

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

Device Marking

Item	Marking	Equivalent Circuit diagram
BAV199	JY	

Characteristics Curve

