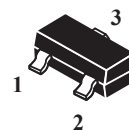


**Surface Mount Switching Diode**

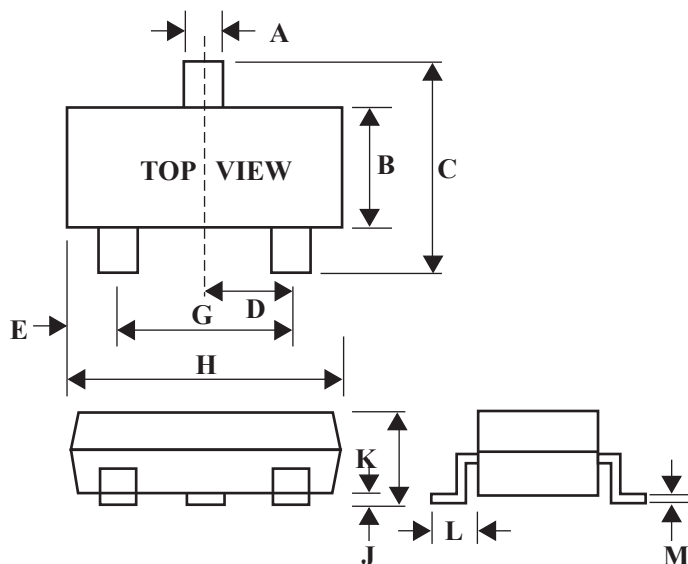
**(Pb)** Lead(Pb)-Free

**Features:**

- \*Low Current Leakage
- \*Low Forward Voltage
- \*Reverse Recover Time  $T_{rr} \leq 4ns$
- \*Small Outline Surface Mount SOT-23 Package

**SWITCHING DIODE**
**200m AMPERES**
**50 VOLTS**

**SOT-23**
**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
Reverse Voltage	$V_R$	50	V
Forward Current	$I_F$	200	mA
Peak Forward Surge Current	$I_{FM}$	500	mA

## Thermal Characteristics

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board <sup>1</sup> $T_A=25^\circ\text{C}$ Derate Above $25^\circ\text{C}$	$P_D$	225 1.8	mW mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate <sup>2</sup> $T_A=25^\circ\text{C}$ Derate Above $25^\circ\text{C}$	$P_D$	300 2.4	mW mW/ $^\circ\text{C}$
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature	$T_J, T_{stg}$	-55 to + 150	$^\circ\text{C}$

1. FR-5=1.0x0.75x0.062 in.

2. Alumina=0.4x0.3x0.024 in 99.5% Alumina.

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

Characteristic	Symbol	Min	Max	Unit
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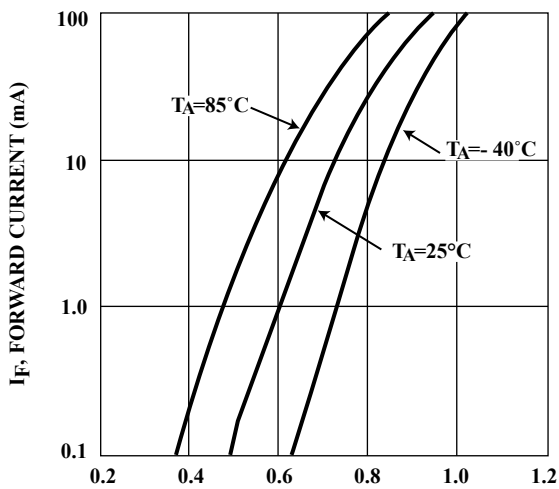
## Off Characteristics

Reverse Breakdown Voltage $I_{BR} = 5.0 \mu\text{Adc}$	$V_{BR}$	50	-	V
Reverse Voltage Leakage Current $V_R=50\text{V}, T_J=125^\circ\text{C}$ $V_R=50\text{V}$	$I_R$	- -	100 0.1	$\mu\text{A}$
Diode Capacitance ( $V_R = 0, f = 1.0 \text{ MHz}$ )	$C_D$	-	2.0	pF
Forward Voltage $I_F = 100 \text{ mAdc}$	$V_F$	-	1.0	V
Reverse Recovery Time $I_F=I_R=10 \text{ mAdc}, I_{R(REC)}=1.0 \text{ mAdc}$ measured at $I_R=1.0\text{mA } R_L=100\Omega$	$t_{rr}$	-	4.0	ns

## Device Marking

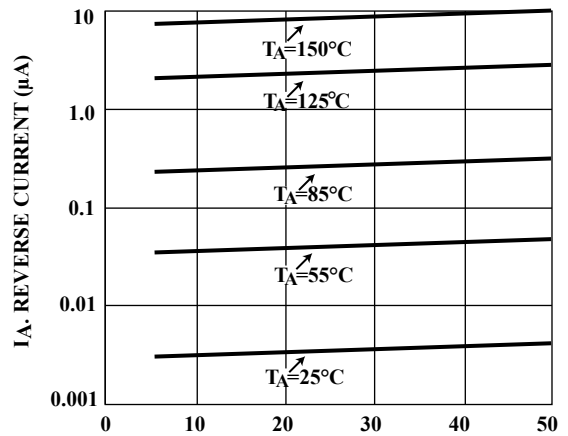
Item	Marking	Equivalent Circuit diagram
BAV74	JA	

## Characteristics Curve



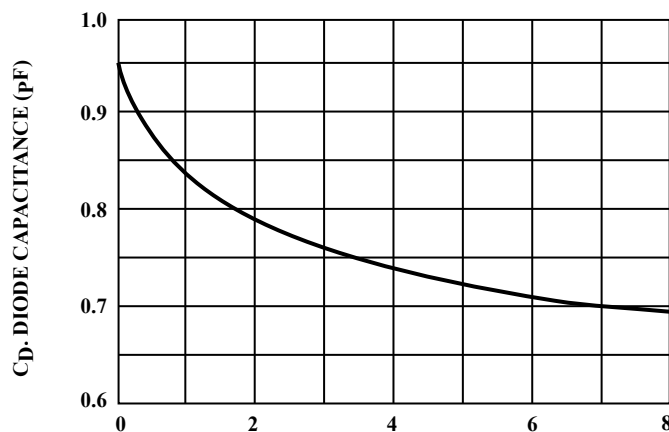
$V_F$ , FORWARD VOLTAGE (VOLTS)

FIG.1 FORWARD VOLTAGE



$V_R$ , REVERSE VOLTAGE (VOLTS)

FIG.2 LEAKAGE CURRENT



$V_R$ , REVERSE VOLTAGE (VOLTS)

FIG.3 CAPACITANCE