

**SURFACE MOUNT FAST SWITCHING DIODE**

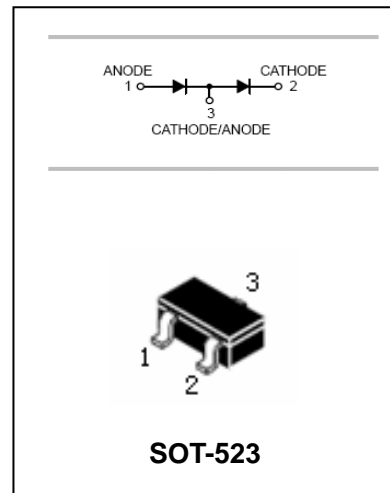
**BAV99T**

**FEATURES**

- Ultra-Small Surface Mount Package.
- Fast switching speed.
- For General Purpose Switching Applications.
- High Conductance.
- Also Available in Lead Free Version.



Lead-free



**ORDERING INFORMATION**

Type No.	Marking	Package Code
.BAV99T	JE	SOT-523

**MAXIMUM RATING @ Ta=25°C unless otherwise specified**

Symbol	Parameter	Value	Units
V <sub>RRM</sub>	Peak Repetitive Reverse Voltage	85	V
V <sub>RWM</sub>	Working Peak Reverse Voltage	85	V
V <sub>R</sub>	DC Blocking Voltage	85	V
V <sub>R(RMS)</sub>	RMS Reverse Voltage	60	V
I <sub>FM</sub>	Forward Continuous Current	200	mA
I <sub>FRM</sub>	Repetitive Peak Forward Current	500	mA
I <sub>FSM</sub>	Non-repetitive Peak Forward Surge Current		A
	@t=1.0µs	4.5	
	@t=1.0ms	1	
	@t=1.0s	0.5	
P <sub>d</sub>	Power Dissipation	150	mW
R <sub>θJA</sub>	Thermal Resistance Junction to Ambient	833	°C/W
T <sub>j</sub> , T <sub>stg</sub>	Junction and Storage Temperature	-65 to +150	°C

**ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified**

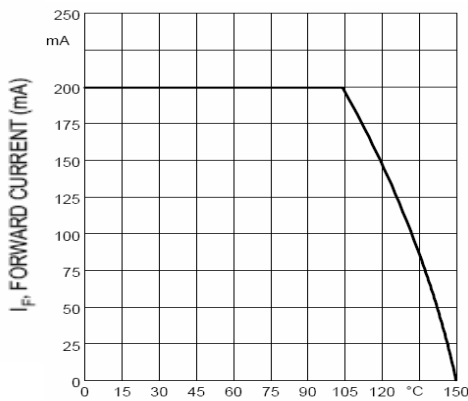


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Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=100\mu A$	85		V
Leakage current	$I_R$	$V_R=25V$		30	nA
		$V_R=75V$		2	$\mu A$
		$V_R=25V, T_j=150^\circ C$		60	$\mu A$
		$V_R=75V, T_j=150^\circ C$		100	$\mu A$
Forward voltage	$V_F$	$I_F=1mA$		0.715	V
		$I_F=10mA$		0.855	
		$I_F=50mA$		1	
		$I_F=150mA$		1.25	
Typical Total Capacitance	$C_T$	$V_R=0V, f=1MHz$		1.5	pF
Reverse recovery Time	$t_{rr}$	$I_F=I_R=10mA, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$		4	ns

TYPICAL CHARACTERISTICS @  $T_a=25^\circ C$  unless otherwise specified



$T_S$ , SOLDERING POINT TEMPERATURE ( $^\circ C$ )  
Fig. 1 Current Derating Curve

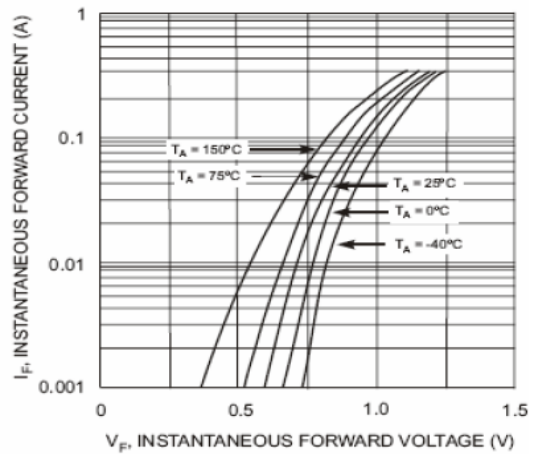


Fig. 2 Forward Characteristics

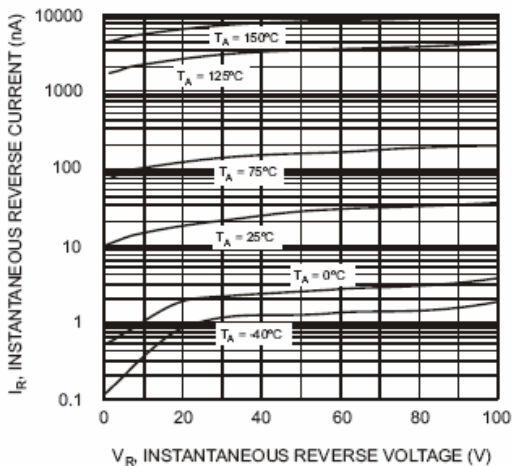


Fig. 3 Typical Reverse Characteristics

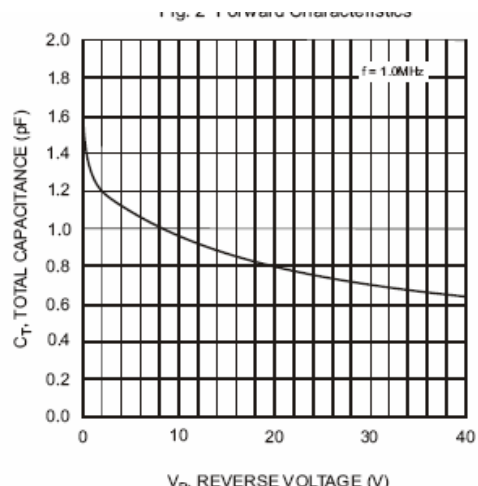


Fig. 4 Typical Capacitance vs. Reverse Voltage



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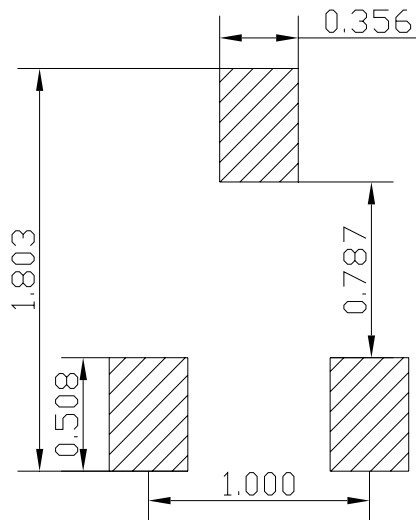
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-523

SOT-523		
Dim	Min	Max
A	1.5	1.7
B	0.75	0.85
C	0.6	0.8
D	0.15	0.3
G	0.9	1.1
H	0.02	0.1
J	0.1Typical	
K	1.45	1.75
All Dimensions in mm		

**SOLDERING FOOTPRINT**



Unit : mm

**PACKAGE INFORMATION**

Device	Package	Shipping
BAV99T	SOT-523	3000/Tape&Reel