



**BAS16T/BAW56T
BAV70T/BAV99T**

Surface Mount Switching Diodes

(Pb) Lead(Pb)-Free

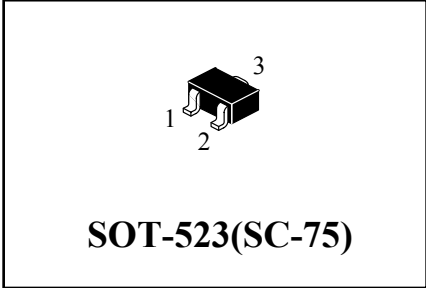
Features:

- * Ultra-Small Surface Mount Package
- * Fast switching Speed
- * For General Purpose Switching Applications
- * High Conductance

Mechanical Data:

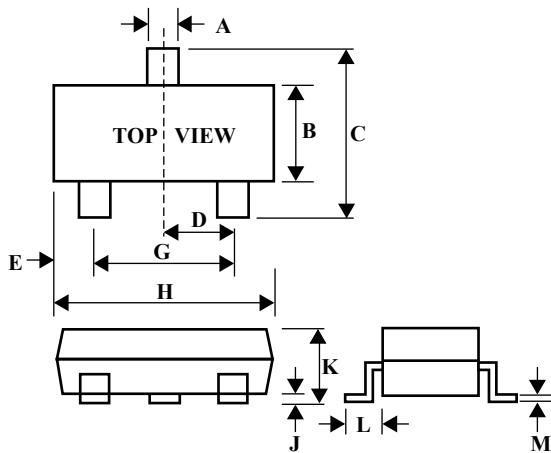
- * Terminals: Solderable per MIL-STD-202, Method 208
- * Polarity: See Diagrams Page.2
- * Marking: See Diagrams Page.2
- * Weight: 0.002 grams (approx)

**SWITCHING DIODES
75 mAMPERES
85 VOLTS**



SOT-523 Outline Dimensions (SC-75)

Unit:mm



SC-75		
Dim	Min	Max
A	0.30	0.50
B	0.70	0.90
C	1.45	1.75
D	-	0.50
E	0.15	0.40
G	0.80	1.00
H	1.40	1.80
J	0.00	0.10
K	0.70	1.00
L	0.37	0.48
M	0.10	0.25

Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RRM} V_R	85	V
Forward Continuous Current Single Diode Double Diode	I_{FM}	155 75	mA
Non-Repetitive Peak Forward Surge Current @ $t=1.0\mu\text{s}$ @ $t=1.0\text{mS}$ @ $t=1.0\text{S}$	I_{FSM}	4.0 1.0 0.5	A
Power Dissipation	P_d	150	mW
Thermal Resistance	$R_{\theta JA}$	833	$^{\circ}\text{C/W}$
Storage Temperature Range	T_j, T_{STG}	-55 to + 150	$^{\circ}\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage $I_R=100\mu\text{A}$	$V_{(BR)R}$	85	-	V
Forward Voltage $I_F=1.0\text{mA}$ $I_F=10\text{mA}$ $I_F=50\text{mA}$ $I_F=150\text{mA}$	V_F	-	715 855 1000 1250	mV
Total Capacitance $V_R=0\text{V}, f=1.0\text{MHz}$	C_T	-	1.5	Pf
Reverse Current $V_R=75\text{V}$ $V_R=25\text{V}$	I_R	-	2.0 0.03	μA
Reverse Recover Time $I_F=I_R=10\text{mA}, I_{rr}=0.1 \times I_R, R_L=100\Omega$	T_{rr}	-	4.0	nS

Device Marking

Item	Marking	Equivalent Circuit diagram
BAS16T	A2	
BAV99T	JE	
BAV70T	JJ	
BAW56T	JD	

Electrical Characteristic curves($T_A=25^{\circ}\text{C}$)

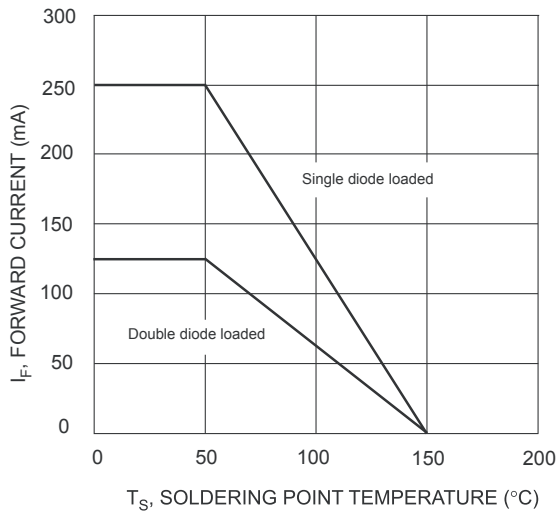


Fig. 1 Current Derating Curve

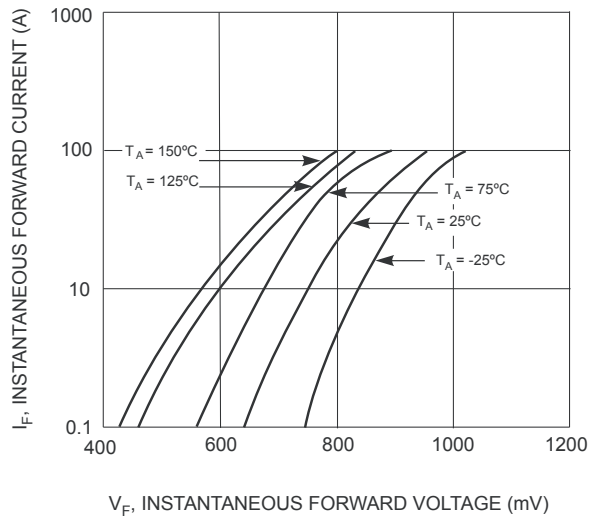


Fig. 2 Forward Characteristics

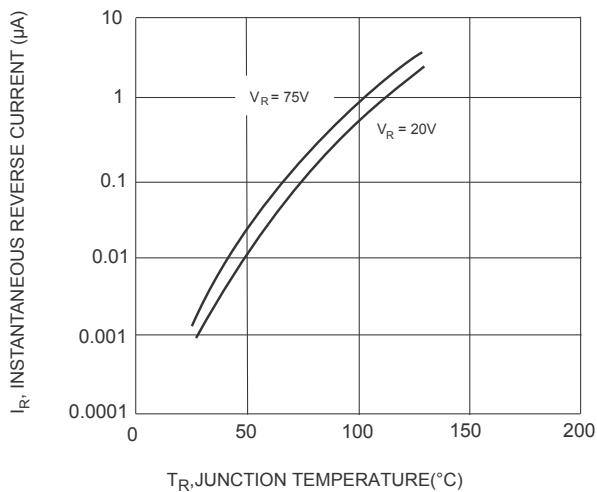


Fig. 3 Typical Reverse Characteristics