

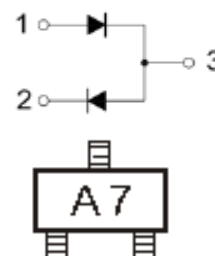
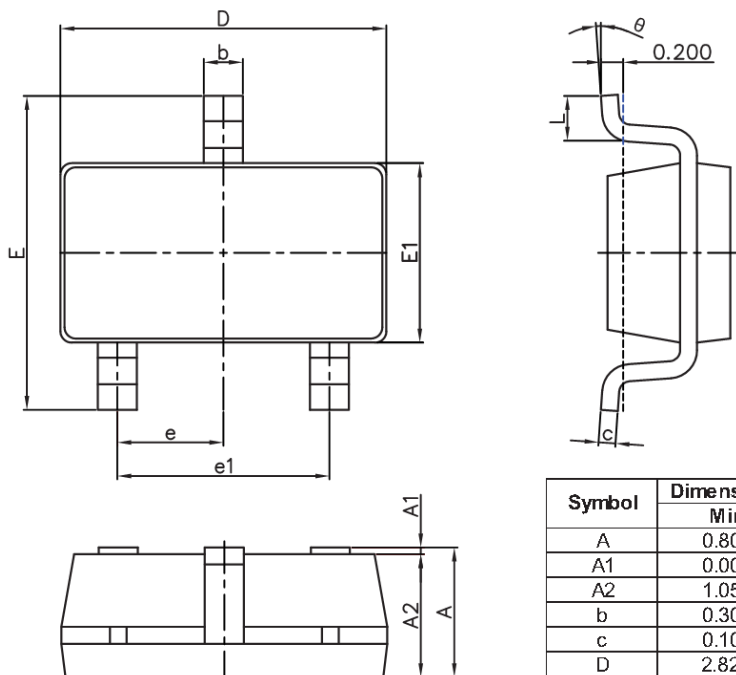
## BAV99 SWITCHING DIODE

**Features:**

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose and Switching
- Plastic Material –UL Recognition Flammability Classification 94V-O
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

**Mechanical Data:**

- Case: SOT-23, Molded Plastic
- Terminals: Plated leads Solderable per MIL-STD-202, Method 208
- Mounting Position: Any
- Marking: A7


**Mechanical Dimensions: In mm/Inches**


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.800	1.250	0.031	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E1	0.990	1.700	0.039	0.067
E	2.250	2.950	0.084	0.116
e	0.950(BSC)		0.037(BSC)	
e1	1.800	2.000	0.071	0.079
L	0.300	0.600	0.012	0.024
$\theta$	0°	8°	0°	8°

**SOT-23**

**Ordering Information:**

Device	Package	Shipping
BAV99	SOT-23(Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Maximum Ratings @ $T_A=25^{\circ}\text{C}$  unless otherwise specified**

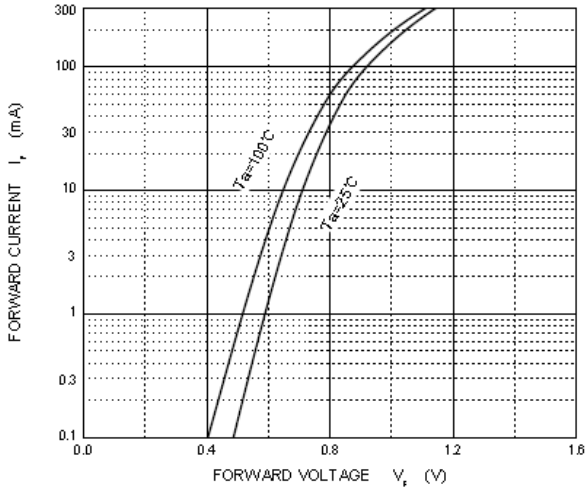
Characteristic	Symbol	Limits	Unit
Reverse Voltage	$V_R$	70	V
Forward Current	$I_F$	200	mA
Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	$I_{FSM}$	2.0	A
Power Dissipation	$P_D$	225	mW
Typical Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	556	$^{\circ}\text{C/W}$
Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^{\circ}\text{C}$

**Electrical Characteristics @ $T_A=25^{\circ}\text{C}$  unless otherwise specified**

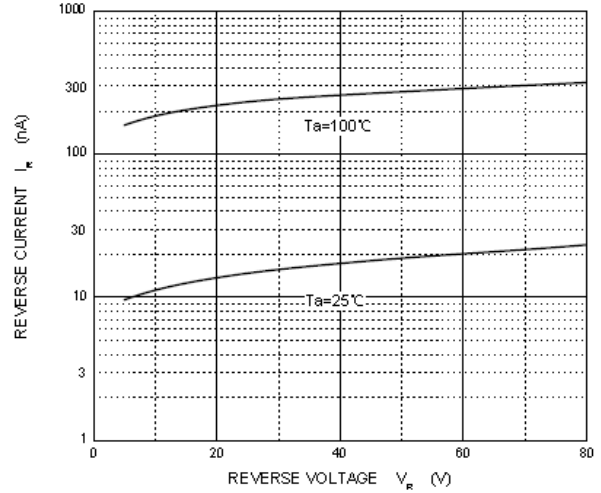
Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse breakdown voltage	$V_R$	70	-	V	@ $I_F=100\mu\text{A}$
Forward Voltage	$V_F$	-	0.715 0.855 1 1.25	V	@ $I_F=1\text{mA}$ @ $I_F=10\text{mA}$ @ $I_F=50\text{mA}$ @ $I_F=150\text{mA}$
Reverse Leakage Current	$I_R$	-	2.5	$\mu\text{A}$	@ $V_R=70\text{V}$
Capacitance between terminals	$C_T$	-	1.5	pF	$V_R=0\text{V}, f=1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	-	6.0	ns	$I_F=I_R=10\text{mA}, I_{RR}=0.1 \times I_R, R_L=100\Omega$

Note: 1. Device mounted on fiberglass substrate 40×40×1.5mm

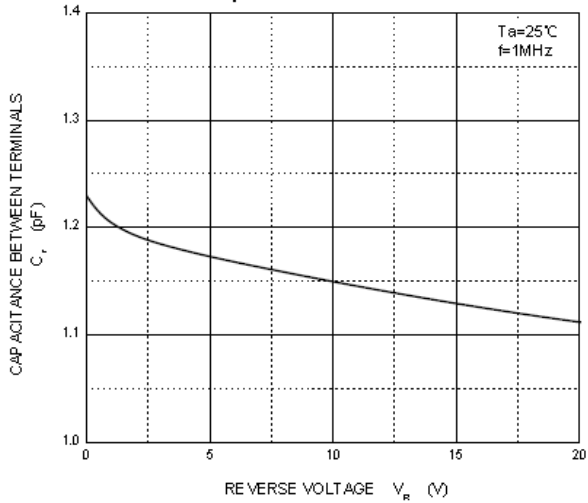
**Forward Characteristics**



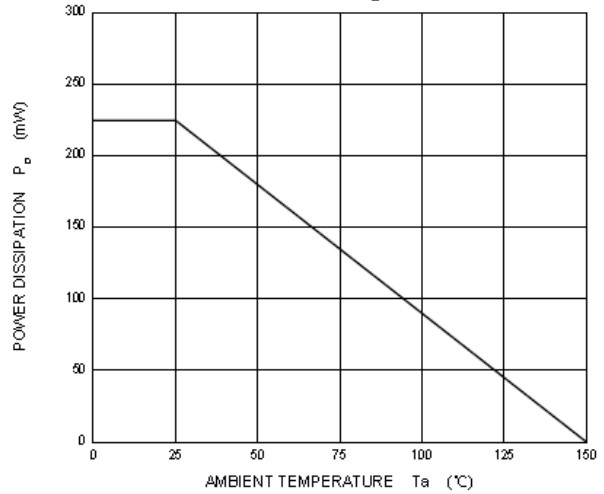
**Reverse Characteristics**



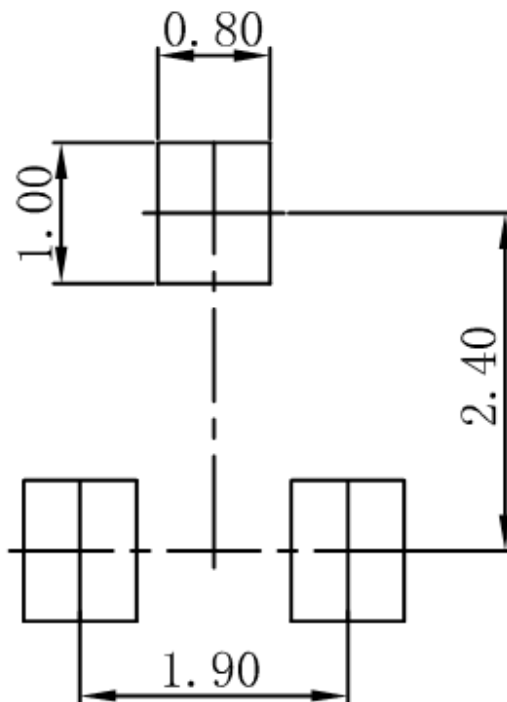
**Capacitance Characteristics**



**Power Derating Curve**



### SOT-23 Suggested Pad Layout



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