

## DATA SHEET

### BAV99

#### SURFACE MOUNT SWITCHING DIODES

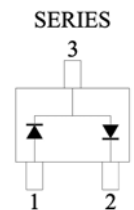
**VOLTAGE** 70 Volts **POWER** 225 mW

#### FEATURES

- FAST SWITCHING SPEED
- ELECTRICALLY IDENTICAL TO STANDARD JEDEC
- HIGH CONDUCTANCE
- SURFACE MOUNT PACKAGE IDEALLY SUITED FOR AUTOMATIC INSERTION
- LEAD FREE AND HALOGEN-FREE

#### MECHANICAL DATA

- CASE : SOT-23 PLASTIC CASE
- TERMINALS : SOLDERABLE PER MIL-STD-202, METHOD208
- APPROX.WEIGHT:0.008 GRAMS



CASE : SOT-23

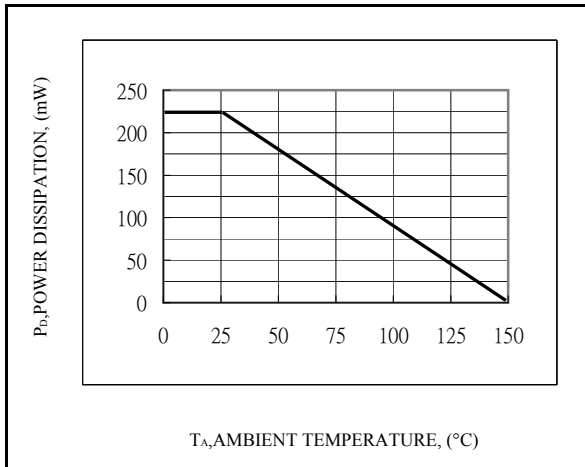
### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

#### RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED

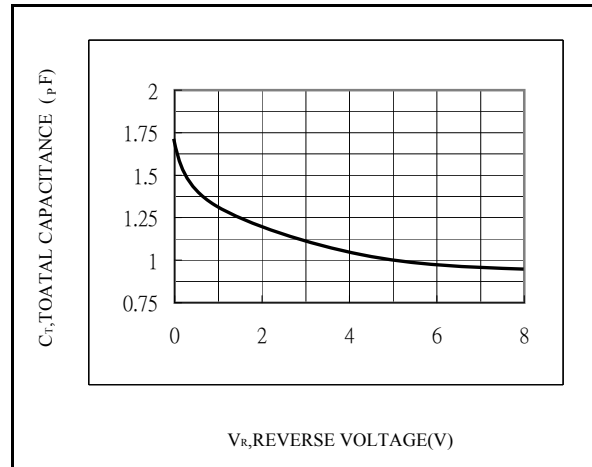
PARAMETER	SYMBOL	VALUE	UNITS
MAXIMUM REVERSE VOLTAGE	$V_R$	70	V
RMS REVERSE VOLTAGE	$V_{R(RMS)}$	49	V
AVERAGE RECTIFIED CURRENT, HALF WAVE RECTIFICATION WITH RESISTIVE LOAD AND $f \geq 50\text{Hz}$	$I_O$	215	mA
NON-REPETITIVE PEAK FORWARD CURRENT AT	$I_{FSM}$	$T=1.0\mu\text{s}$	2.0
		$T=1.0\text{ms}$	1.0
		$T=1.0\text{s}$	0.5
PEAK FORWARD SURGE CURRENT	$I_{FM}$	500	mA
POWER DISSIPATION (DERATE ABOVE 25°C)	$P_{TOT}$	225	mW
JUNCTION TEMPERATURE	$T_J$	150	°C
STORAGE TEMPERATURE RANGE	$T_{STG}$	-65~+150	°C

#### ELECTRICAL CHARACTERISTICS (AT $T_A = -25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

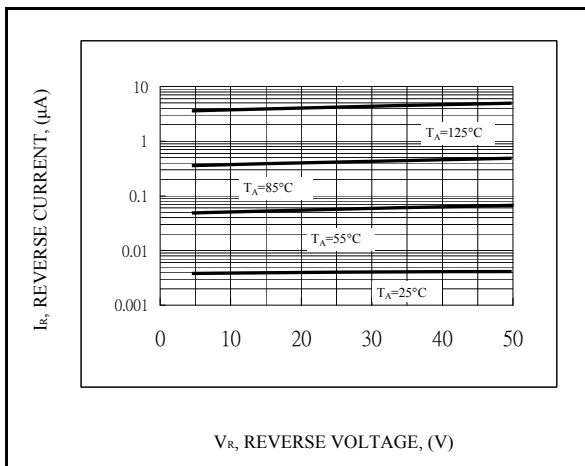
PARAMETER	SYMBOL	VALUE	UNITS
MAXIMUM FORWARD VOLTAGE	$V_F$	$I_F=1\text{mA}$	0.715
		$I_F=10\text{mA}$	0.855
		$I_F=50\text{mA}$	1.0
		$I_F=150\text{mA}$	1.25
MAXIMUM DC REVERSE CURRENT AT 70V	$I_R$	2.5	$\mu\text{A}$
JUNCTION CAPACITANCE, ( $V_R=0$ , $f=1\text{MHz}$ )	$C_J$	1.75	pF
REVERSE RECOVERY TIME, ( $I_F=10\text{mA}$ TO $I_R=1\text{mA}$ , $V_R=6\text{V}$ , $R_L=100\Omega$ )	$T_{RR}$	6.0	nS



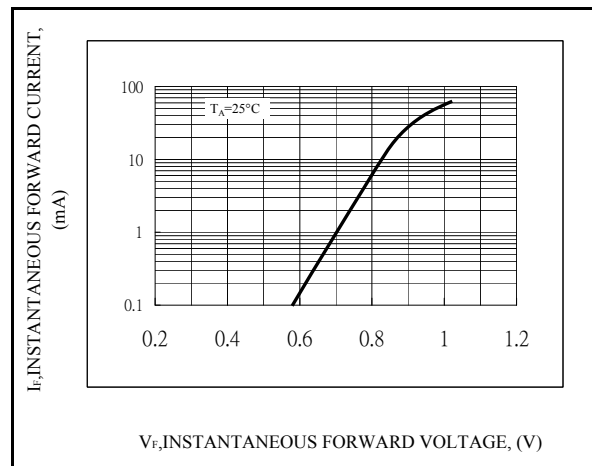
**Fig.1-POWER DERATING CURVE**



**Fig.2-TYPICAL CAPACITANCE VS. REVERSE VOLTAGE**

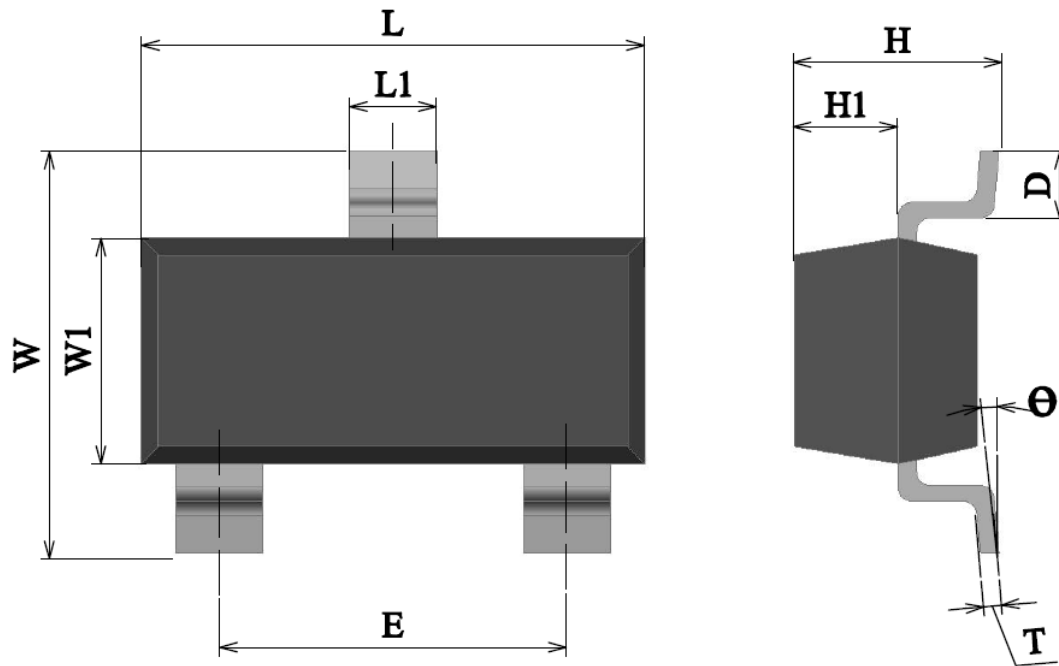


**Fig.3- TYPICAL REVERSE CHARACTERISTICS**



**Fig.4- FORWARD CHARACTERISTIC**

## SOT-23 DIMENSION



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
L	2.80	3.10	0.110	0.122
L1	0.30	0.50	0.012	0.020
W	2.25	2.54	0.089	0.100
W1	1.20	1.40	0.047	0.055
E	1.80	2.00	0.071	0.079
H	0.90	1.15	0.035	0.045
H1	0.40	0.80	0.016	0.031
D	0.30	0.50	0.012	0.020
T	0.08	0.15	0.003	0.006
θ	0°	8°	0°	8°