

# BAV99

**PRV : 85 Volts**

**I<sub>o</sub> : 125 mA**

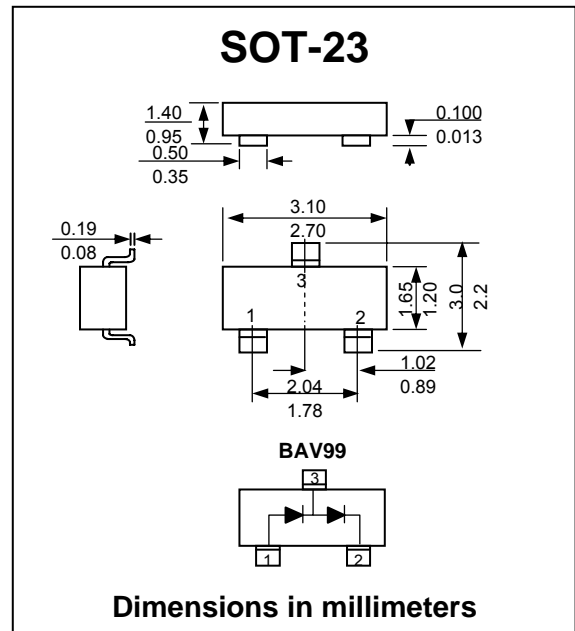
## FEATURES :

- \* Small plastic SMD package
- \* High switching speed : max. 4 ns
- \* Continuous reverse voltage : max.75 V
- \* Repetitive peak reverse voltage : max. 85 V
- \* Repetitive peak forward current : max. 450 mA
- \* Pb / RoHS Free

## MECHANICAL DATA :

- \* Case : SOT-23 plastic Case
- \* Marking Code : A7

## HIGH SPEED DOUBLE DIODE



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	85	V
Maximum Continuous Reverse Voltage	$V_R$	75	V
Maximum Continuous Forward Current (Note 1)	$I_F$	125	mA
Maximum Repetitive Peak Forward Current	$I_{FRM}$	450	mA
Maximum Non-repetitive Peak Forward Current (square wave; $T_j = 25\text{ °C}$ prior to surge)	$I_{FSM}$	$t = 1\mu s$	4
		$t = 1ms$	1
		$t = 1s$	0.5
Total Power Dissipation (Note 1)	$P_{tot}$	250	mW
Thermal Resistance Junction to tie-point	$R_{th\ j-tp}$	360	K/W
Thermal Resistance Junction to Ambient (Note 1)	$R_{th\ j-a}$	500	K/W
Junction Temperature Range	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-65 to +150	°C

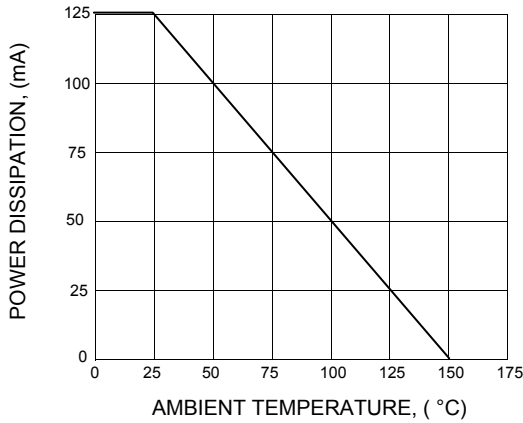
## ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage	$I_F = 1\text{ mA}$	$V_F$	-	-	715	mV
	$I_F = 10\text{ mA}$	$V_F$	-	-	855	mV
	$I_F = 50\text{ mA}$	$V_F$	-	-	1.0	V
	$I_F = 150\text{ mA}$	$V_F$	-	-	1.25	V
Reverse Current	$V_R = 25\text{ V}$	$I_R$	-	-	30	nA
	$V_R = 75\text{ V}$	$I_R$	-	-	1.0	$\mu A$
	$V_R = 25\text{ V}$ ; $T_j = 150\text{ °C}$	$I_R$	-	-	30	$\mu A$
	$V_R = 75\text{ V}$ ; $T_j = 150\text{ °C}$	$I_R$	-	-	50	$\mu A$
Diode Capacitance	$V_R = 0\text{ V}$ , $f = 1\text{ MHz}$	$C_D$	-	-	1.5	pF
Reverse Recovery Time	$I_F = 10\text{ mA}$ to $I_R = 10\text{ mA}$ , $I_R = 1\text{ mA}$ , $R_L = 100\ \Omega$	$T_{rr}$	-	-	4	ns

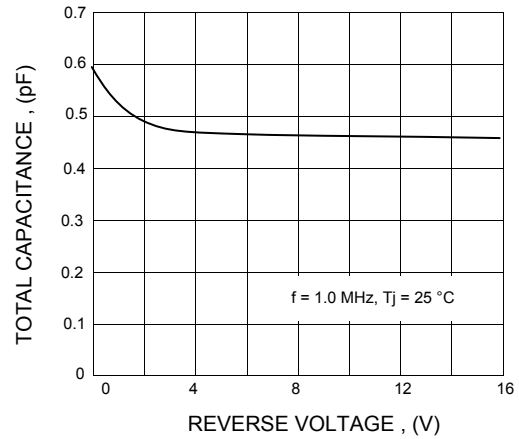
Notes : (1) Device mounted on an FR-4 printed-circuit board

**RATINGS AND CHARACTERISTIC CURVES ( BAV99 )**

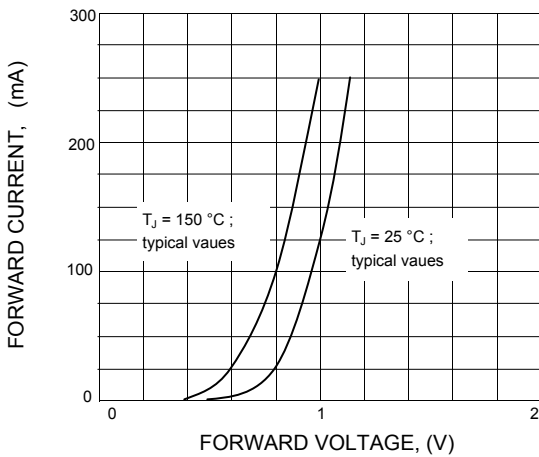
**FIG.1 - MAXIMUM PERMISSIBLE CONTINUOUS FORWARD CURRENT AS A FUNCTION OF AMBIENT TEMPERATURE**



**FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE**



**FIG.3 - FORWARD CURRENT AS A FUNCTION OF FORWARD VOLTAGE**



**FIG.4 - REVERSE CURRENT AS A FUNCTION OF JUNCTION TEMPERATURE**

