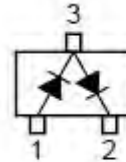


## BAV99 SWITCHING DIODES

### FEATURES

Fast Switching Speed  
For General Purpose Switching Applications  
High Conductance



Marking Code: A7  
SOT-23 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

Parameter	Symbol	Value	Unit	
Repetitive Peak Reverse Voltage	$V_{RRM}$	85	V	
Continuous Reverse Voltage	$V_R$	75	V	
Continuous Forward Current (Double Diode Loaded)	$I_F$	125	mA	
Continuous Forward Current (Single Diode Loaded)	$I_F$	215	mA	
Repetitive Peak Forward Current	$I_{FRM}$	450	mA	
Non-repetitive Peak Forward Surge Current	$I_{FSM}$	at $t = 1\text{ s}$ at $t = 1\text{ ms}$ at $t = 1\text{ }\mu\text{s}$	0.5 1 4.5	A
Power Dissipation		$P_{tot}$	350	mW
Junction Temperature		$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 65 to + 150	$^\circ\text{C}$	

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Max.	Unit		
Forward Voltage at $I_F = 1\text{ mA}$ at $I_F = 10\text{ mA}$ at $I_F = 50\text{ mA}$ at $I_F = 150\text{ mA}$	$V_F$	0.715 0.855 1 1.25	V		
Reverse Current at $V_R = 25\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 25\text{ V}, T_j = 150\text{ }^\circ\text{C}$ at $V_R = 75\text{ V}, T_j = 150\text{ }^\circ\text{C}$		$I_R$	30 1 30 50	nA $\mu\text{A}$ $\mu\text{A}$ $\mu\text{A}$	
Diode Capacitance at $V_R = 0, f = 1\text{ MHz}$			$C_d$	1.5	pF
Reverse Recovery Time at $I_F = I_R = 10\text{ mA}, I_R = 1\text{ mA}, R_L = 100\text{ }\Omega$			$t_{rr}$	4	ns



### Typical Characteristics

### BAV99

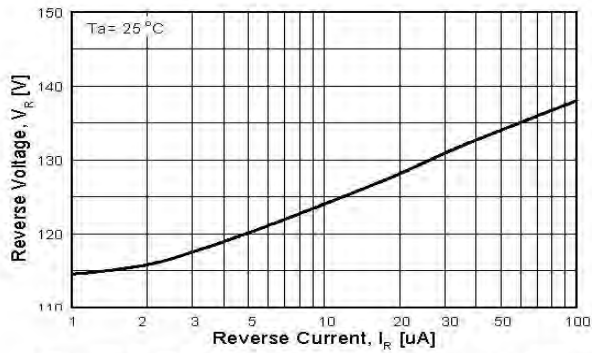


Figure 1. Reverse Voltage vs Reverse Current BV - 1.0 to 100uA

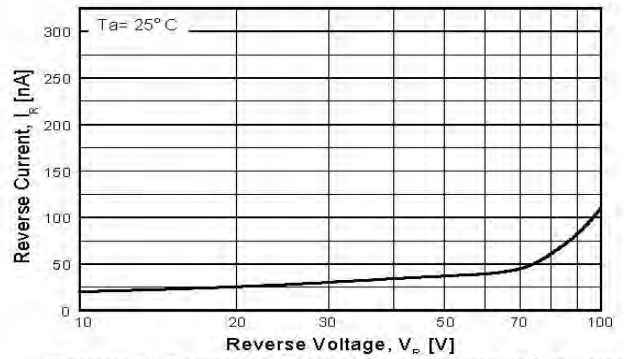


Figure 2. Reverse Current vs Reverse Voltage IR - 10 to 100 V

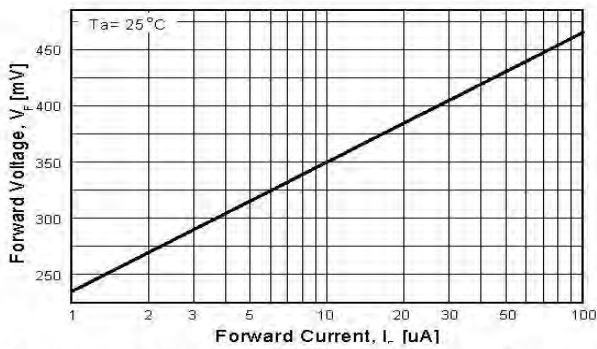


Figure 3. Forward Voltage vs Forward Current VF - 1.0 to 100 uA

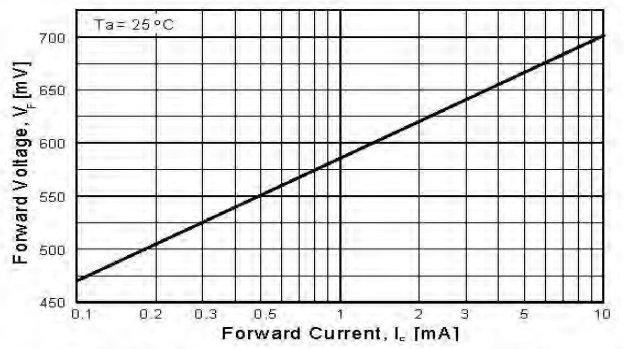


Figure 4. Forward Voltage vs Forward Current VF - 0.1 to 10 mA

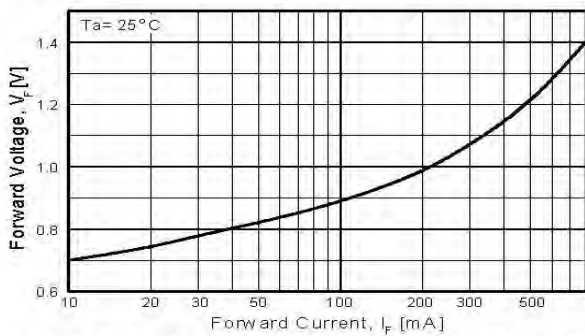


Figure 5. Forward Voltage vs Forward Current VF - 10 - 800 mA

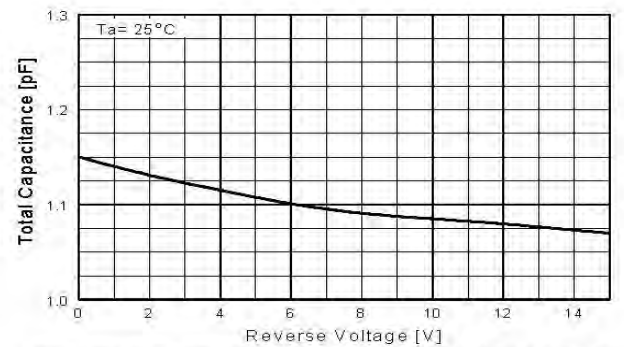


Figure 6. Total Capacitance vs Reverse Voltage

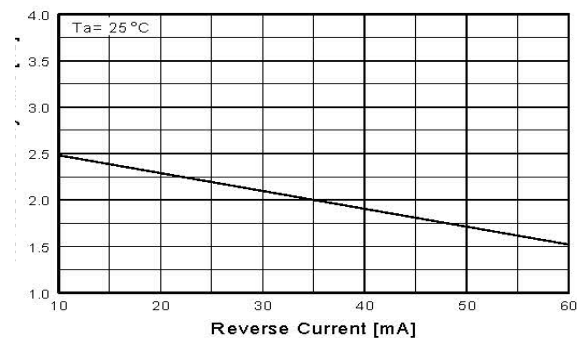


Figure 7. Reverse Recovery Time vs Reverse Current TRR - IR 10 mA vs 60 mA

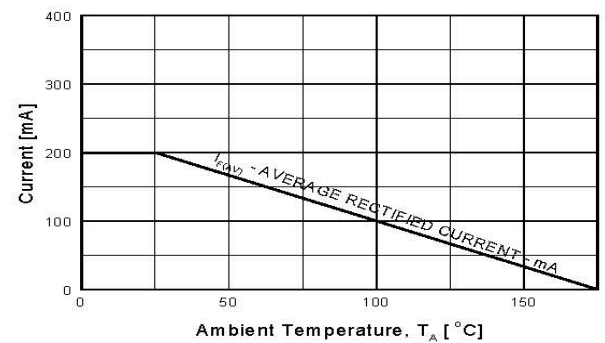
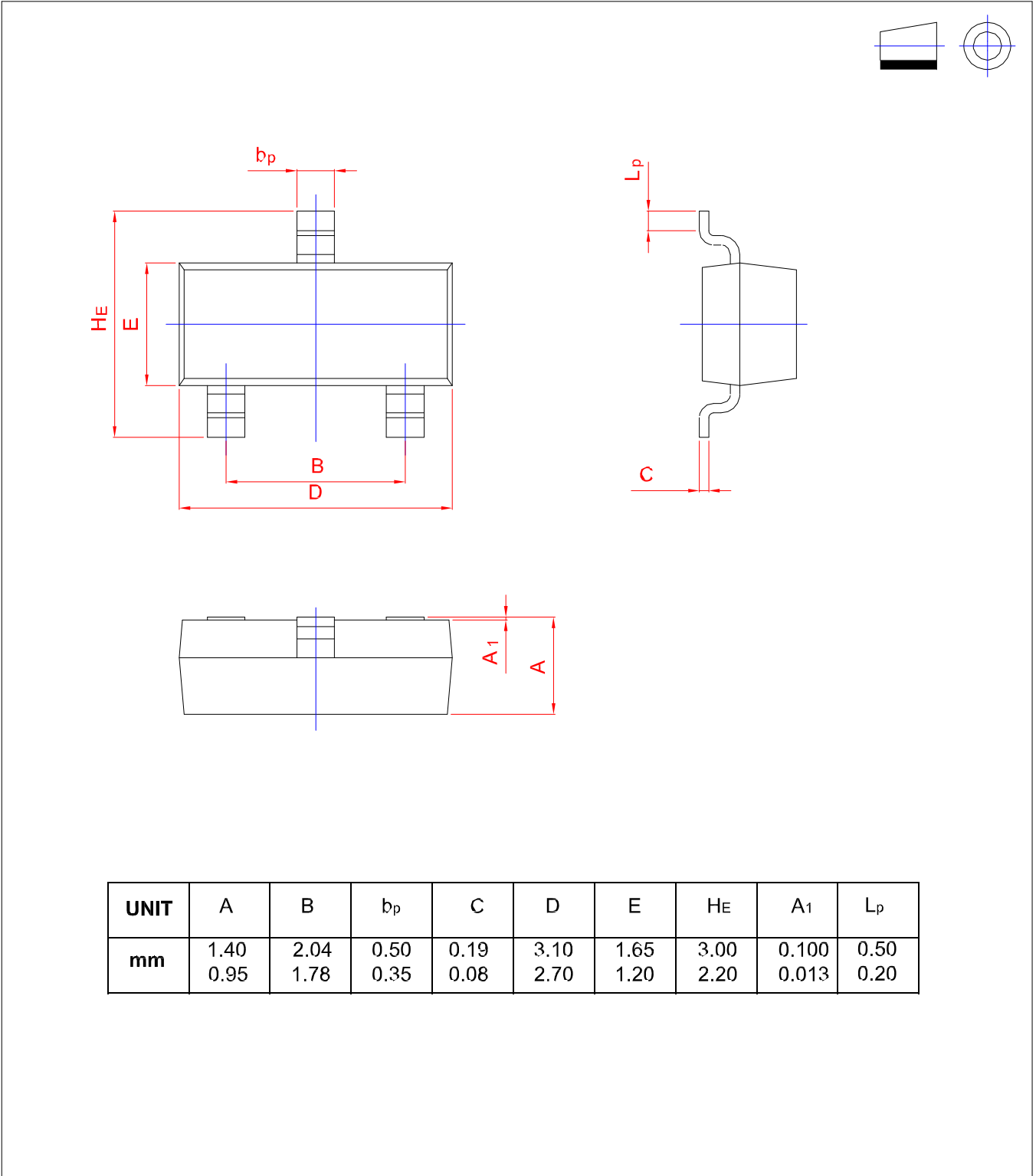


Figure 8. Average Rectified Current ( $I_{F(AV)}$ ) versus Ambient Temperature ( $T_A$ )

## PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



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