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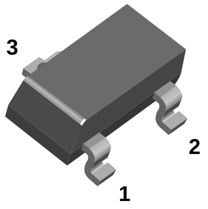
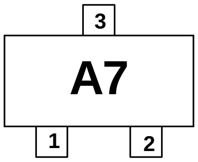
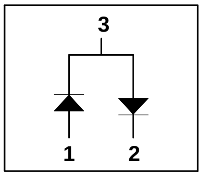
BAV99



SOT-23



Connection Diagram



Small Signal Diode

Absolute Maximum Ratings* T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
V_{RRM}	Maximum Repetitive Reverse Voltage	70	V
$I_{F(AV)}$	Average Rectified Forward Current	200	mA
I_{FSM}	Non-repetitive Peak Forward Surge Current Pulse width = 1.0 second Pulse width = 1.0 microsecond	 1.0 2.0	 A A
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_J	Operating Junction Temperature	150	°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

NOTES:
1) These ratings are based on a maximum junction temperature of 150 degrees C.
2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	350	mW
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	357	°C/W

Electrical Characteristics T_A = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min	Max	Units
V_R	Breakdown Voltage	I_R = 100 μA	70		V
V_F	Forward Voltage	I_F = 1.0 mA I_F = 10 mA I_F = 50 mA I_F = 150 mA		715 855 1.0 1.25	mV mV V V
I_R	Reverse Current	V_R = 70 V V_R = 25 V, T_A = 150°C V_R = 70 V, T_A = 150°C		2.5 30 50	μA μA μA
C_T	Total Capacitance	V_R = 0, f = 1.0 MHz		1.5	pF
t_{rr}	Reverse Recovery Time	I_F = I_R = 10 mA, I_{RR} = 1.0 mA, R_L = 100Ω		6.0	ns

Typical Characteristics

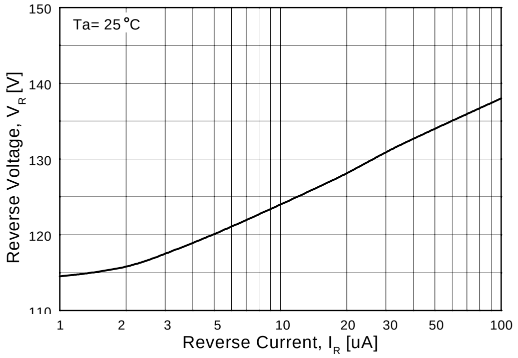


Figure 1. Reverse Voltage vs Reverse Current BV - 1.0 to 100uA

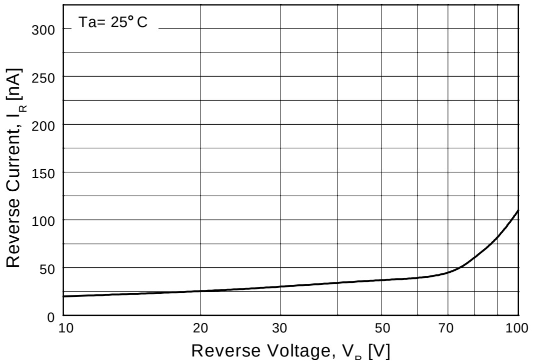


Figure 2. Reverse Current vs Reverse Voltage IR - 10 to 100 V

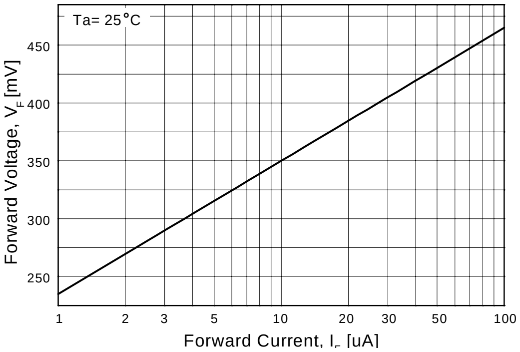


Figure 3. Forward Voltage vs Forward Current VF - 1.0 to 100 uA

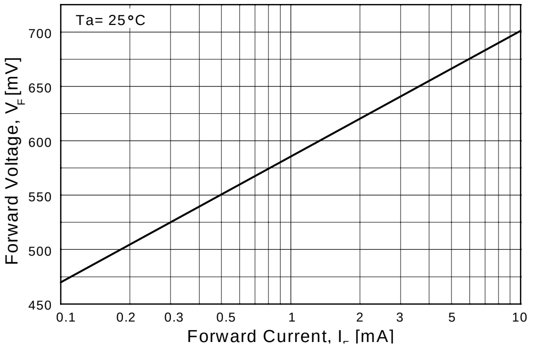


Figure 4. Forward Voltage vs Forward Current VF - 0.1 to 10 mA

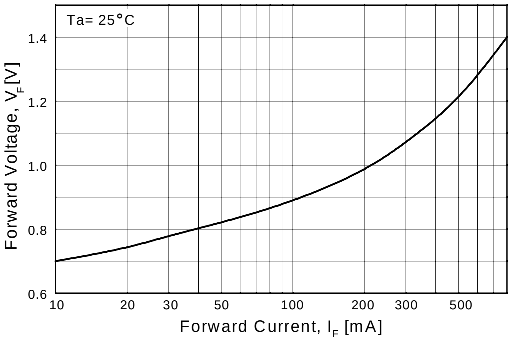


Figure 5. Forward Voltage vs Forward Current VF - 10 - 800 mA

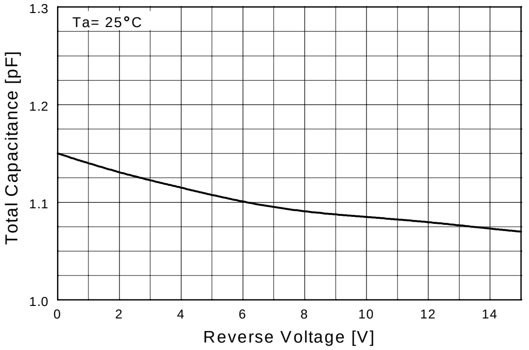


Figure 6. Total Capacitance vs Reverse Voltage

Typical Characteristics (continued)

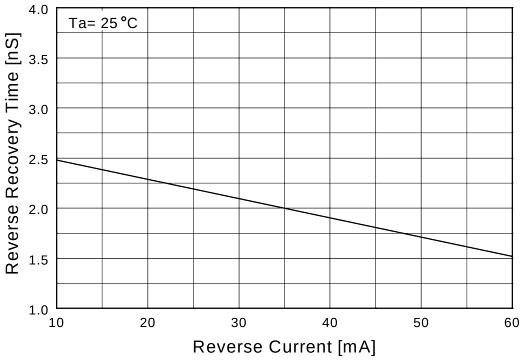


Figure 7. Reverse Recovery Time vs Reverse Current TRR - IR 10 mA vs 60 mA

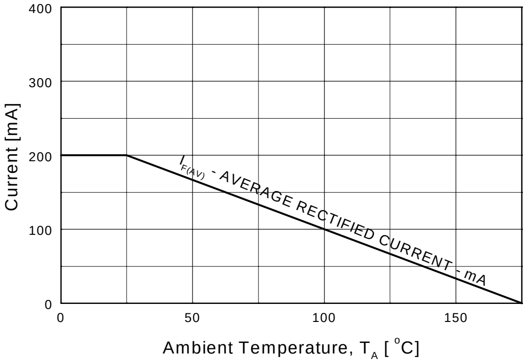


Figure 8. Average Rectified Current ($I_{F(AV)}$) versus Ambient Temperature (T_A)

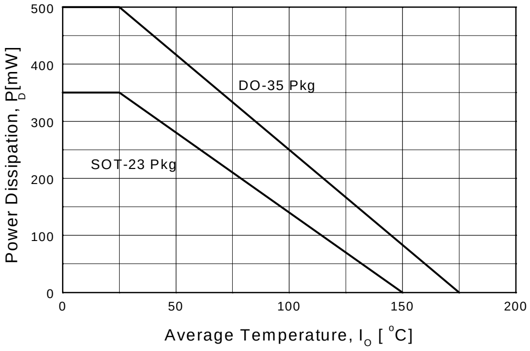


Figure 9. Power Derating Curve

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Rev. H4