

Dual Series Switching Diode

BAV99L, SBAV99L

Features

- S Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable
- These Devices are Pb-Free, Halogen Free/BFR Free and are RoHS Compliant

MAXIMUM RATINGS (Each Diode)

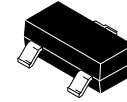
Rating	Symbol	Value	Unit
Reverse Voltage	V_R	100	Vdc
Forward Current	I_F	215	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc
Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Average Rectified Forward Current (Note 1) (averaged over any 20 ms period)	$I_{F(AV)}$	715	mA
Repetitive Peak Forward Current	I_{FRM}	450	mA
Non-Repetitive Peak Forward Current t = 1.0 μ s t = 1.0 ms t = 1.0 s	I_{FSM}	2.0 1.0 0.5	A

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

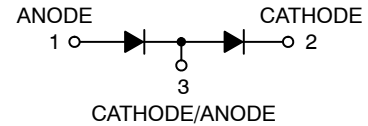
THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (Note 1) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	225 1.8	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation Alumina Substrate (Note 2) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	300 2.4	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage Temperature Range	T_J, T_{stg}	-65 to +150	$^\circ\text{C}$

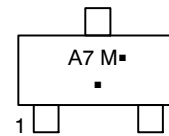
1. FR-5 = $1.0 \times 0.75 \times 0.062$ in.
2. Alumina = $0.4 \times 0.3 \times 0.024$ in 99.5% alumina.



CASE 318
SOT-23
STYLE 11



MARKING DIAGRAM



- A7 = Device Code
- M = Date Code*
- = Pb-Free Package

(Note: Microdot may be in either location)

*Date Code orientation and/or overbar may vary depending upon manufacturing location.

ORDERING INFORMATION

Device	Package	Shipping [†]
BAV99LT1G	SOT-23 (Pb-Free)	3,000 / Tape & Reel
SBAV99LT1G	SOT-23 (Pb-Free)	3,000 / Tape & Reel
BAV99LT3G	SOT-23 (Pb-Free)	10,000 / Tape & Reel
SBAV99LT3G	SOT-23 (Pb-Free)	10,000 / Tape & Reel

[†]For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specifications Brochure, BRD8011/D.

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OFF CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) (Each Diode)

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage, ($I_{(BR)} = 100 \mu\text{A}$)	$V_{(BR)}$	100	-	Vdc
Reverse Voltage Leakage Current, ($V_R = 100 \text{ Vdc}$) ($V_R = 25 \text{ Vdc}$, $T_J = 150^\circ\text{C}$) ($V_R = 70 \text{ Vdc}$, $T_J = 150^\circ\text{C}$)	I_R	-	1.0 30 50	μA dc
Diode Capacitance, ($V_R = 0$, $f = 1.0 \text{ MHz}$)	C_D	-	1.5	pF
Forward Voltage, ($I_F = 1.0 \text{ mAdc}$) ($I_F = 10 \text{ mAdc}$) ($I_F = 50 \text{ mAdc}$) ($I_F = 150 \text{ mAdc}$)	V_F	-	715 855 1000 1250	mVdc
Reverse Recovery Time, ($I_F = I_R = 10 \text{ mAdc}$, $i_{R(REC)} = 1.0 \text{ mAdc}$) $R_L = 100 \Omega$	t_{rr}	-	6.0	ns
Forward Recovery Voltage, ($I_F = 10 \text{ mA}$, $t_r = 20 \text{ ns}$)	V_{FR}	-	1.75	V

CURVES APPLICABLE TO EACH DIODE

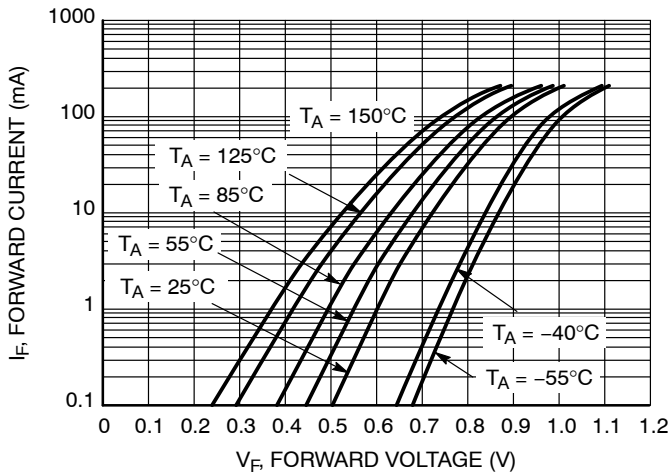


Figure 1. Forward Voltage

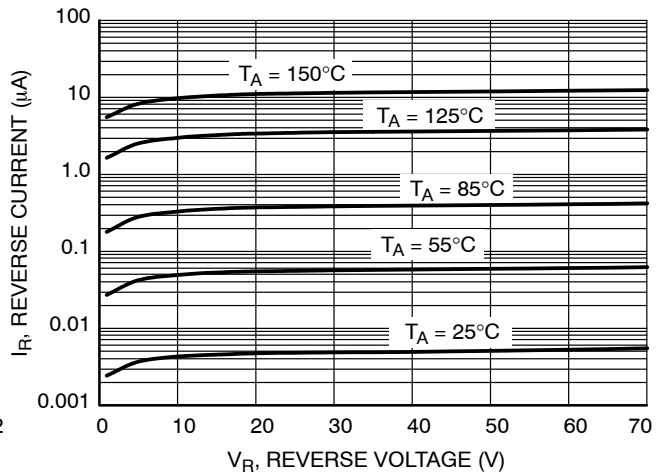


Figure 2. Leakage Current

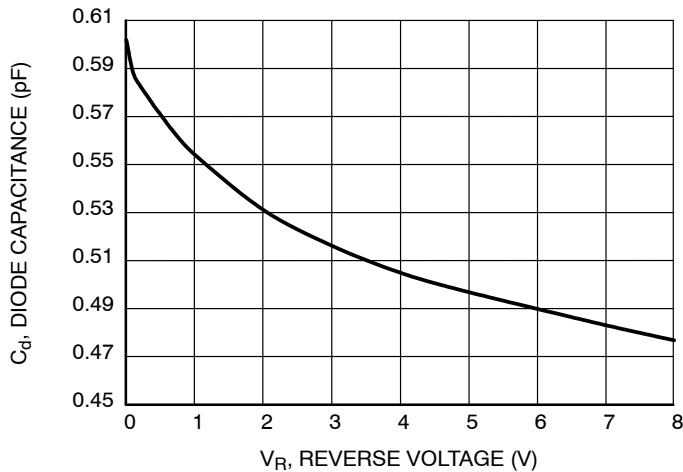


Figure 3. Capacitance

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