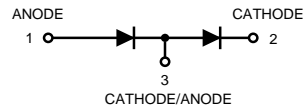
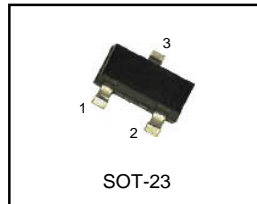


## Dual Series Switching Diode

Lead free product

Halogen-free type

**BAV99GH**



### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	$V_R$	70	Vdc
Peak Forward Current	$I_F$	215	mAdc
Peak Forward Surge Current	$I_{FM}(\text{surge})$	500	mAdc
Repetitive Peak Reverse Voltage	$V_{RRM}$	70	Vdc
Average Rectified Forward Current <sup>(1)</sup> (averaged over any 20 ms period)	$I_{F(AV)}$	715	mAdc
Repetitive Peak Forward Current	$I_{FRM}$	450	mAdc
Non-Repetitive Peak Forward Current	$I_{FSM}$	2.0 1.0 0.5	A
	$t=1.0 \mu\text{S}$ $t=1.0 \text{mS}$ $t=1.0 \text{S}$		

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max.	Unit
Total Device Dissipation FR-5 Board <sup>(1)</sup> $T_A=25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	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, <sup>(2)</sup> $T_A=25^\circ\text{C}$ Derate above $25^\circ\text{C}$	$P_D$	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	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted) (Continued) (EACH DIODE)

Characteristic	Symbol	Min.	Max.	Unit
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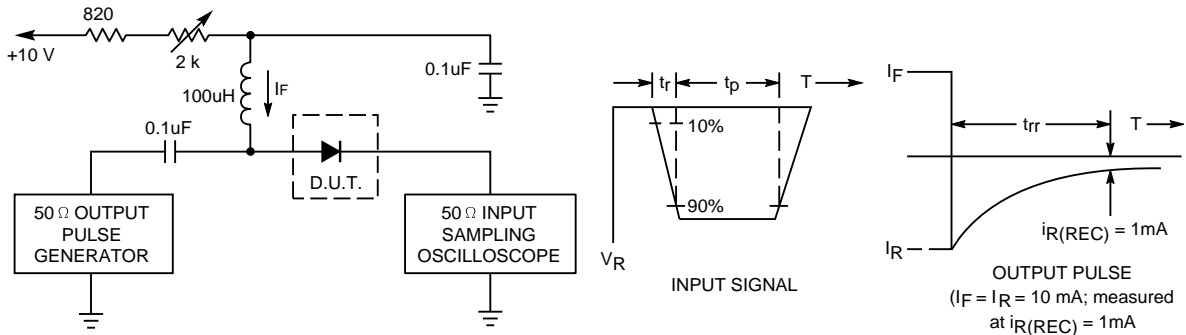
### OFF CHARACTERISTICS

Reverse Breakdown Voltage ( $I_{BR}=100\mu\text{Adc}$ )	$V_{(BR)}$	70	-	Vdc
Forward Voltage	$V_F$	-	715 855 1000 1250	mVdc
			( $I_F=1.0 \text{mAdc}$ ) ( $I_F=10 \text{mAdc}$ ) ( $I_F=50 \text{mAdc}$ ) ( $I_F=150 \text{mAdc}$ )	
Reverse Voltage Leakage Current	$I_R$	-	2.5 30 50	$\mu\text{Adc}$
			( $V_R=70 \text{Vdc}$ ) ( $V_R=25 \text{Vdc}$ , $T_J=150^\circ\text{C}$ ) ( $V_R=70 \text{Vdc}$ , $T_J=150^\circ\text{C}$ )	
Diode Capacitance ( $V_R=0$ , $f=1.0\text{MHz}$ )	$C_J$	-	1.5	pF
Reverse Recovery Time ( $I_F=I_R=10 \text{mAdc}$ , $I_R(\text{REC})=1.0\text{mA}$ , $R_L=50\Omega$ )	$t_{rr}$	-	6.0	nS
Forward Recovery Voltage ( $I_F=10 \text{mAdc}$ , $t_r=20\text{nS}$ )	$V_{FR}$	-	1.75	Vdc

(1) FR-5=1.0 x 0.75 x 0.062in.

(2) Alumina=0.4 x 0.3 x 0.024in. 99.5% alumina.

FIGURE 1. RECOVERY TIME EQUIVALENT TEST CIRCUIT



- Notes: 1. A 2.0kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10mA.
- 2. Input pulse is adjusted so  $I_{R(peak)}$  is equal to 10mA.
- 3.  $t_p \gg t_{rr}$

FIGURE 2. FORWARD VOLTAGE

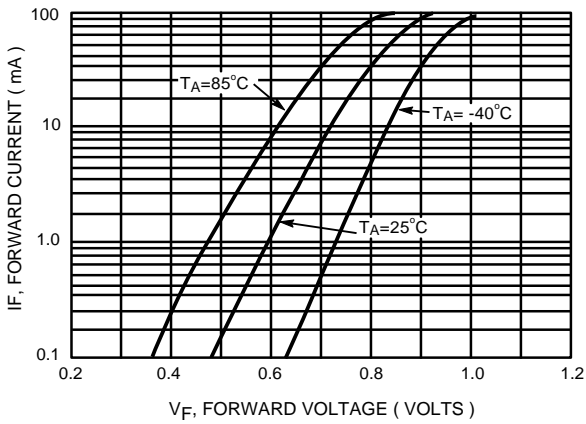


FIGURE 3. LEAKAGE CURRENT

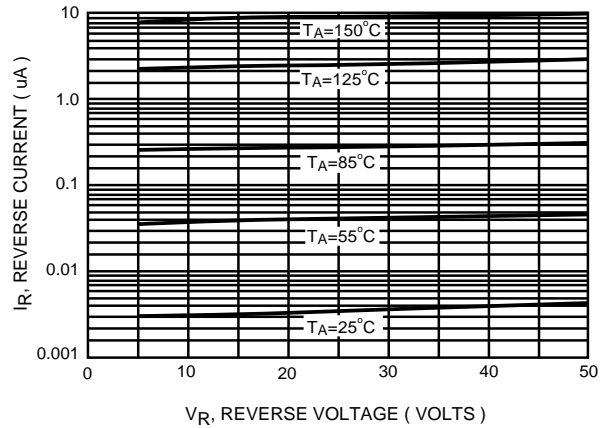


FIGURE 4. CAPACITANCE

