Dual Series Switching Diode

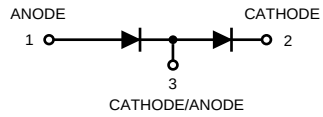
Lead free product

Halogen-free type

BAV99GH



SOT-23



MAXIMUM RATINGS

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

THERMAL CHARACTERISTICS

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

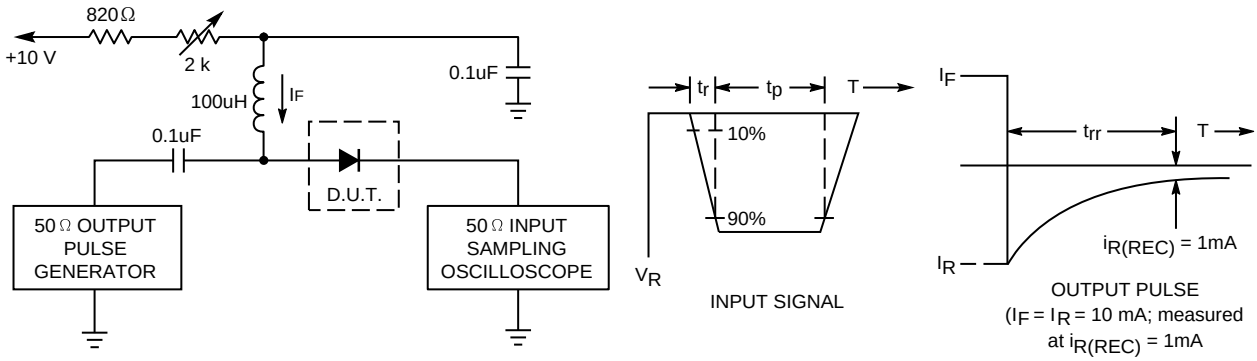
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted) (Continued) (EACH DIODE)

Characteristic		Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS					
Reverse Breakdown Voltage (I_{BR}=100uAdc)		$V_{(BR)}$	70	-	Vdc
Forward Voltage	(I_F=1.0 mAdc) (I_F=10 mAdc) (I_F=50 mAdc) (I_F=150 mAdc)	V_F	- - - -	715 855 1000 1250	mVdc
Reverse Voltage Leakage Current	(V_R=70 Vdc) (V_R=25 Vdc, T_J=150°C) (V_R=70 Vdc, T_J=150°C)	I_R	- - -	2.5 30 50	uAdc
Diode Capacitance (V_R=0, f=1.0MHz)		C_J	-	1.5	pF
Reverse Recovery Time (I_F=I_R=10 mAdc, $I_{R(REC)}$=1.0mA, R_L=50Ω)		trr	-	6.0	nS
Forward Recovery Voltage (I_F=10 mAdc, tr=20nS)		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

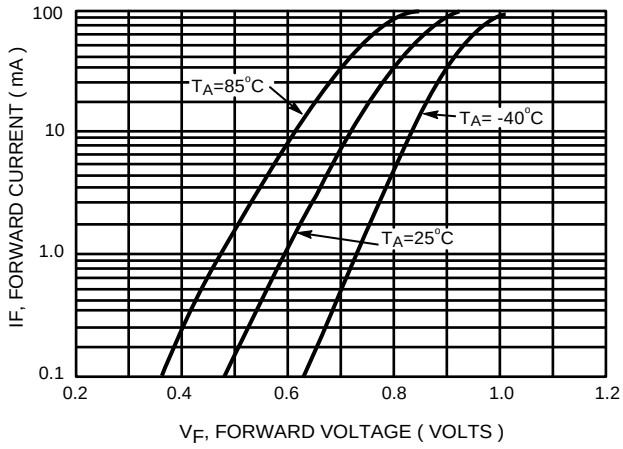


FIGURE 3. LEAKAGE CURRENT

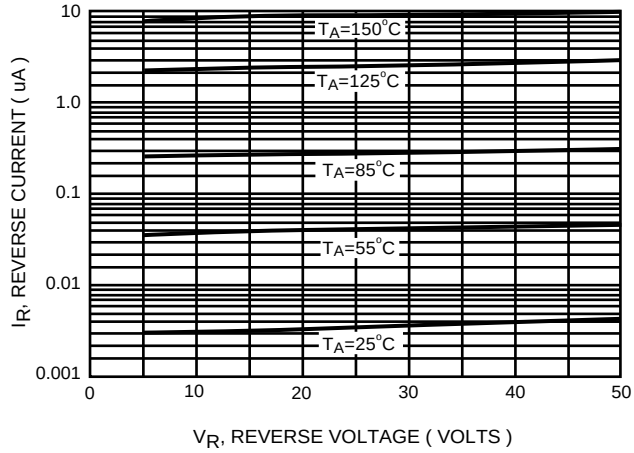


FIGURE 4. CAPACITANCE

