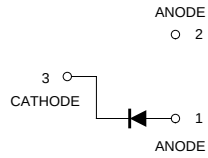
Switching Diode
Lead free product
Halogen-free type

BAS16GH

SOT-23



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	75	Vdc
Peak Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc

THERMAL CHARACTERISTICS

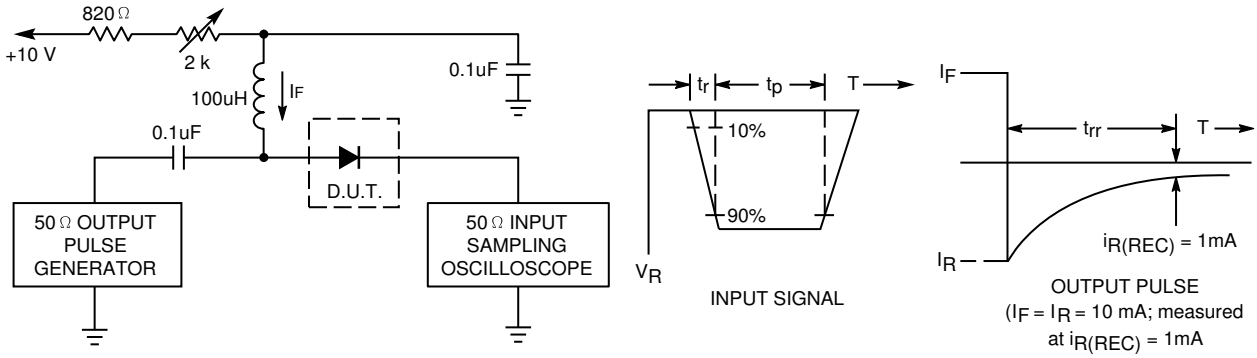
Characteristic	Symbol	Max.	Unit
Total Device Dissipation FR-5 Board(1) T_A=25°C Derate above 25°C	P_D	225 1.8	mW mW / °C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C / W
Total Device Dissipation Alumina Substrate,(2) T_A=25°C Derate above 25°C	P_D	300 2.4	mW mW / °C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C / W
Junction and Storage Temperature	T_J,T_{STG}	-55 to +150	°C

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

Characteristic		Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS					
Reverse Breakdown Voltage (I_{BR}=100uAdc)		$V_{(BR)}$	75	-	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=75 Vdc) (V_R=25 Vdc, T_J=150°C) (V_R=75 Vdc, T_J=150°C)	I_R	- - -	1.0 30 50	uAdc
Recovery Current (I_F=10 mAdc, V_R=5.0 Vdc, R_L=500Ω)		Q_S	-	45	pC
Diode Capacitance (V_R=0, f=1.0MHz)		C_J	-	2.0	pF
Reverse Recovery Time (I_F=I_R=10 mAdc, 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 (IF) 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

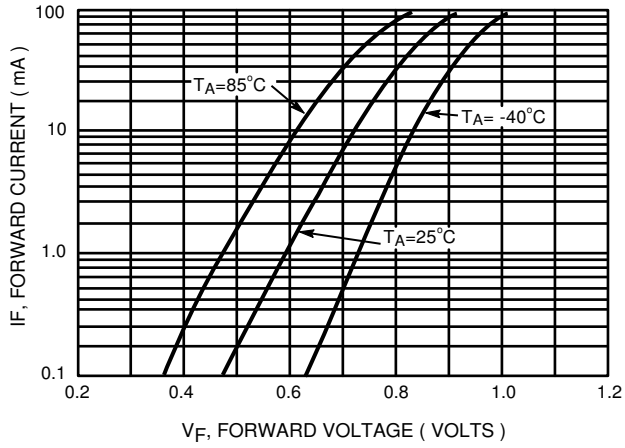


FIGURE 3. LEAKAGE CURRENT

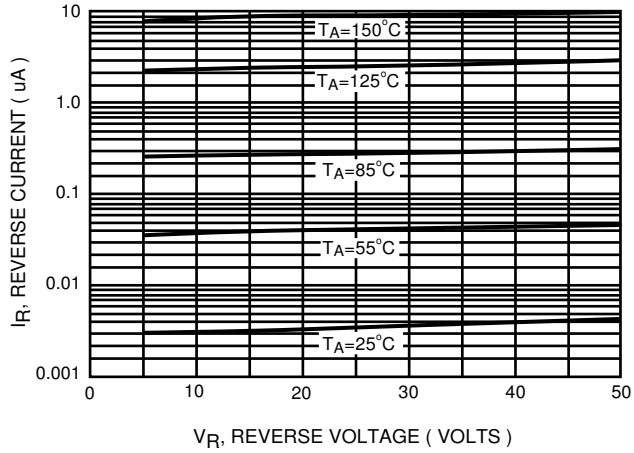


FIGURE 4. CAPACITANCE