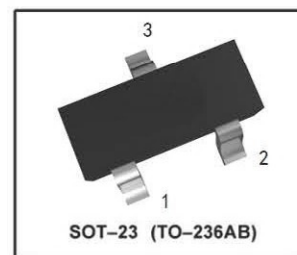




● MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	70	Vdc
Peak Forward Current	I_F	100	mAdc



● DEVICE MARKING

BAL99 = JF

● THERMAL CHARACTERISTICS

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

● ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit
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● OFF CHARACTERISTICS

Reverse Voltage Leakage Current ($V_R = 70$ Vdc)	I_R	—	2.5	μAdc
($V_R = 25$ Vdc, $T_J = 150^\circ\text{C}$)		—	30	
($V_R = 70$ Vdc, $T_J = 150^\circ\text{C}$)		—	50	
Reverse Breakdown Voltage ($I_R = 100 \mu\text{Adc}$)	$V_{(BR)}$	70	—	Vdc
Forward Voltage ($I_F = 1.0$ mAdc)	V_F	—	715	mV
($I_F = 10$ mAdc)		—	855	
($I_F = 50$ mAdc)		—	1000	
($I_F = 150$ mAdc)		—	1250	
Recovery Current ($I_F = 10$ mAdc, $V_R = 5.0$ Vdc, $R_L = 500 \Omega$)	Q_S	—	45	pC
Diode Capacitance ($V_R = 0$, $f = 1.0$ MHz)	C_D	—	1.5	pF
Reverse Recovery Time ($I_F = I_R = 10$ mAdc, $R_L = 100 \Omega$, measured at $I_R = 1.0$ mAdc)	t_{rr}	—	6.0	ns
Forward Recovery Voltage ($I_F = 10$ mAdc, $t_r = 20$ ns)	V_{FR}	—	1.75	Vdc

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.

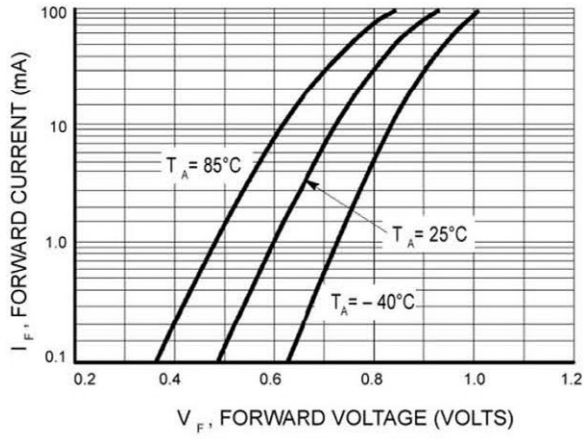


Figure 1. Forward Voltage

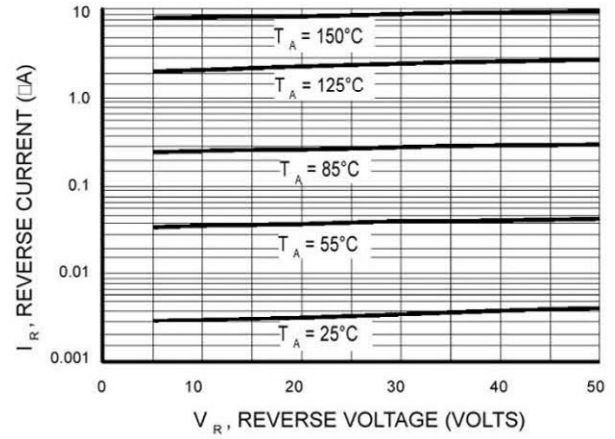


Figure 2. Leakage Current

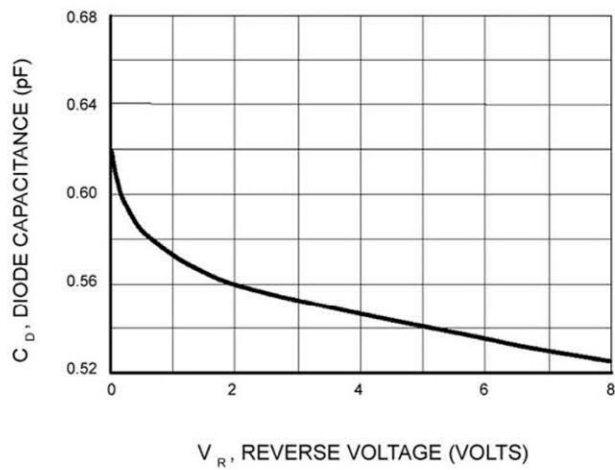


Figure 3. Capacitance