3

BAL99

CASE 318-02/03, STYLE 17
SOT-23 (TO-236AA/AB)

SWITCHING DIODE

MAXIMUM RATINGS

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

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
*Total Device Dissipation, T_A = 25°C Derate above 25°C	P_D	350 2.8	mW mW/°C
Storage Temperature	T_{stg}	150	°C
*Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	°C/W

*Package mounted on 99.5% alumina 10 x 8 x 0.6 mm.

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Voltage Leakage Current (V_R = 70 V) (V_R = 25 V, T_J = 150°C) (V_R = 70 V, T_J = 150°C)	I_R	 — — —	 2.5 30 50	μA
Reverse Breakdown Voltage (I_R = 100 μA)	$V_{(BR)}$	70	—	V
Forward Voltage (I_F = 1.0 mA) (I_F = 10 mA) (I_F = 50 mA) (I_F = 100 mA)	V_F	 — — — —	 715 855 1100 1300	mV
Recovery Current (I_F = 10 mA, V_R = 5.0 V, R_L = 500 Ω)	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 mA, R_L = 100 Ω, measured at I_R = 1.0 mA)	t_{rr}	—	6.0	ns
Forward Recovery Voltage (I_F = 10 mA, t_r = 20 ns)	V_{FR}	—	1.75	V