

Switching Diode

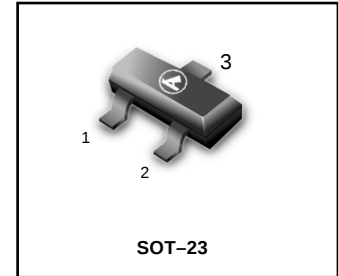
Featrues

We declare that the material of product compliance with RoHS requirements.

Ordering Information

Device	Marking	Shipping
LBAL99LT1G	JF	3000/Tape&Reel
LBAL99LT3G	JF	10000/Tape&Reel

LBAL99LT1G



MAXIMUM RATINGS

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



DEVICE MARKING

LBAL99LT1G = 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	$R_{\theta JA}$	556	$^\circ\text{C/W}$
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	$R_{\theta JA}$	417	$^\circ\text{C/W}$
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 ($V_R = 70\text{ Vdc}$)	I_R	—	2.5	μAdc
($V_R = 25\text{ Vdc}, T_J = 150^\circ\text{C}$)		—	30	
($V_R = 70\text{ Vdc}, T_J = 150^\circ\text{C}$)		—	50	
Reverse Breakdown Voltage ($I_R = 100\text{ }\mu\text{Adc}$)	$V_{(BR)}$	70	—	Vdc
Forward Voltage ($I_F = 1.0\text{ mAdc}$)	V_F	—	715	mV
($I_F = 10\text{ mAdc}$)		—	855	
($I_F = 50\text{ mAdc}$)		—	1000	
($I_F = 150\text{ mAdc}$)		—	1250	
Recovery Current ($I_F = 10\text{ mAdc}, V_R = 5.0\text{ Vdc}, R_L = 500\text{ }\Omega$)	Q_S	—	45	pC
Diode Capacitance ($V_R = 0, f = 1.0\text{ MHz}$)	C_D	—	1.5	pF
Reverse Recovery Time ($I_F = I_R = 10\text{ mAdc}, R_L = 100\text{ }\Omega$, measured at $I_R = 1.0\text{ mAdc}$)	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 = $1.0 \times 0.75 \times 0.062\text{ in.}$

2. Alumina = $0.4 \times 0.3 \times 0.024\text{ in.}$ 99.5% alumina.

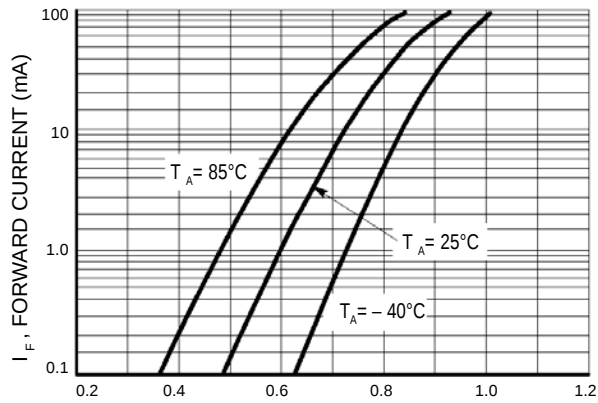
LBAL99LT1G


Figure 1. Forward Voltage

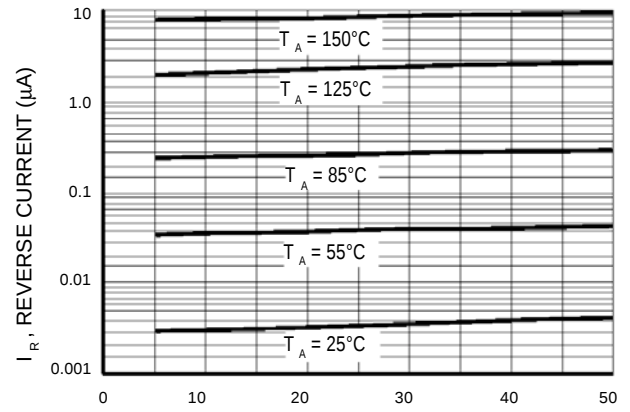


Figure 2. Leakage Current

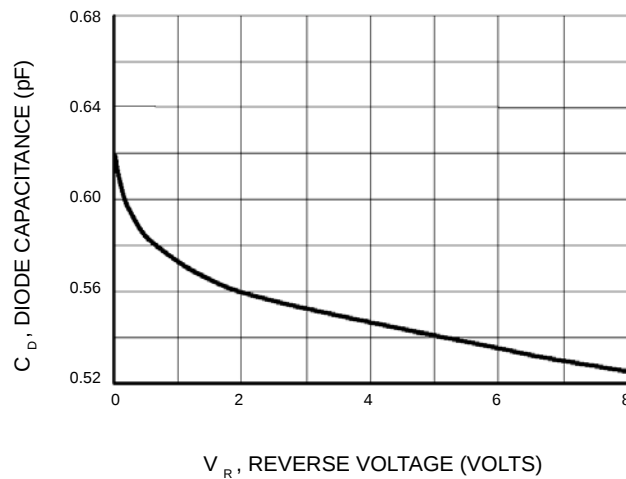


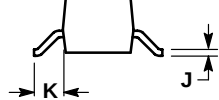
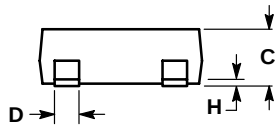
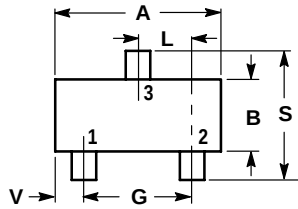
Figure 3. Capacitance

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NOTES:

1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M,1982
2. CONTROLLING DIMENSION: INCH.



DIM	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.1102	0.1197	2.80	3.04
B	0.0472	0.0551	1.20	1.40
C	0.0350	0.0440	0.89	1.11
D	0.0150	0.0200	0.37	0.50
G	0.0701	0.0807	1.78	2.04
H	0.0005	0.0040	0.013	0.100
J	0.0034	0.0070	0.085	0.177
K	0.0140	0.0285	0.35	0.69
L	0.0350	0.0401	0.89	1.02
S	0.0830	0.1039	2.10	2.64
V	0.0177	0.0236	0.45	0.60

