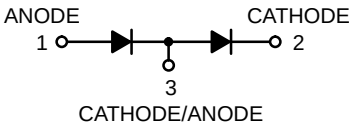
High Voltage Switching Diode

LBAS21SLT1

SOT– 23 (TO–236AB)



FETURE

- Pb-Free Package is available.

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	250	Vdc
Peak Forward Current	I_F	225	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	625	mAdc

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Total Device Dissipation FR– 5 Board, (1) T_A = 25°C	P_D	225	mW
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate, (2) T_A = 25°C	P_D	300	mW
Derate above 25°C		2.4	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)

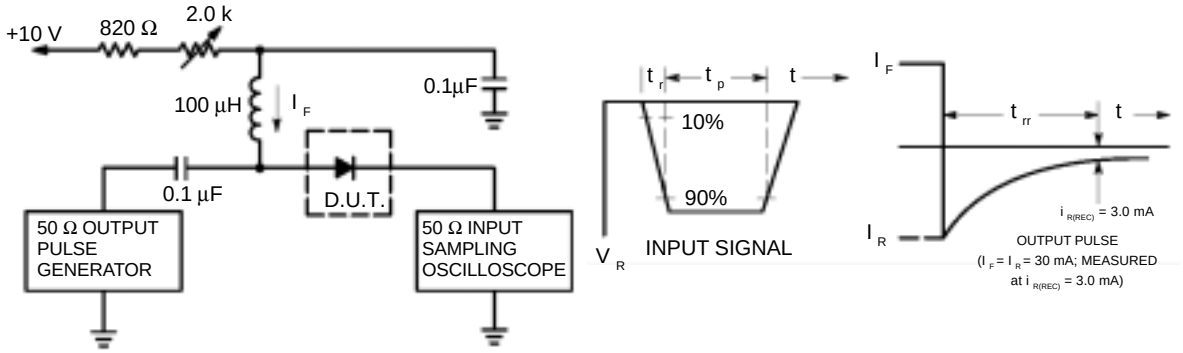
Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Voltage Leakage Current	I_R			µAdc
(V_R = 200Vdc)		—	0.1	
(V_R = 200Vdc, T_J = 150°C)		—	100	
Reverse Breakdown Voltage (I_{BR} = 100 µAdc)	$V_{(BR)}$	250	—	Vdc
Forward Voltage	V_F			mV
(I_F = 100 mAdc)		—	1000	
(I_F = 200 mAdc)		—	1250	
Diode Capacitance (V_R = 0, f = 1.0 MHz)	C_D	—	5.0	pF
Reverse Recovery Time (I_F = I_R = 30mAdc, R_L = 100 Ω)	t_{rr}	—	50	ns

1. FR–5 = 1.0 x 0.75 x 0.062 in.
2. Alumina = 0.4 x 0.3 x 0.024 in. 99.5% alumina.

DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LBAS21SLT1	JT	3000/Tape&Reel
LBAS21SLT1G	JT (Pb-Free)	3000/Tape&Reel

LBAS21SLT1



Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 30 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 30 mA.
3. $t_p >> t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

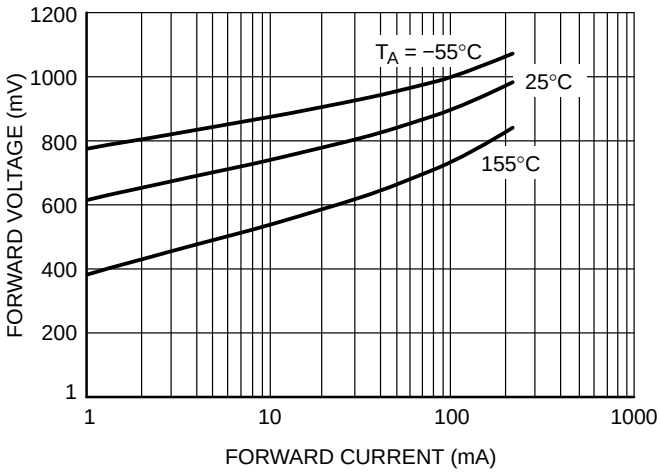


Figure 2. Forward Voltage

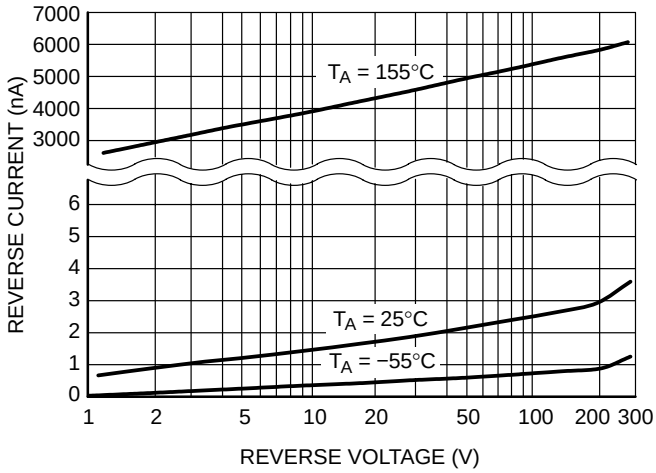
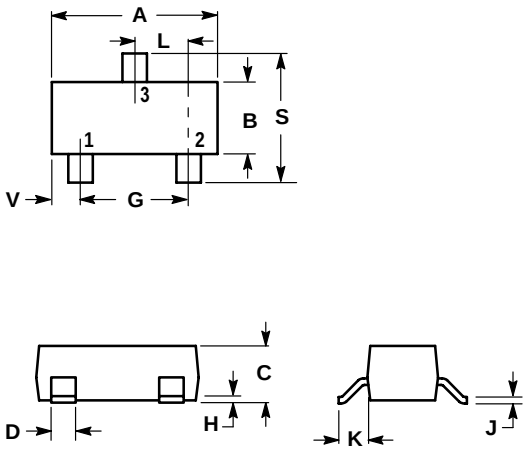


Figure 3. Reverse Leakage

LBAS21SLT1

SOT-23



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