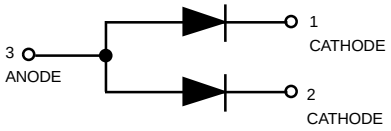
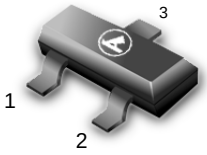
Monolithic Dual Switching Diode

Common Anode

LBAW56LT1

- Pb−Free Package is Available.





SOT− 23 (TO−236AB)

MAXIMUM RATINGS (EACH DIODE)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	70	Vdc
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	P_D	225	mW
erate 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

DEVICE MARKING

LBAW56LT1 = A1

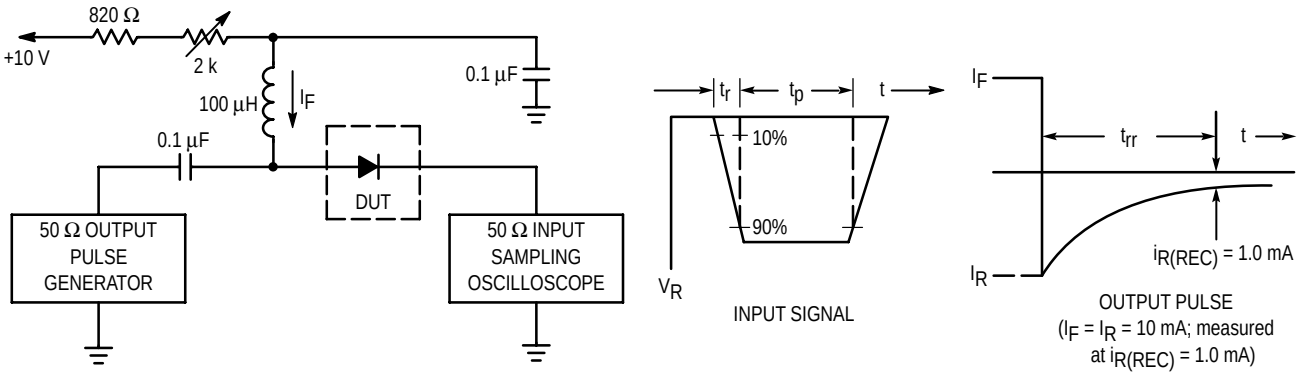
ORDERING INFORMATION

Device	PACKAGE	Shipping
LBAW56LT1	SOT-23	3000 Tape & Reel
LBAW56LT1G	SOT-23	3000 Tape & Reel

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage ($I_{(BR)}$ = 100 µAdc)	$V_{(BR)}$	70	–	Vdc
Reverse Voltage Leakage Current	I_R			µAdc
(V_R = 25 Vdc, T_J = 150 °C)		–	30	
(V_R = 70 Vdc)		–	2.5	
(V_R = 70 Vdc, T_J = 150 °C)		–	50	
Diode Capacitance (V_R = 0, f = 1.0 MHz)	C_D	–	2.0	pF
Forward Voltage	V_F			mVdc
(I_F = 1.0 mAdc)		–	715	
(I_F = 10 mAdc)		–	855	
(I_F = 50 mAdc)		–	1000	
(I_F = 150 mAdc)		–	1250	
Reverse Recovery Time (I_F = I_R = 10 mAdc, $I_{R(REC)}$ = 1.0 mAdc) (Figure 1) R_L = 100Ω	t_{rr}	–	6.0	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.



Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 10 mA.
3. $t_p >> t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

CURVES APPLICABLE TO EACH CATHODE

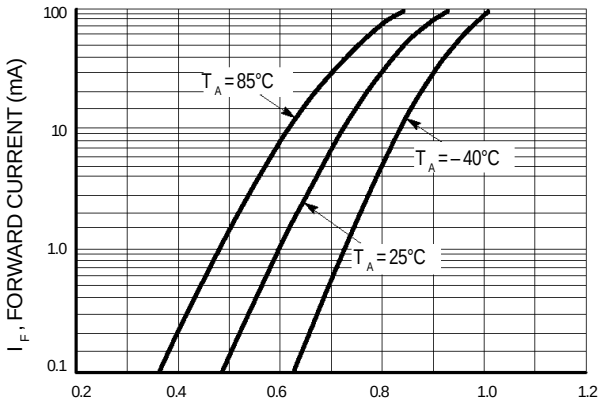


Figure 2. Forward Voltage

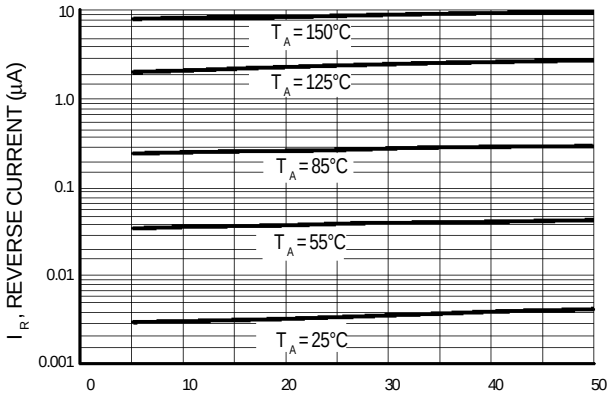


Figure 3. Leakage Current

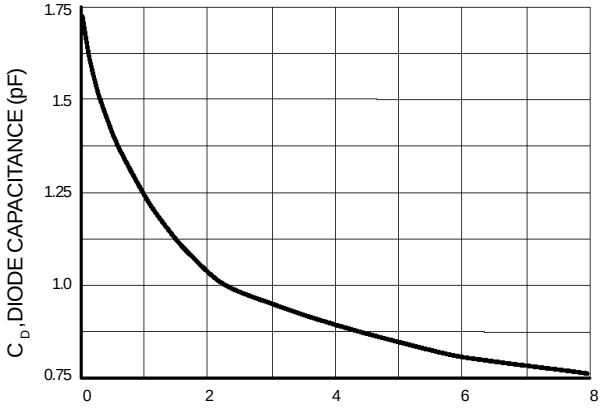
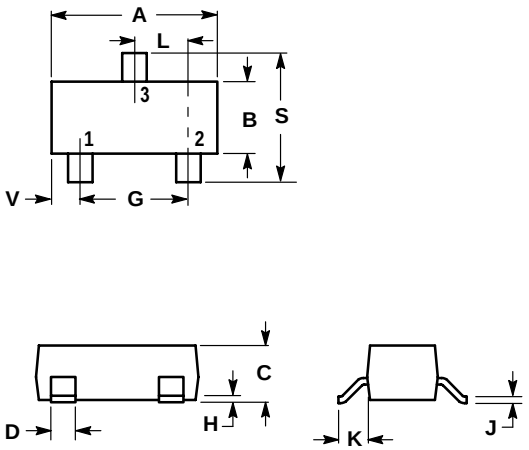


Figure 4. Capacitance

LBAW56LT1

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