

Monolithic Dual Switching Diode

Common Anode

Features

- We declare that the material of product compliance with RoHS requirements.
- S- Prefix for Automotive and Other Applications Requiring Unique Site and Control Change Requirements; AEC-Q101 Qualified and PPAP Capable.

ORDERING INFORMATION

Device	MARKING	Shipping
LBAW56LT1G S-LBAW56LT1G	A1	3000 Tape & Reel
LBAW56LT3G S-LBAW56LT3G	A1	10000 Tape & Reel

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) $T_A = 25\text{ }^{\circ}\text{C}$	P_D	225	mW
Derate above $25\text{ }^{\circ}\text{C}$		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⁾ $T_A = 25\text{ }^{\circ}\text{C}$	P_D	300	mW
Derate above $25\text{ }^{\circ}\text{C}$		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	$^{\circ}\text{C}$

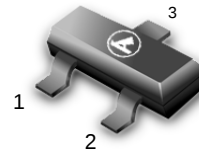
ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted) (EACH DIODE)

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

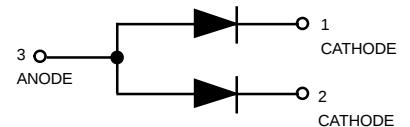
1. FR-5 = $1.0 \times 0.75 \times 0.062\text{ in.}$

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

LBAW56LT1G
S-LBAW56LT1G



SOT- 23 (TO-236AB)



LBAW56LT1G,S-LBAW56LT1G

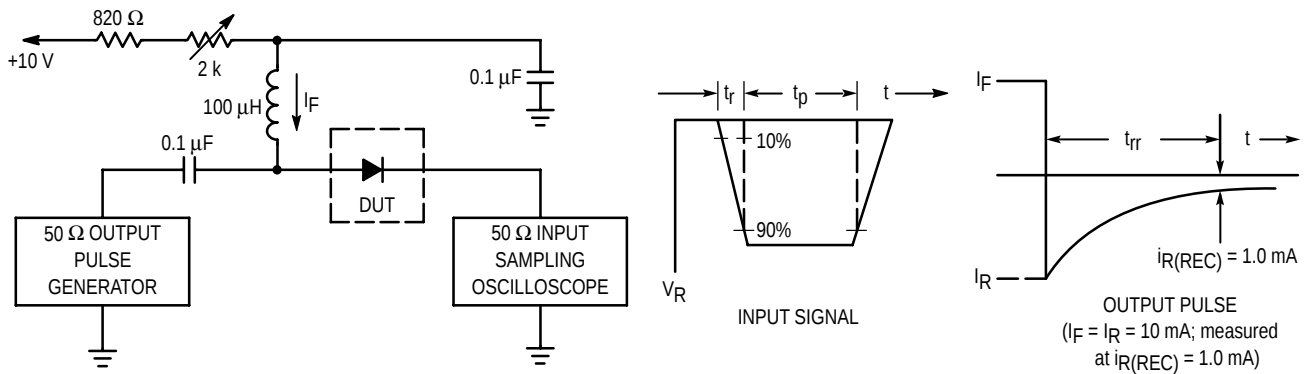


Figure 1. Recovery Time Equivalent Test Circuit

CURVES APPLICABLE TO EACH CATHODE

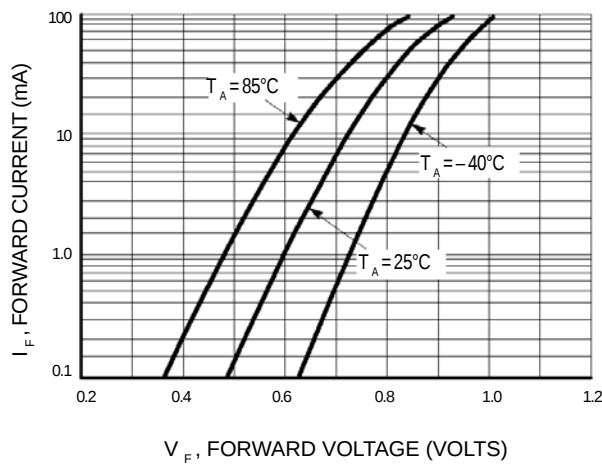


Figure 2. Forward Voltage

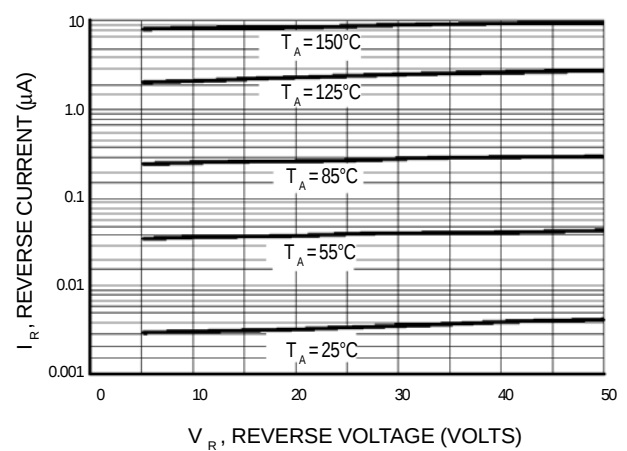


Figure 3. Leakage Current

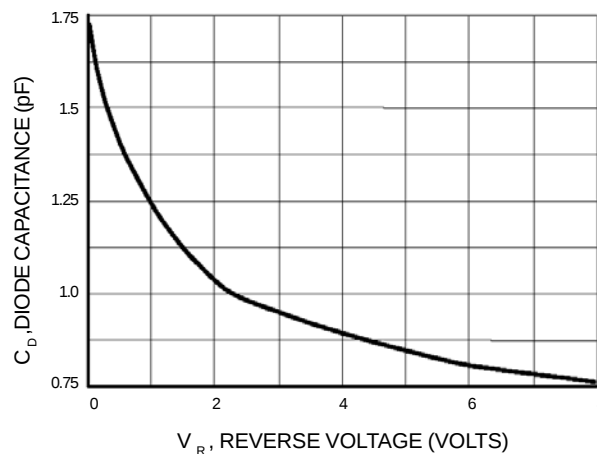
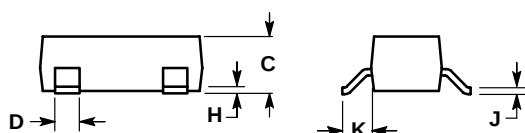
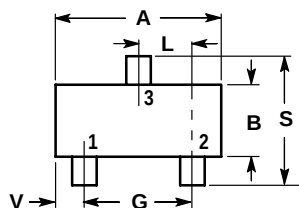


Figure 4. Capacitance

LBAW56LT1G,S-LBAW56LT1G

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

