

Dual Switching Diode

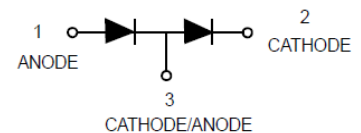
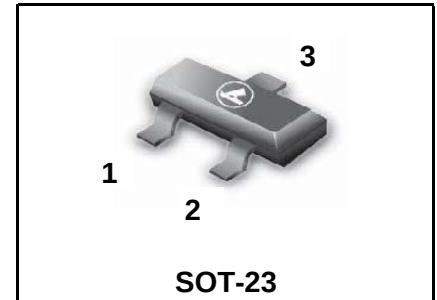
●FEATURES

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

●DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
LMBD7000LT1G	M5C	3000/Tape&Reel
LMBD7000LT3G	M5C	10000/Tape&Reel

LMBD7000LT1G S-LMBD7000LT1G



●MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Reverse Voltage	V_R	100	Vdc
Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM}(\text{surge})$	500	mAdc

●THERMAL CHARACTERISTICS

Total Device Dissipation, FR-5 Board (Note 1) @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	225 1.8	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient(Note 1)	$R_{\theta JA}$	556	$^\circ\text{C}/\text{W}$
Total Device Dissipation, Alumina Substrate (Note 2) @ $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	300 2.4	mW mW/ $^\circ\text{C}$
Thermal Resistance, Junction-to-Ambient(Note 2)	$R_{\theta JA}$	417	$^\circ\text{C}/\text{W}$
Junction and Storage temperature	T_J, T_{stg}	-55 ~ +150	$^\circ\text{C}$

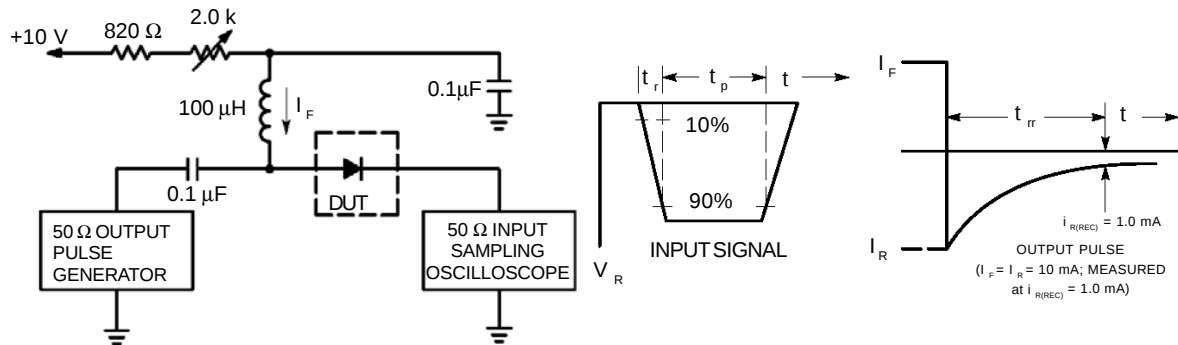
1. FR-5 = 1.0×0.75×0.062 in.

2. Alumina = 0.4×0.3×0.024 in. 99.5% alumina.

LMBD7000LT1G,S-LMBD7000LT1G

● ELECTRICAL CHARACTERISTICS (Ta= 25°C)

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage ($I_{BR} = 100\mu A_{dc}$)	V_{BR}	100	—	—	V
Reverse Voltage Leakage Current ($V_R = 50V_{dc}$) ($V_R = 100V_{dc}$) ($V_R = 50V_{dc}, 125^\circ C$)	I_R	—	—	1.0 3.0 100	μA
Diode Capacitance ($V_R = 0, f = 1.0 MHz$)	C	—	—	1.5	pF
Forward Voltage ($I_F = 1.0 mA_{dc}$) ($I_F = 10 mA_{dc}$) ($I_F = 100 mA_{dc}$)	V_F	0.55 0.67 0.75	—	0.7 0.82 1.1	V
Reverse Recovery Time ($I_F = I_R = 10 mA_{dc}$) (Figure 1)	t_{rr}	—	—	4	ns



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

Figure 1. Recovery Time Equivalent Test Circuit

LMBD7000LT1G,S-LMBD7000LT1G

ELECTRICAL CHARACTERISTIC CURVES(Ta=25°C)

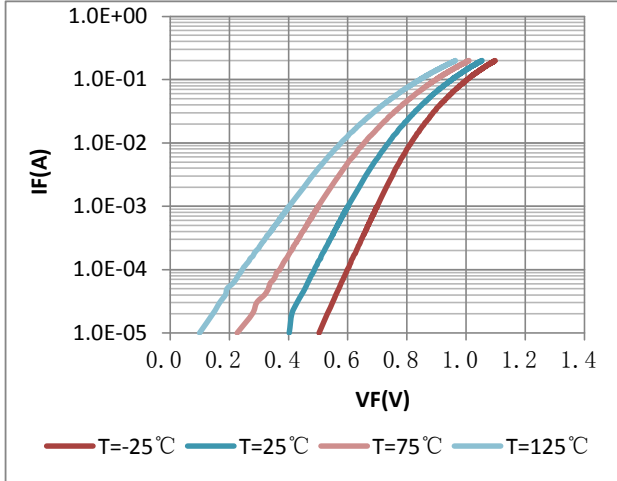


Fig 2. Forward character

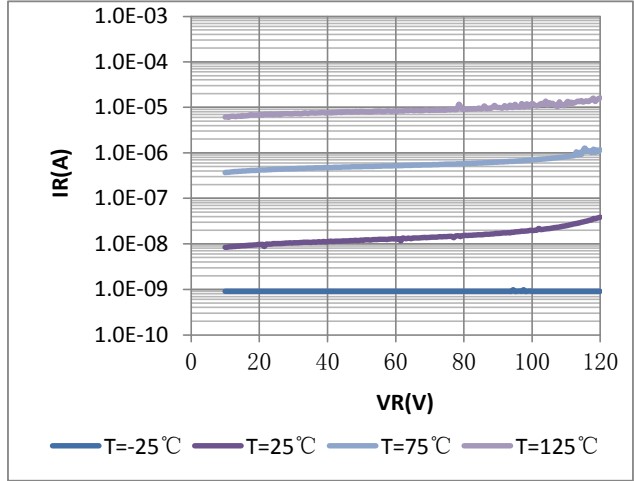


Fig 3. Reverse character

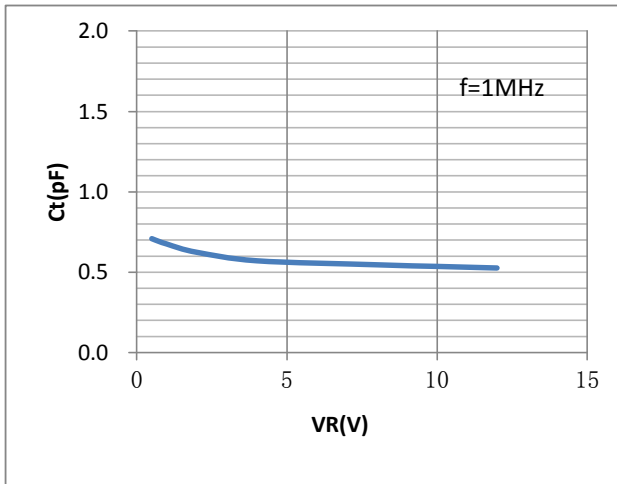


Fig 4. Capacitance

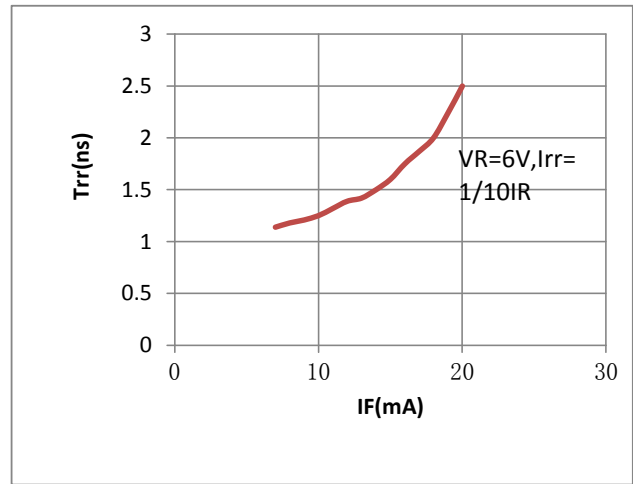


Fig 5. Reverse recover time characteristics

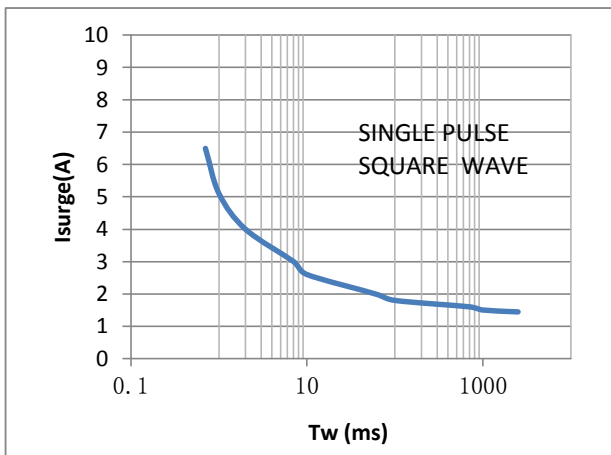


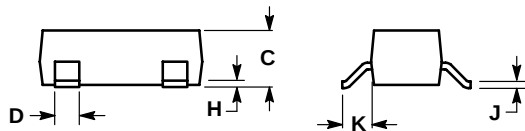
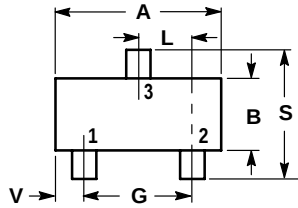
Fig 6. Surge current characteristics

LMBD7000LT1G,S-LMBD7000LT1G

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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

