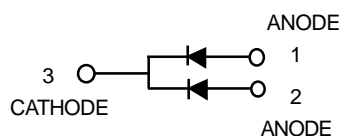
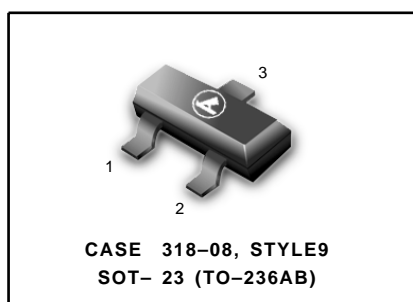


# Monolithic Dual Switching Diode

Pb-Free package is available



## LMBD6100LT1G



### 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 <sup>(1)</sup> $T_A = 25^\circ\text{C}$	$P_D$	225	mW
Derate above $25^\circ\text{C}$		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate, <sup>(2)</sup> $T_A = 25^\circ\text{C}$	$P_D$	300	mW
Derate above $25^\circ\text{C}$		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	$^\circ\text{C}$

### DEVICE MARKING

LMBD6100LT1G = 5BM

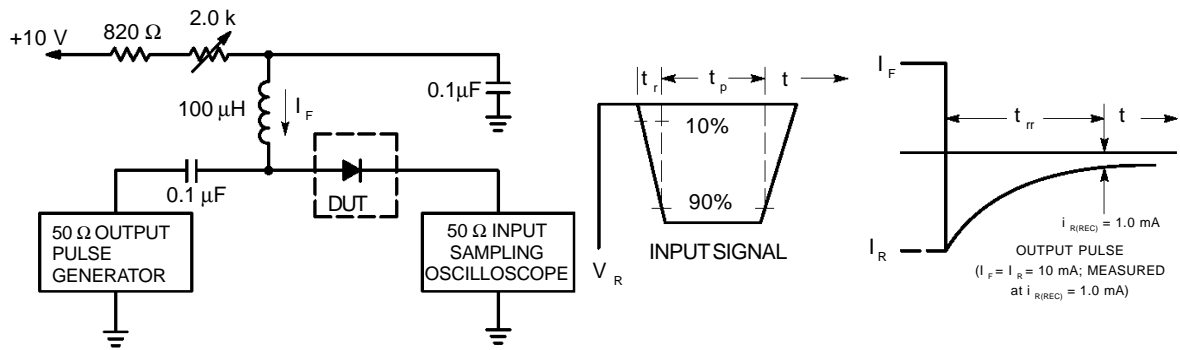
### ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)(EACH DIODE)

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Reverse Breakdown Voltage ( $I_{(BR)} = 100 \mu\text{Adc}$ )	$V_{(BR)}$	70	—	Vdc
Reverse Voltage Leakage Current ( $V_R = 50 \text{ Vdc}$ )	$I_R$	—	0.1	$\mu\text{Adc}$
Forward Voltage ( $I_F = 1.0 \text{ mAdc}$ )	$V_F$	0.55	0.7	Vdc
( $I_F = 100 \text{ mAdc}$ )		0.85	1.1	
Reverse Recovery Time ( $I_F = I_R = 10 \text{ mAdc}, I_{R(REC)} = 1.0 \text{ mAdc}$ ) (Figure 1)	$t_{rr}$	—	4.0	ns
Capacitance ( $V_R = 0\text{V}$ )	$C$	—	2.5	pF

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.

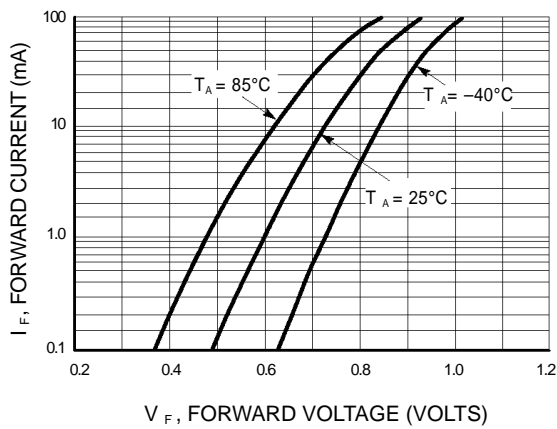
**LMBD6100LT1G**



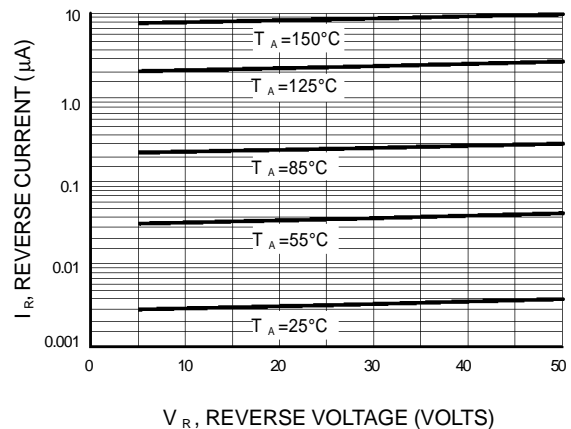
- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10mA.  
 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 10mA.  
 3.  $t_p \gg t_{rr}$

**Figure 1. Recovery Time Equivalent Test Circuit**

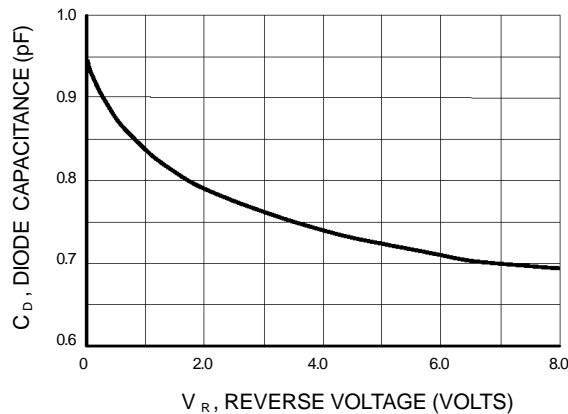
**CURVES APPLICABLE TO EACH CATHODE**



**Figure 2. Forward Voltage**



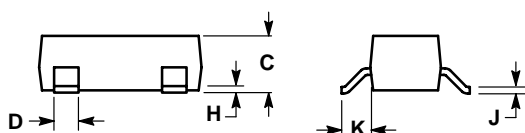
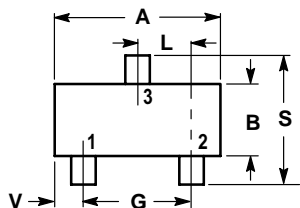
**Figure 3. Leakage Current**



**Figure 4. Capacitance**

**LMBD6100LT1G**

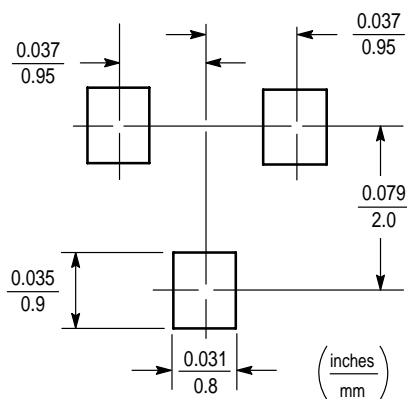
**SOT-23**



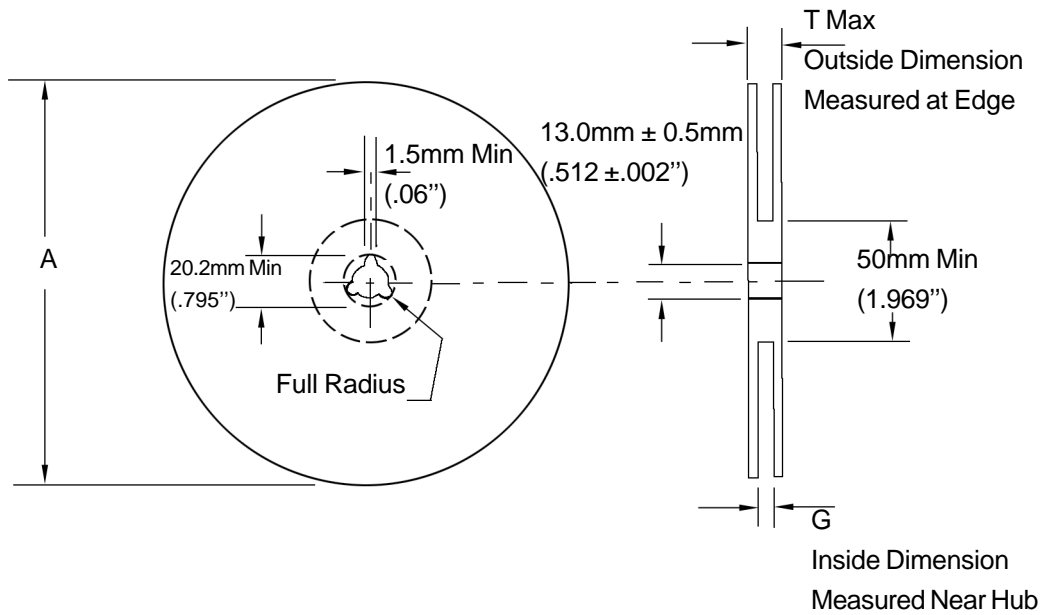
NOTES:

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



## EMBOSSED TAPE AND REEL DATA FOR DISCRETES



Size	A Max	G	T Max
8 mm	330mm (12.992")	8.4mm+1.5mm, -0.0 (.33"+.059", -0.00)	14.4mm (.56")

### Reel Dimensions

Metric Dimensions Govern — English are in parentheses for reference only

### Storage Conditions

Temperature: 5 to 40 Deg.C (20 to 30 Deg. C is preferred)

Humidity: 30 to 80 RH (40 to 60 is preferred)

Recommended Period: One year after manufacturing

(This recommended period is for the soldering condition only. The characteristics and reliabilities of the products are not restricted to this limitation)

## Shipment Specification

