

# Monolithic Dual Switching Diodes

## FETURE

- We declare that the material of product compliance with RoHS requirements.

## ORDERING INFORMATION

Device	Marking	Shipping
LMBD2835LT1G	A3X	3000/Tape&Reel
LMBD2835LT3G	A3X	10000/Tape&Reel
LMBD2836LT1G	A2X	3000/Tape&Reel
LMBD2836LT3G	A2X	10000/Tape&Reel

## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Reverse Voltage	$V_{RM}$	75	Vdc
D.C Reverse Voltage	LMBD2835LT1G $V_R$	35	Vdc
	LMBD2836LT1G	75	
Peak Forward Current	$I_{FM}$	450	mAdc
		300	
Average Rectified Current	$I_O$	150	mAdc
		100	

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

LMBD2835LT1G = A3X; LMBD2836LT1G = A2X

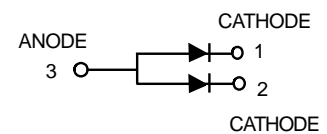
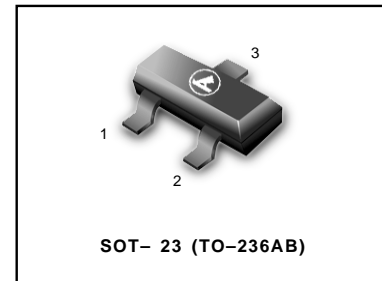
## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)( EACH DIODE )

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Reverse Breakdown Voltage( $I_R = 100 \mu\text{Adc}$ )	LMBD2835LT1 $V_{(BR)}$	35	—	Vdc
	LMBD2836LT1	75	—	
Reverse Voltage Leakage Current ( $V_R = 30 \text{ Vdc}$ )	$I_R$	—	100	nAdc
( $V_R = 50 \text{ Vdc}$ )	LMBD2835LT1	—	100	
	LMBD2836LT1	—	100	
Diode Capacitance ( $V_R = 0, f = 1.0 \text{ MHz}$ )	$C_T$	—	4.0	pF
Forward Voltage( $I_F = 10 \text{ mAdc}$ )	$V_F$	—	1.0	Vdc
( $I_F = 50 \text{ mAdc}$ )		—	1.0	
( $I_F = 100 \text{ mAdc}$ )		—	1.2	
Reverse Recovery Time( $I_F = I_R = 10 \text{ mAdc}, I_{R(REC)} = 1.0 \text{ mAdc}$ ) (Figure 1)	$t_{rr}$	—	4.0	ns

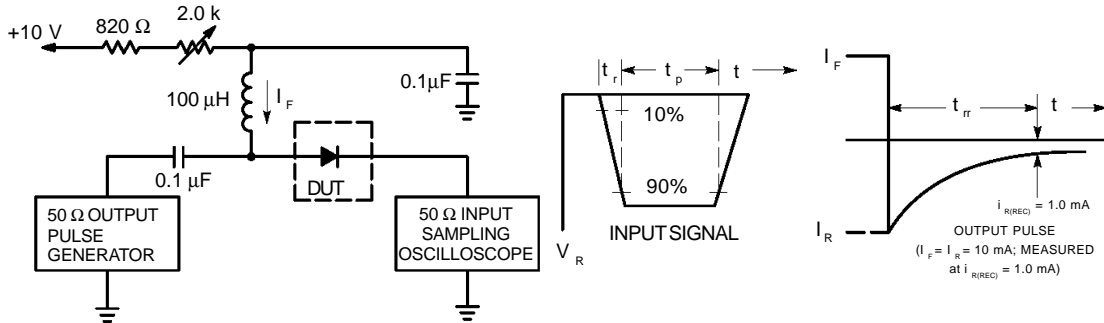
1. FR-5 = 1.0 x 0.75 x 0.062 in.

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

**LMBD2835LT1G**  
**LMBD2836LT1G**



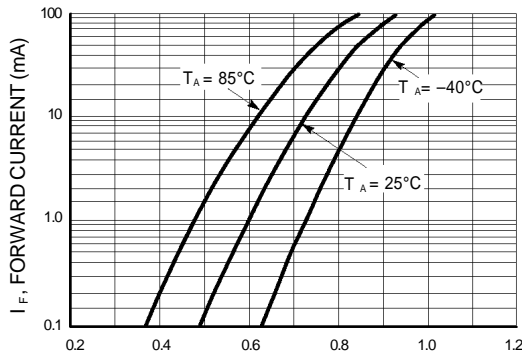
**LMBD2835LT1G LMBD2836LT1G**



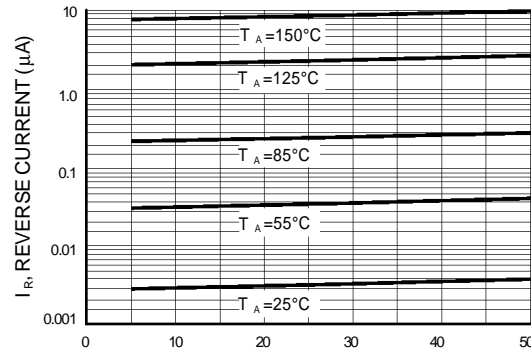
- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current ( $I_F$ ) of 10mA.
- 2. Input pulse is adjusted so  $I_{R(\text{peak})}$  is equal to 10mA.
- 3.  $t_p \gg t_{rr}$

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

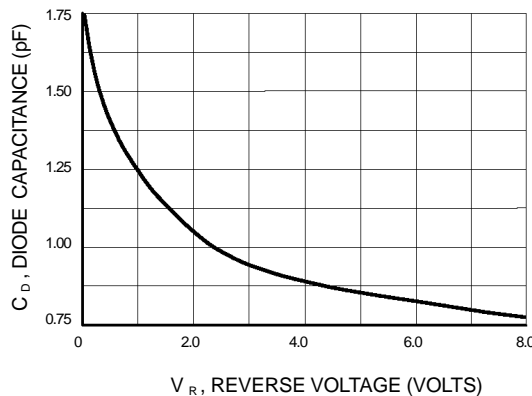
**CURVES APPLICABLE TO EACH CATHODE**



**Figure 2. Forward Voltage**



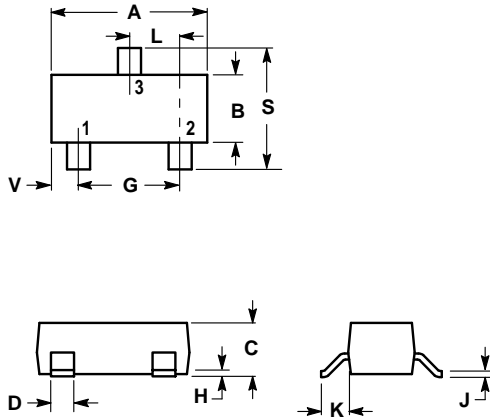
**Figure 3. Leakage Current**



**Figure 4. Capacitance**

**LMBD2835LT1G LMBD2836LT1G**

**SOT-23**

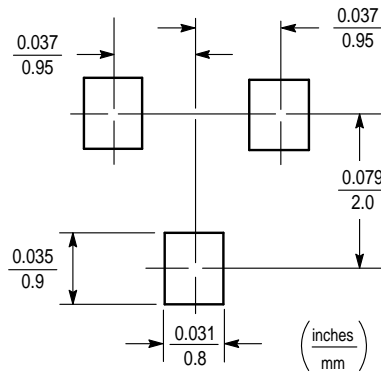


NOTES:

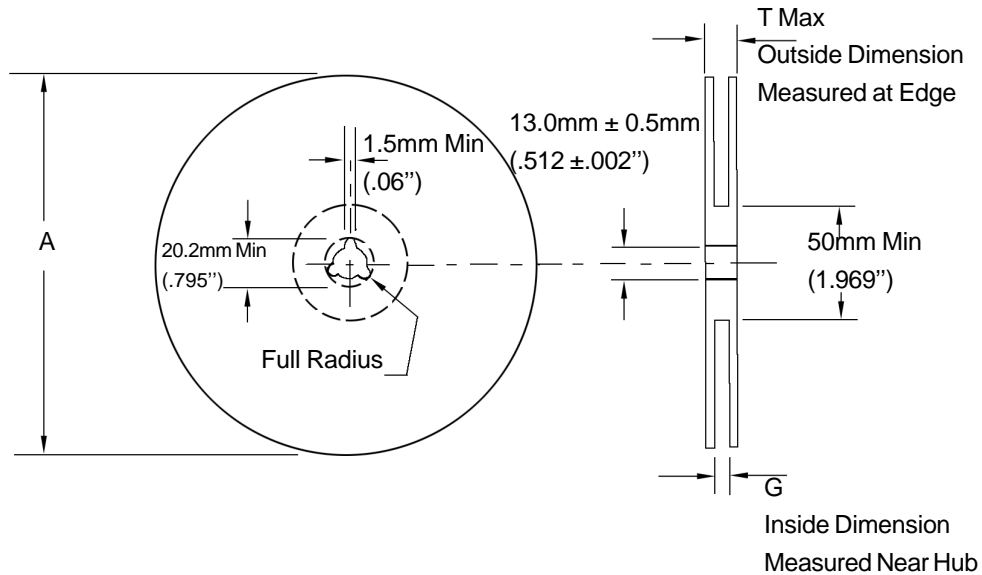
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982.
2. CONTROLLING DIMENSION: INCH.

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

- PIN 1. ANODE  
 2. NO CONNECTION  
 3. CATHODE



## 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

