

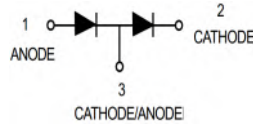


# SOT-23 Plastic-Encapsulate Diodes

## LMBD7000LT1

Dual Switching Diode

Marking:7000



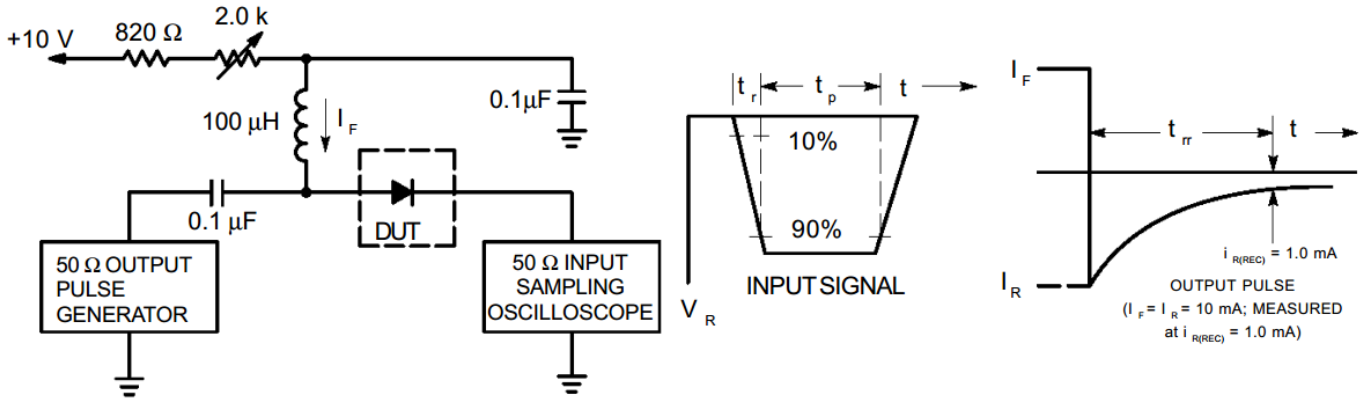
### Maximum Ratings (T<sub>a</sub>=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V <sub>R</sub>	Reverse Voltage	100	V
I <sub>F</sub>	Forward Current	200	mA
I <sub>FM(surge)</sub>	Peak Forward Surge Current	500	mA
P <sub>D</sub>	Total Device Dissipation FR- 5 Board <sup>(1)</sup>		
	T <sub>A</sub> = 25°C Derate above 25°C	225 1.8	mW mW/°C
R <sub>θJA</sub>	Thermal Resistance Junction to Ambient	556	°C/W
P <sub>D</sub>	Total Device Dissipation Alumina Substrate, <sup>(2)</sup> T <sub>A</sub> = 25°C		
	Derate above 25°C	300 2.4	mW mW/°C
R <sub>θJA</sub>	Thermal Resistance Junction to Ambient	417	°C/W
T <sub>J</sub> , T <sub>stg</sub>	Junction and Storage Temperature	-55~+150	°C

### Electrical Characteristics (T<sub>a</sub>=25°C unless otherwise specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Unit
V <sub>R</sub>	Reverse breakdown voltage	I <sub>R</sub> = 100μA	100			V
V <sub>F1</sub>	Forward voltage	I <sub>F</sub> = 1mA		0.55	0.70	V
V <sub>F2</sub>		I <sub>F</sub> = 10mA		0.67	0.82	
V <sub>F3</sub>		I <sub>F</sub> = 100mA		0.75	1.1	
I <sub>R1</sub>	Reverse current	V <sub>R</sub> = 50V			1.0	μA
I <sub>R2</sub>		V <sub>R</sub> = 100V			3.0	
I <sub>R13</sub>		V <sub>R</sub> = 50V, 125°C			100	
C	Capacitance between terminals	V <sub>R</sub> = 0, f = 1MHz			1.5	pF
t <sub>rr</sub>		I <sub>F</sub> = I <sub>R</sub> = 10mA			4.0	ns

Typical Characteristics



- 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

CURVES APPLICABLE TO EACH CATHODE

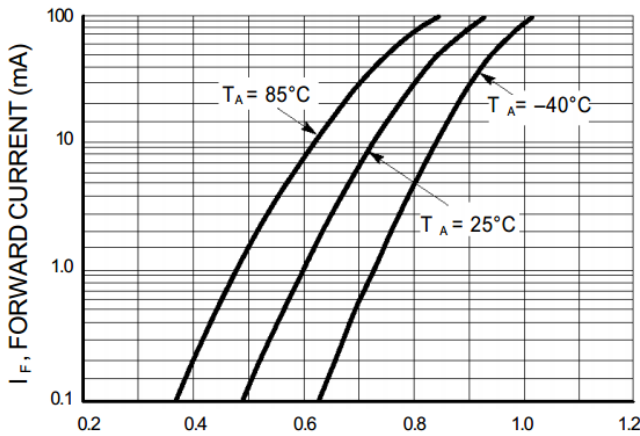


Figure 2. Forward Voltage

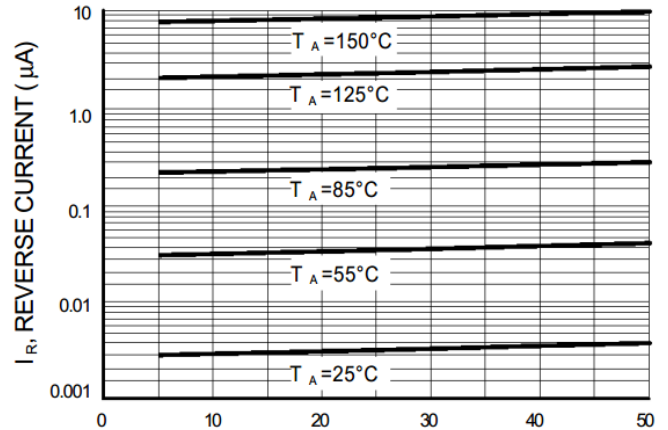


Figure 3. Leakage Current

Typical Characteristics

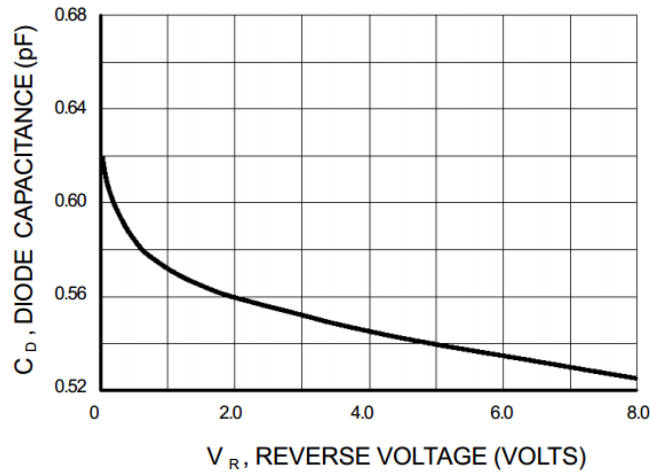


Figure 4. Capacitance

Package Dimensions

SOT-23

unit:mm

