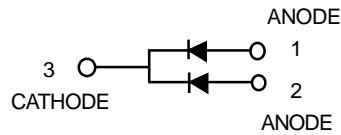
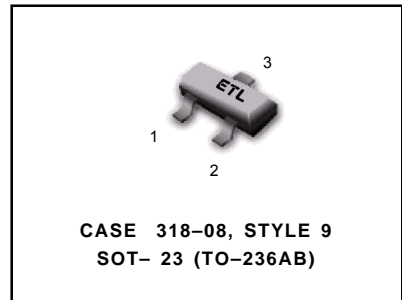


# Monolithic Dual Switching Diodes



**MMBD2837LT1**  
**MMBD2838LT1**



## MAXIMUM RATINGS(EACH DIODE)

Rating	Symbol	Value	Unit
Peak Reverse Voltage	$V_{RM}$	75	Vdc
D.C Reverse Voltage	$V_R$	30	Vdc
	MMBD2837LT1	50	
	MMBD2838LT1	50	
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>	$P_D$	225	mW
$T_A = 25^\circ\text{C}$			
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation	$P_D$	300	mW
Alumina Substrate, <sup>(2)</sup> $T_A = 25^\circ\text{C}$			
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

MMBD2837LT1 = A5; MMBD2838LT1 = MA6

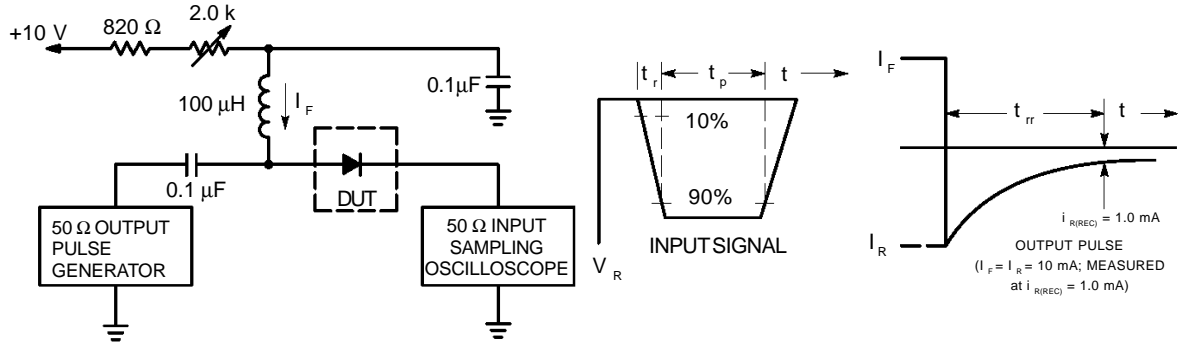
## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted) ( EACH DIODE )

Characteristic	Symbol	Min	Max	Unit
<b>OFF CHARACTERISTICS</b>				
Reverse Breakdown Voltage( $I_{BR} = 100\mu\text{Adc}$ )	MMBD2837LT1	$V_{(BR)}$	35	—
	MMBD2838LT1		75	—
Reverse Voltage Leakage Current	$I_R$	—	—	$\mu\text{Adc}$
( $V_R = 30\text{ Vdc}$ )	MMBD2837LT1	—	0.1	
( $V_R = 50\text{ Vdc}$ )	MMBD2838LT1	—	0.1	
Diode Capacitance	$C_T$	—	4.0	pF
( $V_R = 0\text{ V}$ , $f = 1.0\text{ MHz}$ )				
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.

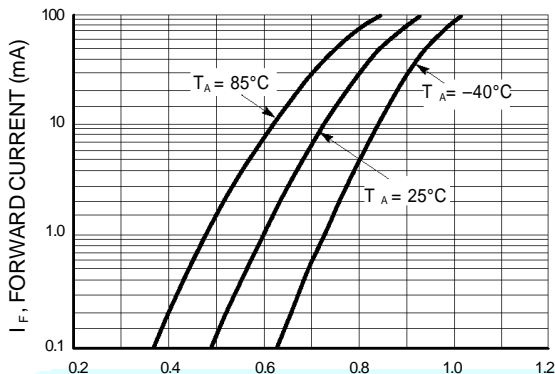
## MMBD2837LT1 MMBD2838LT1



- 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.  $t_p \gg t_{rr}$

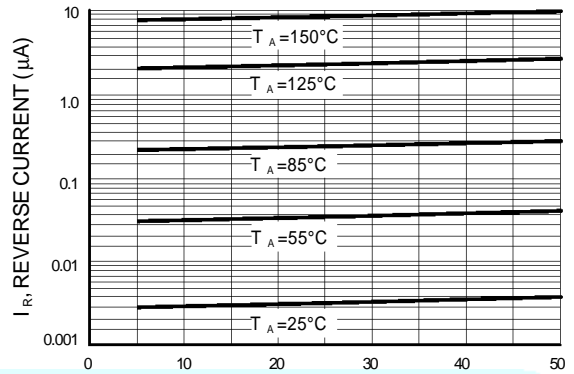
Figure 1. Recovery Time Equivalent Test Circuit

### CURVES APPLICABLE TO EACH CATHODE



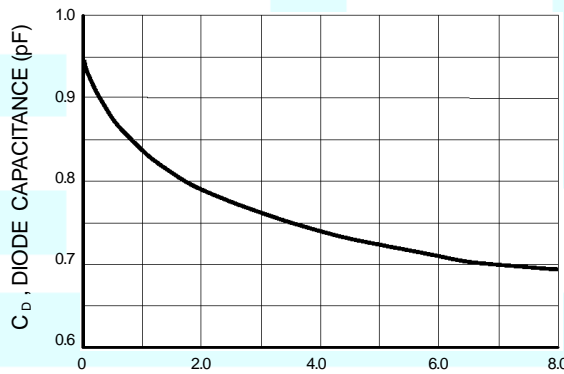
$V_F$ , FORWARD VOLTAGE (VOLTS)

Figure 2. Forward Voltage



$V_R$ , REVERSE VOLTAGE (VOLTS)

Figure 3. Leakage Current



$V_R$ , REVERSE VOLTAGE (VOLTS)

Figure 4. Capacitance