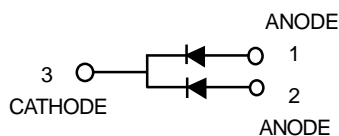
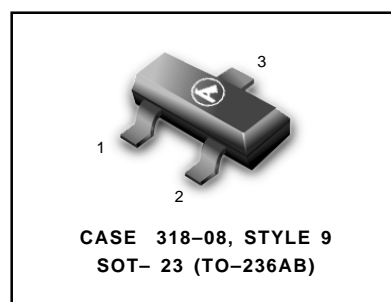


Monolithic Dual Switching Diodes



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 ⁽¹⁾	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, ⁽²⁾ $T_A = 25^\circ\text{C}$			
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

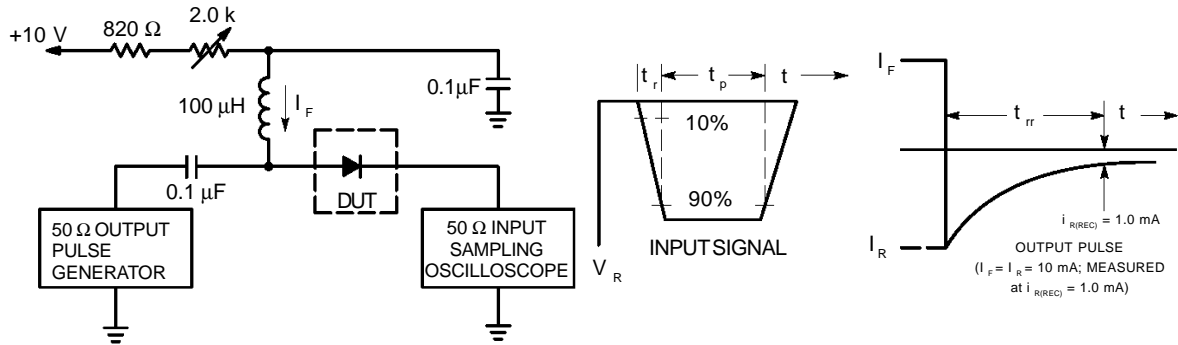
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage($I_{(BR)} = 100\mu\text{Adc}$)	MMBD2837LT1	$V_{(BR)}$	35	—
	MMBD2838LT1		75	—
Reverse Voltage Leakage Current		I_R	—	μAdc
($V_R = 30\text{ Vdc}$)	MMBD2837LT1		—	0.1
($V_R = 50\text{ Vdc}$)	MMBD2838LT1			0.1
Diode Capacitance		C_T	—	4.0
($V_R = 0\text{ V}$, $f = 1.0\text{ MHz}$)				pF
Forward Voltage($I_F = 10\text{ mAdc}$)		V_F	—	1.0
($I_F = 50\text{ mAdc}$)				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.

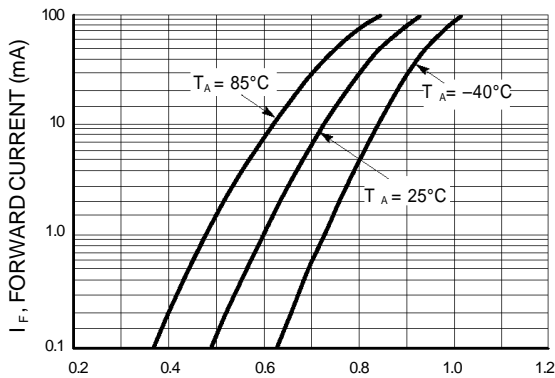
MMBD2837LT1 MMBD2838LT1



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

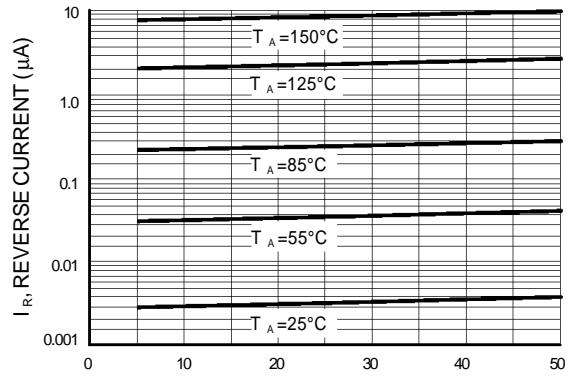
Figure 1. Recovery Time Equivalent Test Circuit

CURVES APPLICABLE TO EACH CATHODE



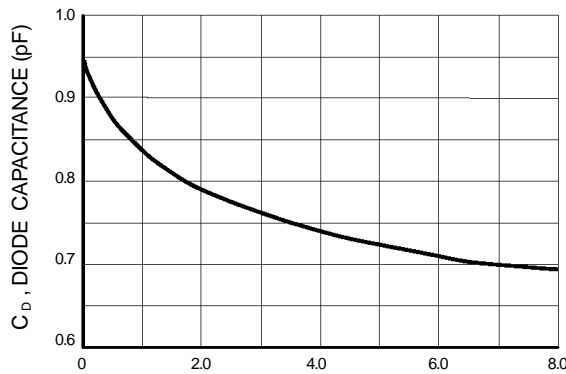
$V_{F,}$ FORWARD VOLTAGE (VOLTS)

Figure 2. Forward Voltage



$V_{R,}$ REVERSE VOLTAGE (VOLTS)

Figure 3. Leakage Current



$V_{R,}$ REVERSE VOLTAGE (VOLTS)

Figure 4. Capacitance