

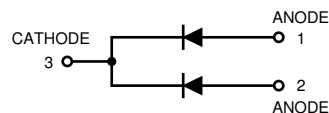
Monolithic Dual Switching Diodes

Lead free product

FETURE

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

MMBD2837G
MMBD2838G



MAXIMUM RATINGS(EACH DIODE)

Rating	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	75	Vdc
D.C Reverse Voltage	V_R	30	Vdc
		50	
Peak Forward Current	I_{FM}	450	mAdc
		300	
Average Rectified Current	I_O	150	mAdc
		100	

THERMAL CHARACTERISTICS

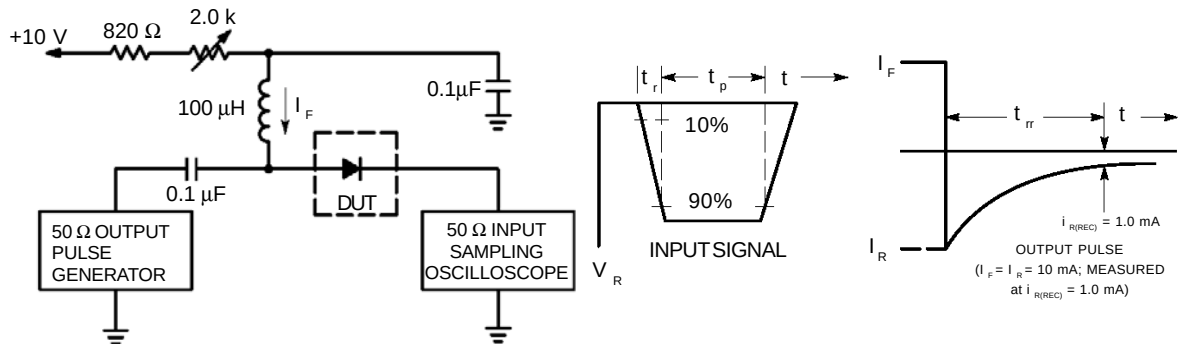
Characteristic	Symbol	Max	Unit
Total Device Dissipation FR-5 Board ⁽¹⁾ $T_A = 25^\circ\text{C}$	P_D	225	mW
Derate above 25°C		1.8	mW/ $^\circ\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Total Device Dissipation Alumina Substrate, ⁽²⁾ $T_A = 25^\circ\text{C}$	P_D	300	mW
Derate above 25°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	$^\circ\text{C}$

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage($I_{(BR)} = 100\mu\text{Adc}$)	$V_{(BR)}$	MMBD2837G	35	Vdc
		MMBD2838G	75	
Reverse Voltage Leakage Current ($V_R = 30\text{ Vdc}$)	I_R	—	—	μAdc
($V_R = 50\text{ Vdc}$)		MMBD2837G	0.1	
		MMBD2838G	0.1	
Diode Capacitance ($V_R = 0\text{ V}$, $f = 1.0\text{ MHz}$)	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 = $1.0 \times 0.75 \times 0.062\text{ in.}$

2. Alumina = $0.4 \times 0.3 \times 0.024\text{ in.}$ 99.5% alumina.



- Notes: 1. A 2.0 k Ω 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

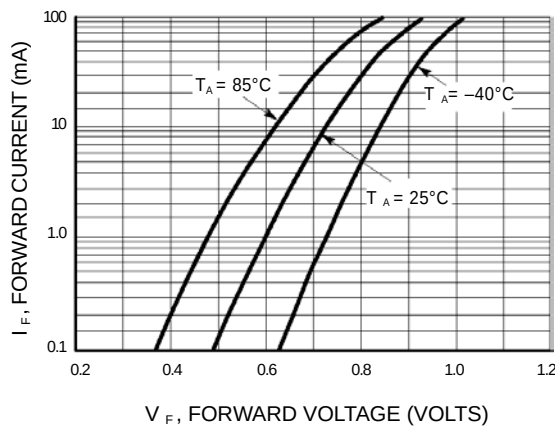


Figure 2. Forward Voltage

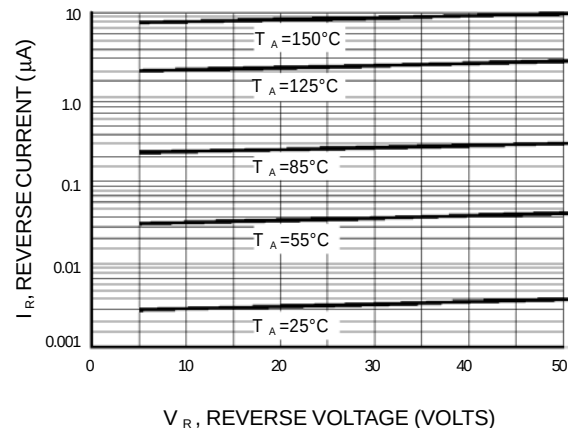


Figure 3. Leakage Current

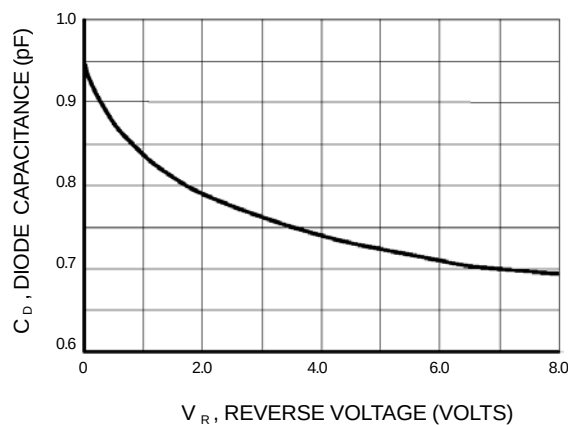


Figure 4. Capacitance