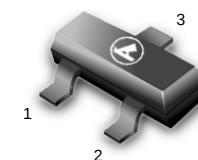
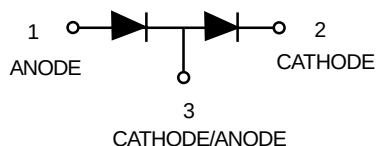


Dual Switching Diode

MMBD7000LT1



CASE 318-08, STYLE11
SOT- 23 (TO-236AB)

MAXIMUM RATINGS(EACH DIODE)

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	100	Vdc
Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM(surge)}$	500	mAdc

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	$^\circ\text{C}$

DEVICEMARKING

MMBD7000LT1 = M5C

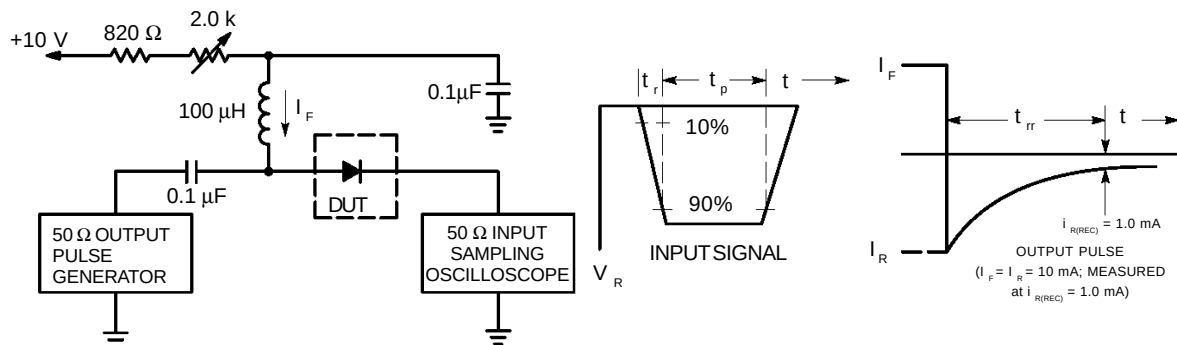
ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)(EACH DIODE)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage ($I_{(BR)} = 100 \mu\text{Adc}$)	$V_{(BR)}$	100	—	Vdc
Reverse Voltage Leakage Current ($V_R = 50 \text{ Vdc}$)	I_R	—	1.0	μAdc
($V_R = 100 \text{ Vdc}$)	I_{R2}	—	3.0	
($V_R = 50 \text{ Vdc}, 125^\circ\text{C}$)	I_{R3}	—	100	
Forward Voltage ($I_F = 1.0 \text{ mAdc}$)	V_F	0.55	0.7	Vdc
($I_F = 10 \text{ mAdc}$)		0.67	0.82	
($I_F = 100 \text{ mAdc}$)		0.75	1.1	
Reverse Recovery Time ($I_F = I_R = 10 \text{ mAdc}$) (Figure 1)	t_{rr}	—	4.0	ns
Capacitance ($V_R = 0\text{V}$)	C	—	1.5	pF

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.

MMBD7000LT1



- 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

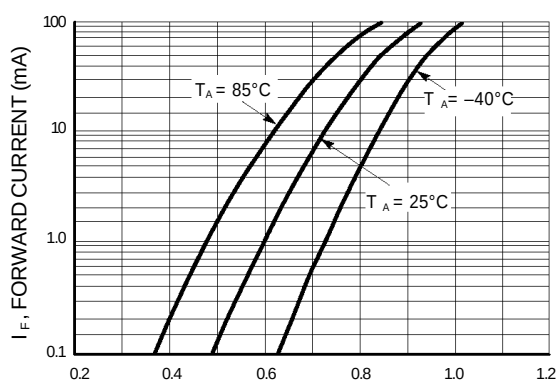


Figure 2. Forward Voltage

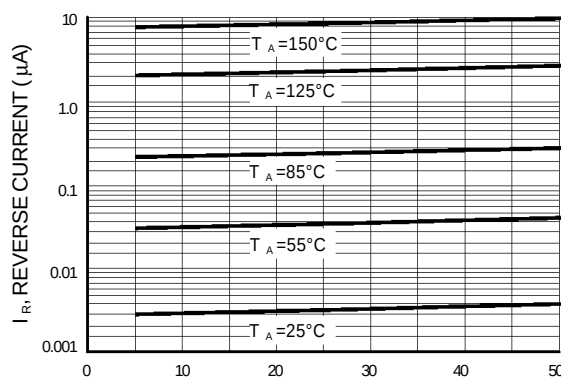


Figure 3. Leakage Current

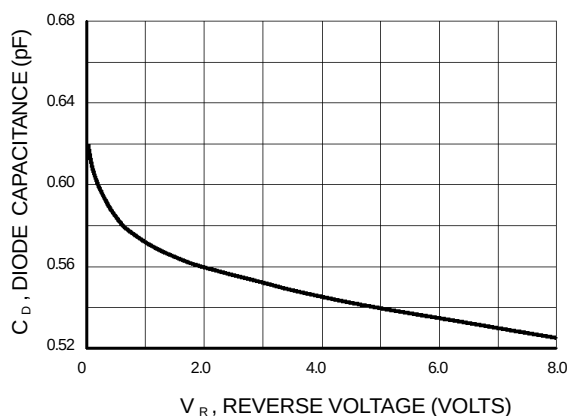


Figure 4. Capacitance