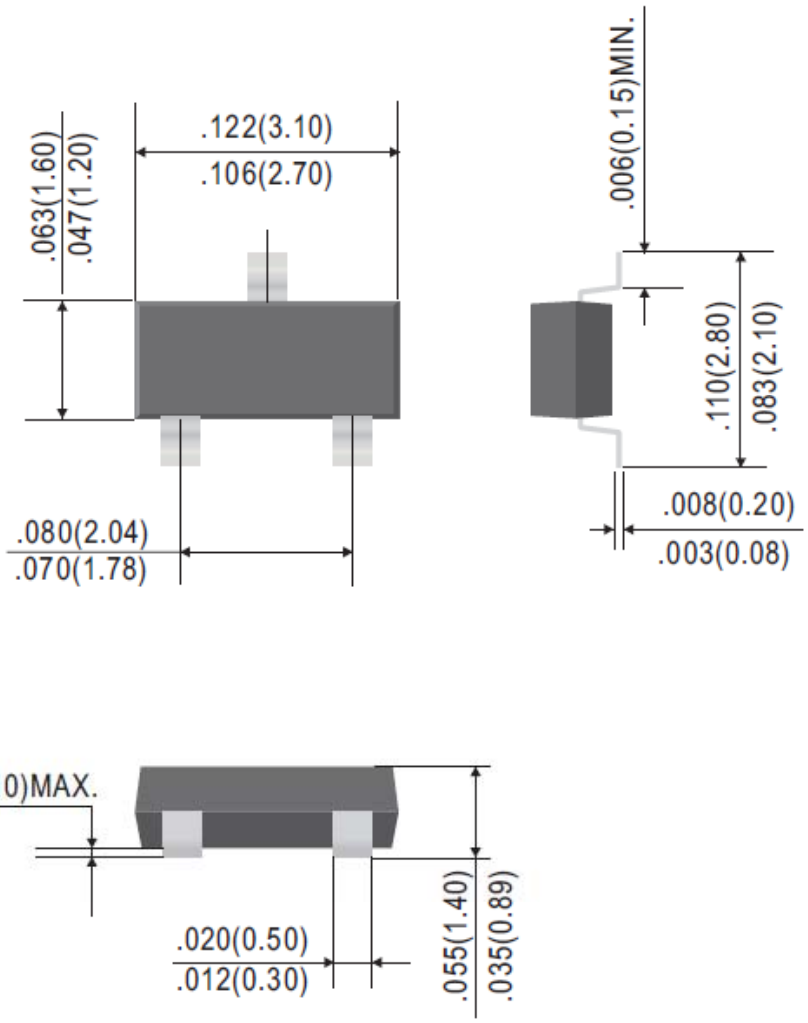
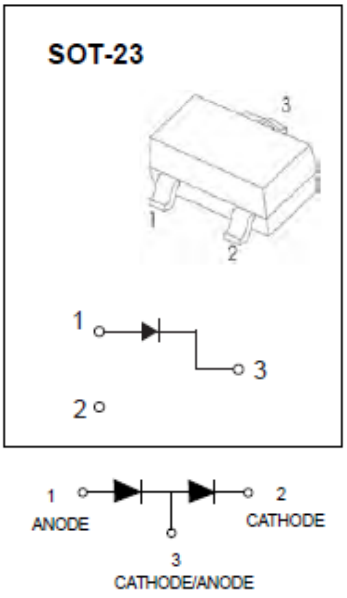
MMBD7000LT1

200mA Surface Mount Switching Diode-100V



Dimensions in inches and (millimeters)



FEATURES

·Pb-Free package is available

·RoHS product for packing code suffix "G"

·Halogen free product for packing code suffix "H"

·Moisture Sensitivity Level 1

MARKING: **MMBD7000LT1 = M5C**

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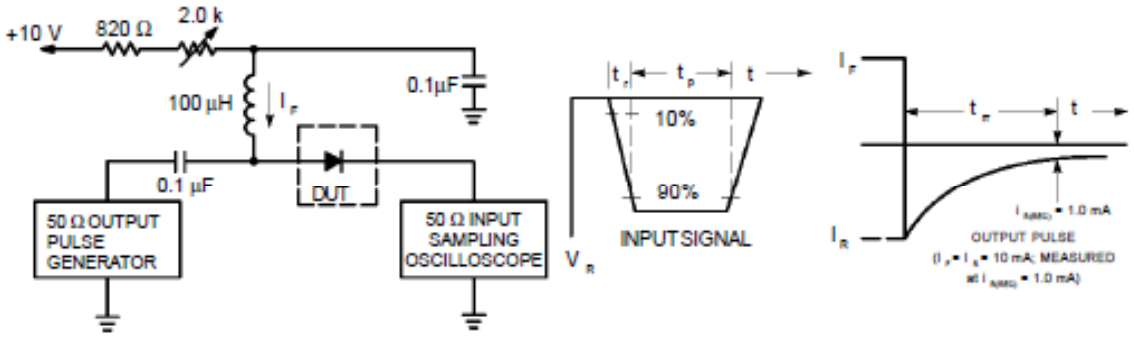
200mA Surface Mount Switching Diode-100V

Maximum Ratings (T_A=25°C unless otherwise specified)			
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 (T_A=25°C unless otherwise specified)			
Characteristic	**Symbol**	**Max**	**Unit**
Total Device Dissipation FR–5 Board [1] T_A = 25°C Derate above 25°C	P_D	225 1.8	mW mW/°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate [2] T_A = 25°C Derate above 25°C	P_D	300 2.4	mW mW/°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	417	°C/W
Operating/ Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)				
Characteristic	**Symbol**	**Min.**	**Max.**	**Unit**
OFF Characteristics				
Reverse Breakdown Voltage ($I_{(BR)}$ = 100 μAdc)	$V_{(BR)}$	100	—	Vdc
Reverse Voltage Leakage Current (V_R = 50 Vdc) (V_R = 100 Vdc) (V_R = 50 Vdc, 125°C)	I_R	 — — —	 1 3 100	μAdc
Forward Voltage (I_F = 1.0 mAdc) (I_F = 10 mAdc) (I_F = 100 mAdc)	V_F	 0.55 0.67 0.75	 0.7 0.82 1.1	Vdc
Diode Capacitance (V_R = 0V)	C_T	—	1.5	pF
Reverse Recovery Time (I_F = I_R = 10 mAdc) (Figure 1)	t_{rr}	—	4	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.



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

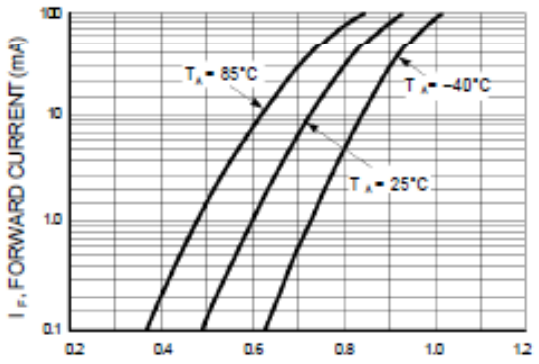


Figure 2. Forward Voltage

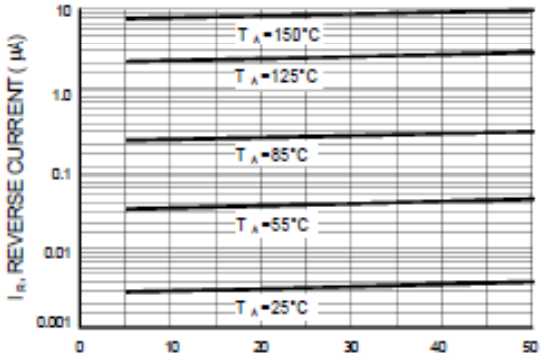


Figure 3. Leakage Current

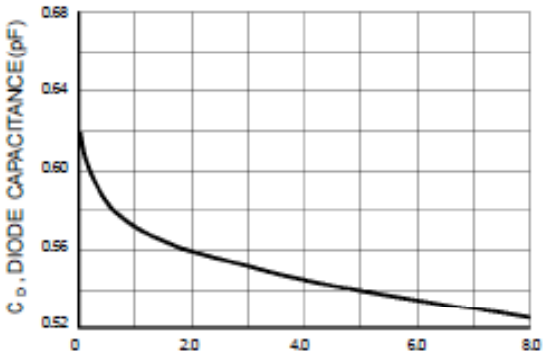


Figure 4. Capacitance