Micro Commercial Components
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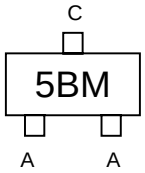
MMBD6100

Monolithic Dual Switching Diode

Features

- Low Current Leakage
- SOT-23 Package For Surface Mount Application
- Capable of 225Watts of Power Dissipation



Maximum Ratings

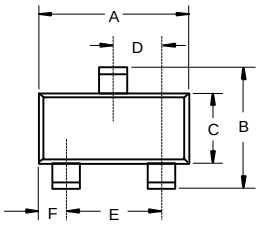
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 556°C/W Junction To Ambient

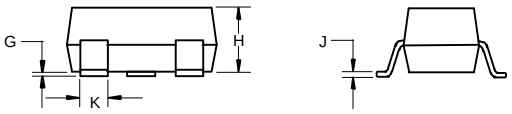
Electrical Characteristics @ 25 °C Unless Otherwise Specified

Reverse Voltage	V_R	70V	
Minimum Reverse Breakdown Voltage	V_{BR}	70V	I_{BR}=100μA
Forward Current	I_F	200mA	
Power Dissipation FR-5 Board(1)	P_{TOT}	225mW 1.8mW/°C	T_A=25°C Derate above 25°C
Power Dissipation Alumina Substrate(2)	P_{TOT}	300mW 2.4mW/°C	T_A=25°C Derate above 25°C
Peak Forward Surge Current	I_{FSM}	500mA	8.3ms, half sine
Junction Temperature	T_J	150°C	
Forward Voltage	V_F	0.55~0.7V 0.85~1.1V	I_F=1.0mA I_F=100mA
Maximum Reverse Voltage Leakage Current	I_R	0.1μA	V_R=50V T_A=25°C,
Maximum Junction Capacitance	C_J	2.5pF	Measured at V_R=0V
Maximum Reverse Recovery Time	T_{rr}	4.0nS	I_F=I_R=10mA $I_{R\ (RCE)}$=1.0mA

1) FR-5=1.0 × 0.75 × 0.062 in.
2) Alumina=0.4 × 0.3 × 0.024 in. 99.5% alumina.

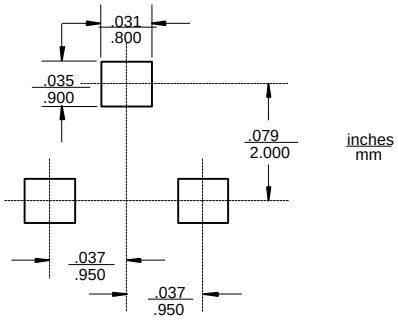
SOT-23

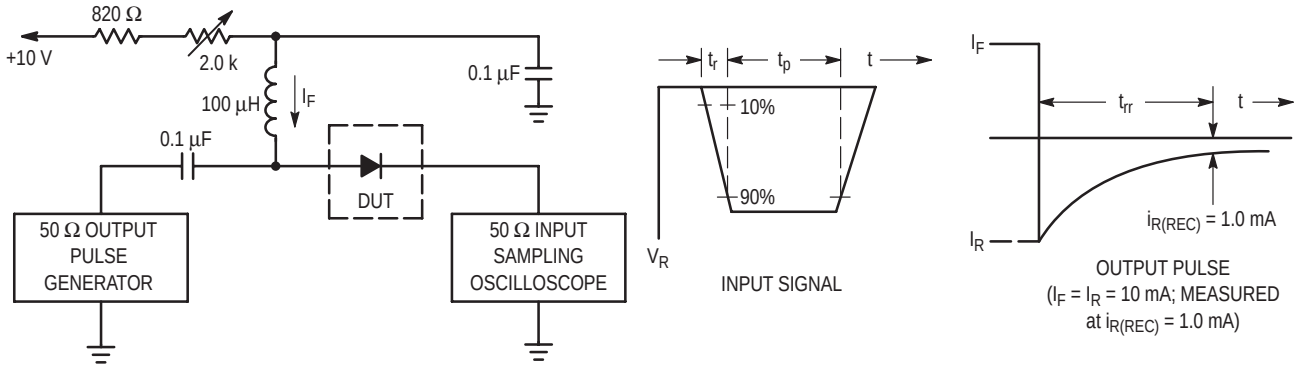




DIMENSIONS					
	INCHES		MM		
DIM	MIN	MAX	MIN	MAX	NOTE
A	.110	.120	2.80	3.04	
B	.083	.098	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout





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

Figure 1. Recovery Time Equivalent Test Circuit

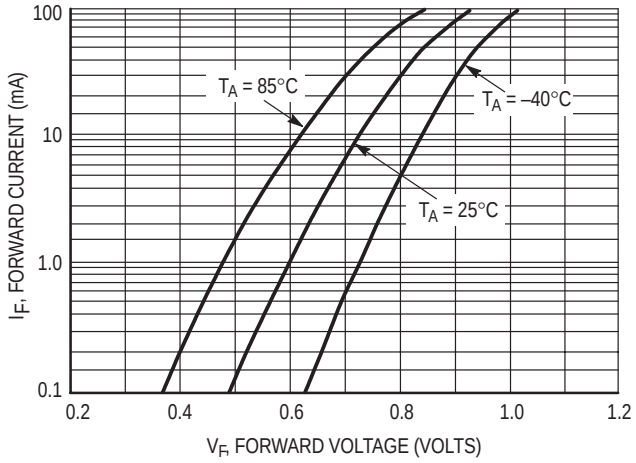


Figure 2. Forward Voltage

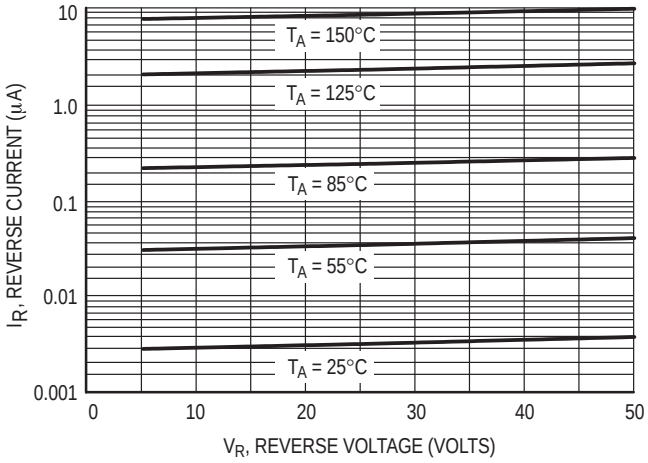


Figure 3. Leakage Current

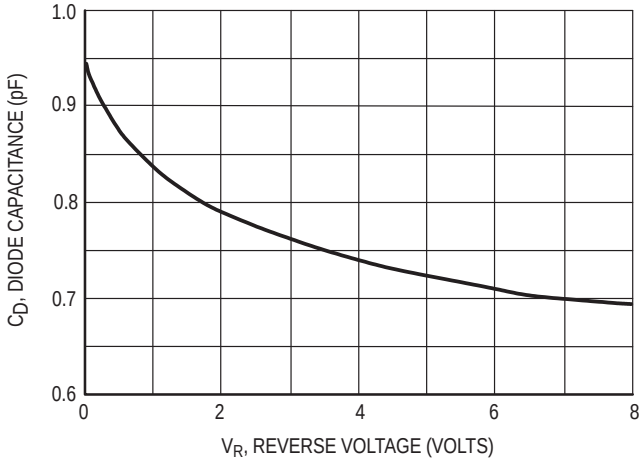


Figure 4. Capacitance