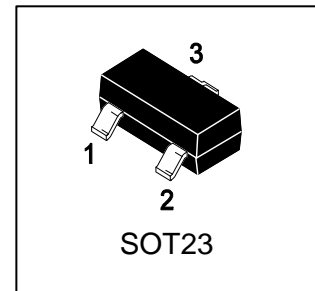


## Monolithic Dual Switching Diode

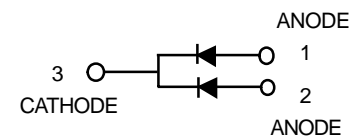
### 1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.



### 2. DEVICE MARKING AND ORDERING INFORMATION

Device	Marking	Shipping
MMBD6100	5BM	3000/Tape&Reel



### 3. MAXIMUM RATINGS(Ta = 25°C)

Parameter	Symbol	Limits	Unit
Reverse Voltage	VR	70	V
Forward Current	IF	200	mA
Peak Forward Surge Current	IFM(surge)	500	mA

### 4. THERMAL CHARACTERISTICS

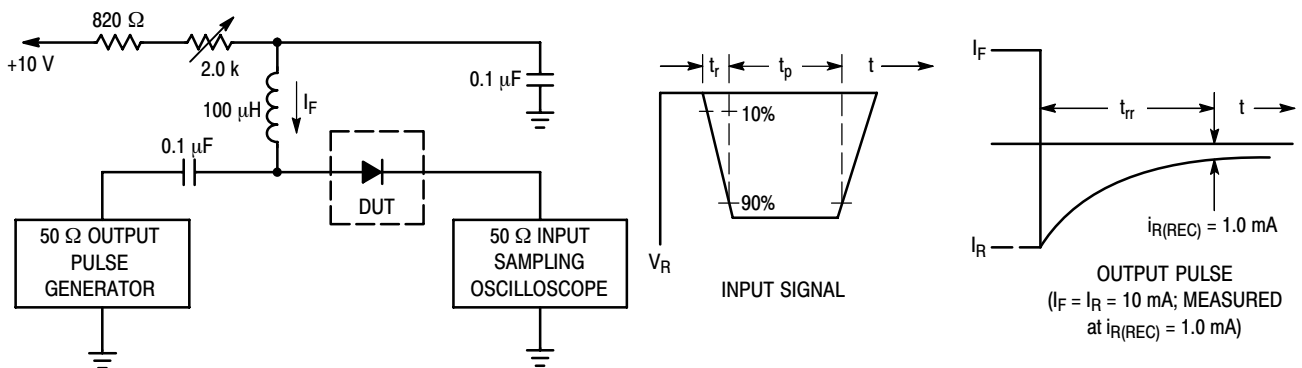
Parameter	Symbol	Value	Unit
Total Device Dissipation FR-5 Board (Note 1) TA = 25°C	PD	225	mW
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction to Ambient	RθJA	556	°C/W
Total Device Dissipation Alumina Substrate(Note 2) TA = 25°C	PD	300	mW
Derate above 25°C		2.4	mW/°C
Thermal Resistance, Junction to Ambient	RθJA	417	°C/W
Junction and Storage Temperature	TJ , Tstg	-55~+150	°C

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.

**5. ELECTRICAL CHARACTERISTICS (Ta= 25°C)**

Characteristic	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage ( $I_{(BR)} = 100 \mu A$ )	$V_{(BR)}$	70	-	-	V
Reverse Voltage Leakage Current ( $V_R = 50 V$ )	$I_R$	-	-	0.1	$\mu A$
Forward Voltage ( $I_F = 1.0 mA$ ) ( $I_F = 100 mA$ )	$V_F$	0.55 0.8	- -	0.7 1.1	V
Reverse Recovery Time ( $I_F = I_R = 10 mA, I_{R(REC)} = 1.0 mA$ )(Figure 1)	$t_{rr}$	-	-	4	nS
Capacitance( $V_R = 0V$ )	$C$	-	-	2.5	pF



- Notes: 1. A 2.0 k $\Omega$  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**

**6.ELECTRICAL CHARACTERISTICS CURVES**
