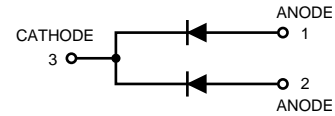
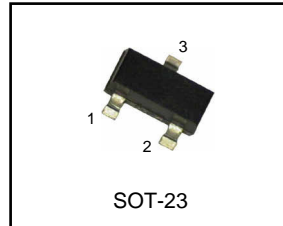


## Monolithic Dual Switching Diode

**MMBD2838**



### MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Peak Reverse Voltage	VRM	75	Vdc
D.C Reverse Voltage	VR	50	Vdc
Peak Forward Current	IFM	450 300	mAdc
Average Rectified Current	IO	150 100	mAdc

### THERMAL CHARACTERISTICS

Characteristic	Symbol	Max.	Unit
Total Device Dissipation FR-5 Board <sup>(1)</sup> TA=25°C Derate above 25°C	PD	225 1.8	mW mW / °C
Thermal Resistance, Junction to Ambient	R $\theta$ JA	556	°C / W
Total Device Dissipation Alumina Substrate, <sup>(2)</sup> TA=25°C Derate above 25°C	PD	300 2.4	mW mW / °C
Thermal Resistance, Junction to Ambient	R $\theta$ JA	417	°C / W
Junction and Storage Temperature	TJ,TSTG	-55 to +150	°C

### DEVICE MARKING

MMBD2838=MA6

### ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted) (EACH DIODE)

Characteristic	Symbol	Min.	Max.	Unit
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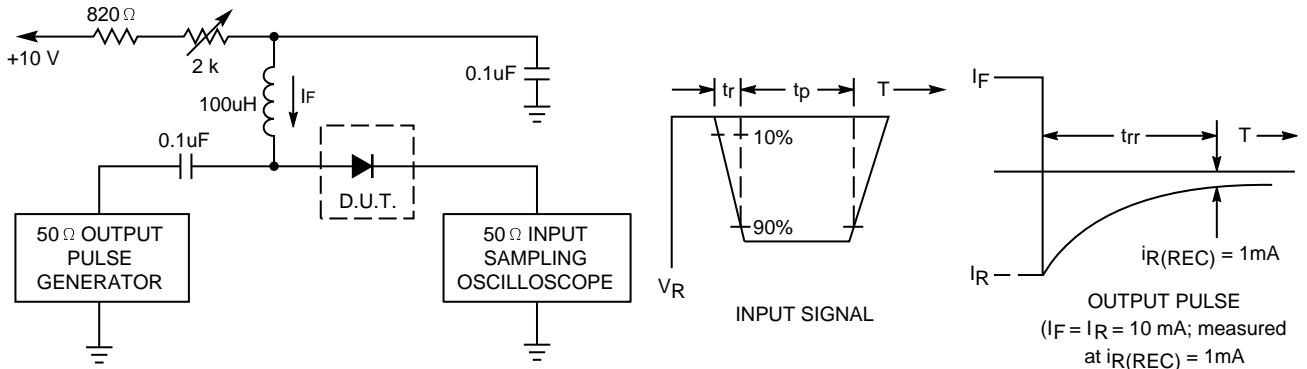
### OFF CHARACTERISTICS

Reverse Breakdown Voltage ( IBR=100 uAdc )	V(BR)	75	-	Vdc
Forward Voltage ( IF=10 mAdc ) ( IF=50 mAdc ) ( IF=100 mAdc )	VF	- - -	1000 1000 1200	mVdc
Reverse Voltage Leakage Current ( VR=50 Vdc )	IR	- -	0.1	uAdc
Diode Capacitance ( VR=0, f=1.0MHZ )	CJ	-	4.0	pF
Reverse Recovery Time ( IF=IR=10 mAdc, IR(REC)=1.0mAdc, measured at IR=1.0mA RL=100 Ω )	trr	-	4.0	nS

(1) FR-5=1.0 x 0.75 x 0.062in.

(2) Alumina=0.4 x 0.3 x 0.024in. 99.5% alumina.

FIGURE 1. RECOVERY TIME EQUIVALENT TEST CIRCUIT



- Notes: 1. A 2.0kΩ 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 2. FORWARD VOLTAGE

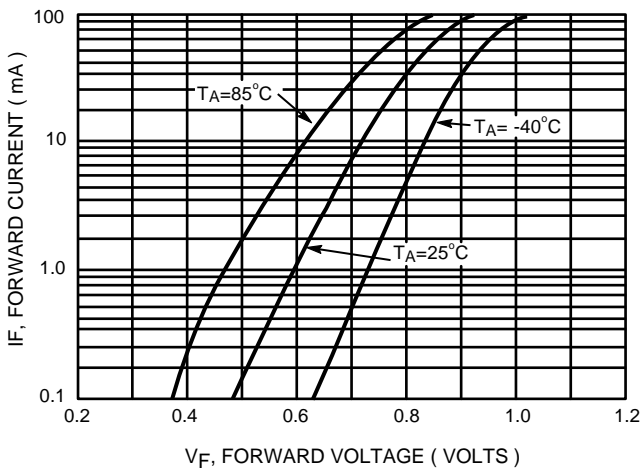


FIGURE 3. LEAKAGE CURRENT

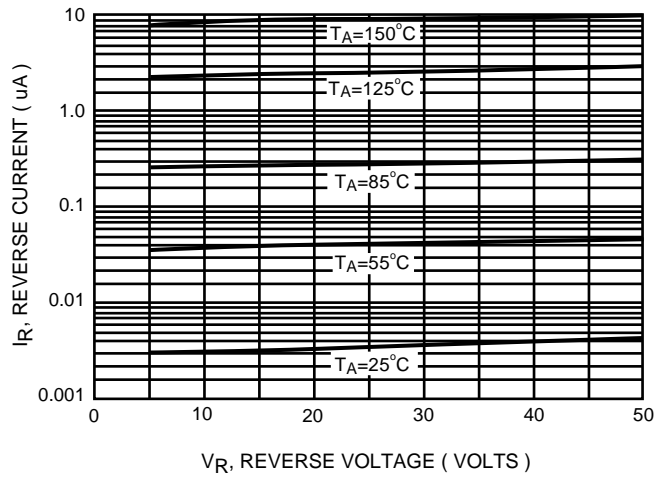


FIGURE 4. CAPACITANCE

