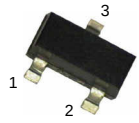
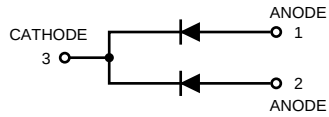
Zowie Technology Corporation

Monolithic Dual Switching Diode

MMBD6100



SOT-23



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	70	Vdc
Peak 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°C Derate above 25°C	P_D	225 1.8	mW mW / °C
Thermal Resistance, 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, Junction to Ambient	$R_{\theta JA}$	417	°C / W
Junction and Storage Temperature	T_J,T_{STG}	-55 to +150	°C

DEVICE MARKING

MMBD6100=5BM

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

Characteristic		Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS					
Reverse Breakdown Voltage (I_{BR}=100uAdc)		$V_{(BR)}$	70	-	Vdc
Forward Voltage	(I_F=1.0 mAdc) (I_F=100 mAdc)	V_F	550 850	700 1100	mVdc
Reverse Voltage Leakage Current (V_R=50 Vdc)		I_R	- -	0.1	uAdc
Diode Capacitance (V_R=0, f=1.0MHz)		C_J	-	2.5	pF
Reverse Recovery Time (I_F=I_R=10 mAdc, $I_{R(REC)}$=1.0mAdc)		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.