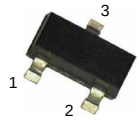
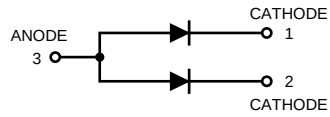
Monolithic Dual Switching Diode

MMBD2835



SOT-23



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Continuous Reverse Voltage	V_R	35	Vdc
Peak Forward Current	I_F	100	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

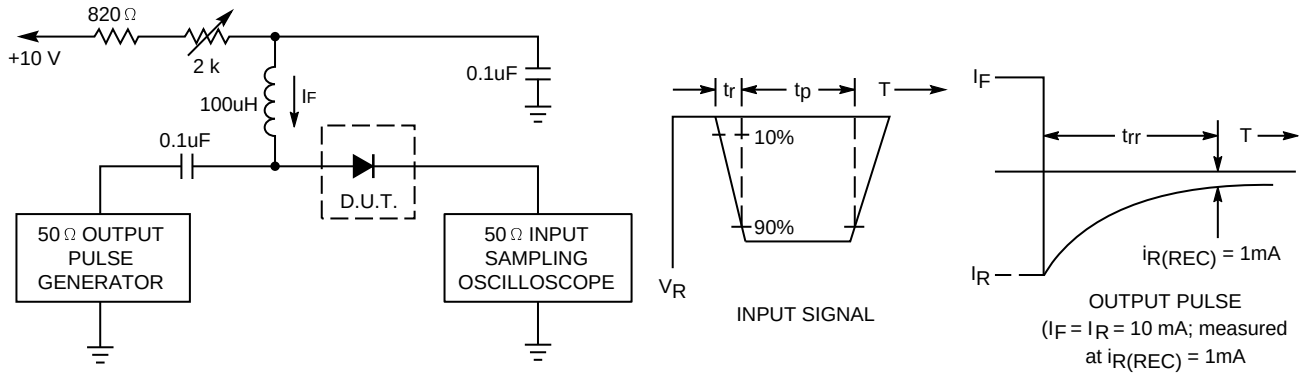
MMBD2835=A3X

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

Characteristic		Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS					
Reverse Breakdown Voltage (I_{BR}=100 uAdc)		$V_{(BR)}$	35	-	Vdc
Forward Voltage	(I_F=10 mAdc) (I_F=50 mAdc) (I_F=100 mAdc)	V_F	- - -	1000 1000 1200	mVdc
Reverse Voltage Leakage Current (V_R=20 Vdc)		I_R	- -	0.1	uAdc
Diode Capacitance (V_R=0, f=1.0MHz)		C_J	-	4.0	pF
Reverse Recovery Time (I_F=I_R=10 mAdc, I_R(REC=1.0mAdc, measured at I_R=1.0mA R_L=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

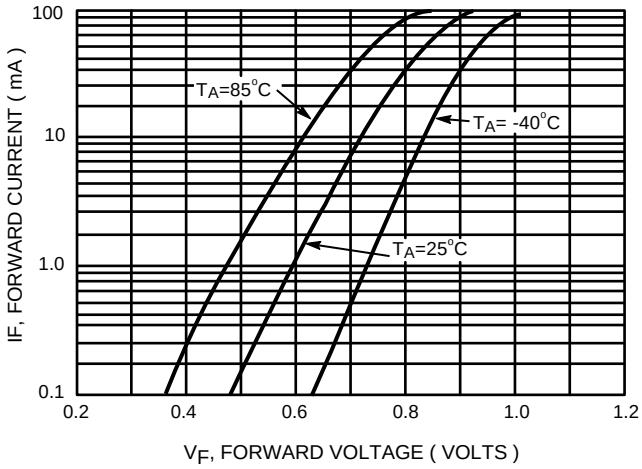


FIGURE 3. LEAKAGE CURRENT

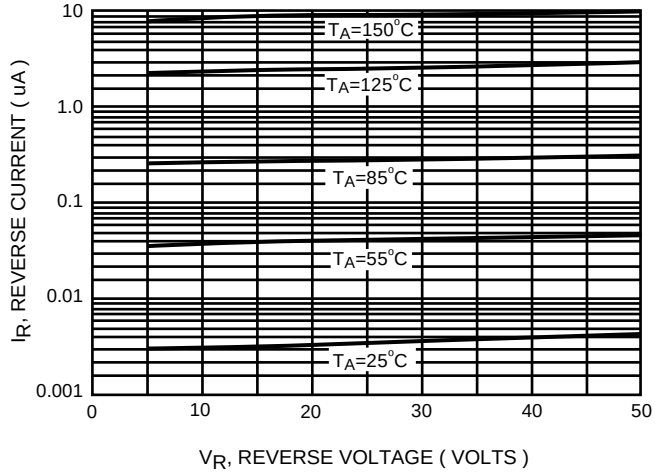


FIGURE 4. CAPACITANCE