

MMBD914

CASE 318-02/03, STYLE 8
SOT-23 (TO-236AA/AB)

HIGH-SPEED SWITCHING DIODE

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	70	Vdc
Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM}(\text{surge})$	500	mAdc

THERMAL CHARACTERISTICS

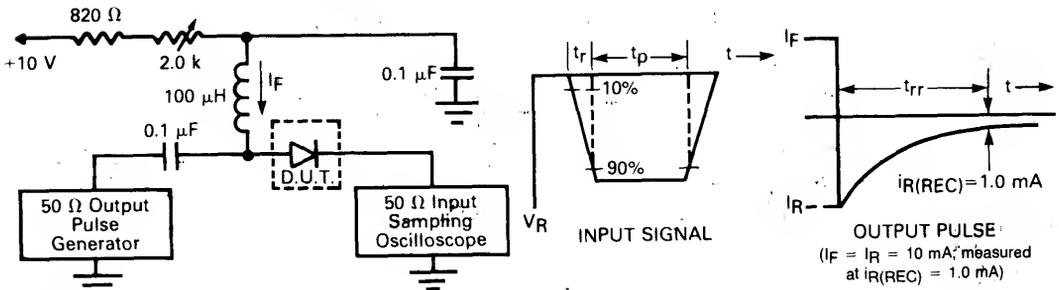
Characteristic	Symbol	Max	Unit
*Total Device Dissipation, $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	350 2.8	mW mW/ $^\circ\text{C}$
Storage Temperature	T_{stg}	150	$^\circ\text{C}$
*Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C/W}$

*Package mounted on 99.5% alumina $10 \times 8 \times 0.6$ mm.

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage ($I_R = 100 \mu\text{Adc}$)	$V_{(BR)}$	100	—	Vdc
Reverse Voltage Leakage Current ($V_R = 20$ Vdc) ($V_R = 75$ Vdc)	I_R	—	25 5.0	nAdc μAdc
Diode Capacitance ($V_R = 0$ Vdc, $f = 1.0$ MHz)	C_T	—	4.0	pF
Forward Voltage ($I_F = 10$ mAdc)	V_F	—	1.0	Vdc
Reverse Recovery Time ($I_F = I_R = 10$ mAdc) (Figure 1)	t_{rr}	—	4.0	ns

FIGURE 1 — Recovery Time Equivalent Test Circuit



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