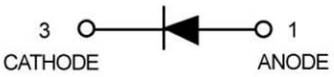
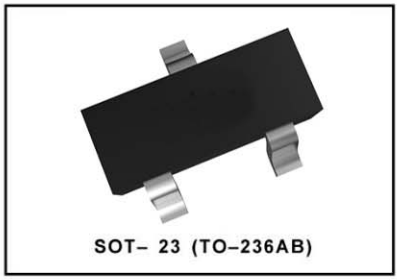
MMBD914




SOT– 23 (TO–236AB)

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Reverse Voltage	V_R	100	Vdc
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	P_D	225	m W
Derate above 25°C		1.8	mW/°C
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate, (2) T_A = 25°C	P_D	300	mW
Derate above 25°C		2.4	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

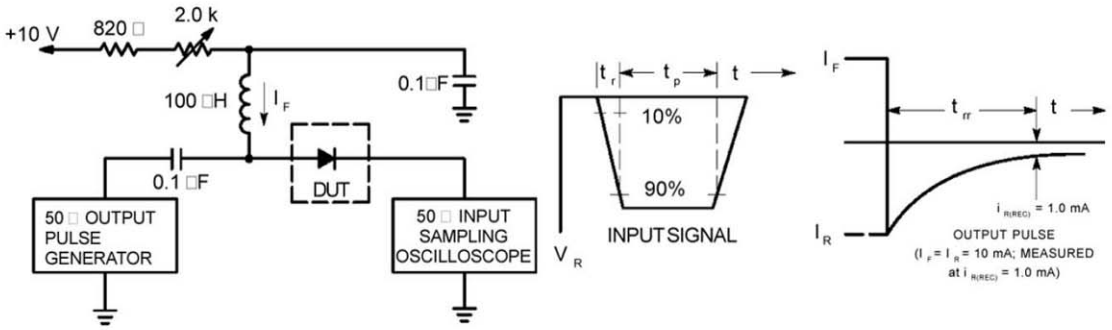
DEVICE MARKING

MMBD914LT1 = 5D

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

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Reverse Breakdown Voltage (I_R = 100□□Adc)	$V_{(BR)}$	100	—	Vdc
Reverse Voltage Leakage Current	I_R			
(V_R = 20 Vdc)		—	25	nAdc
(V_R = 75 Vdc)		—	5.0	□Adc
Diode Capacitance (V_R = 0, 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

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.



Notes: 1. A 2.0 kΩ 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 1. Recovery Time Equivalent Test Circuit

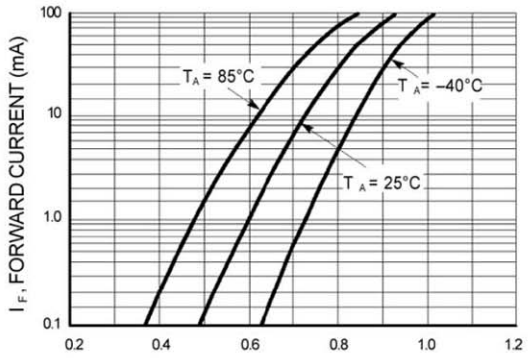


Figure 2. Forward Voltage

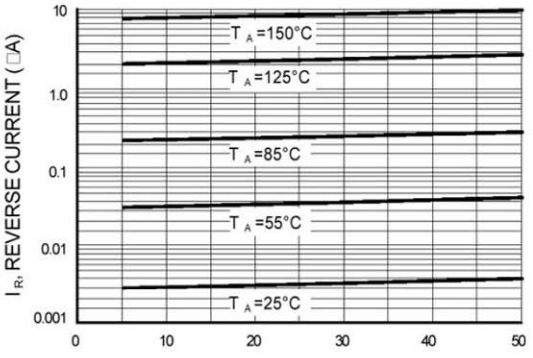


Figure 3. Leakage Current

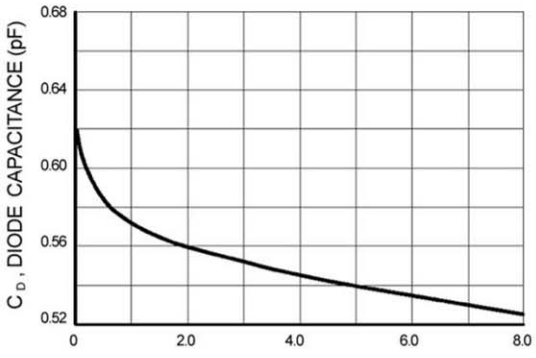


Figure 4. Capacitance