

MMBD914

PRV : 100 Volts
Io : 200 mA

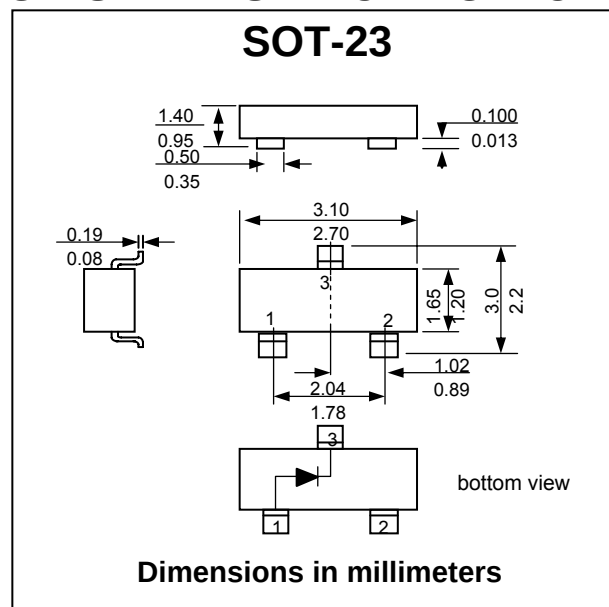
FEATURES :

- * Silicon Epitaxial Planar Diode
- * Fast switching speed
- * Surface mount package ideally suited for automatic insertion
- * High conductance
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SOT-23 plastic Case
- * Marking Code : 5D

HIGH-SPEED SWITCHING DIODE



MAXIMUM RATINGS AND THERMAL CHARACTERISTICS (Ta = 25 °C unless otherwise noted)

Parameter	Symbol	Value	Unit
Reverse Voltage	V_R	100	V
Forward Current	I_F	200	mA
Maximum Peak Forward Surge Current	I_{FSM}	500	mA
Total Power Dissipation, FR-5 Board Ta = 25 °C (Note 1)	P_D	225	mW
Derate above 25 °C		1.8	mW/°C
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Power Dissipation, Alumina Substrate Ta=25 °C(Note 2)	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 Range	T_J, T_{STG}	-55 to +150	°C

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

Parameter	Test Condition	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage	$I_R = 100 \mu A$	$V_{(BR)}$	100	-	V
Forward Voltage	$I_F = 10 mA$	V_F	-	1	V
Reverse Current	$V_R = 20 V$	I_R	-	25	nA
	$V_R = 75 V$		-	5.0	μA
Diode Capacitance	$V_R = 0 V, f = 1 MHz$	C_T	-	4.0	pF
Reverse Recovery Time	$I_F = I_R = 10 mA$	T_{rr}	-	4.0	ns

Notes :

- (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.

RATINGS AND CHARACTERISTIC CURVES (MMBD914)

FIG.1 - POWER DERATING CURVE

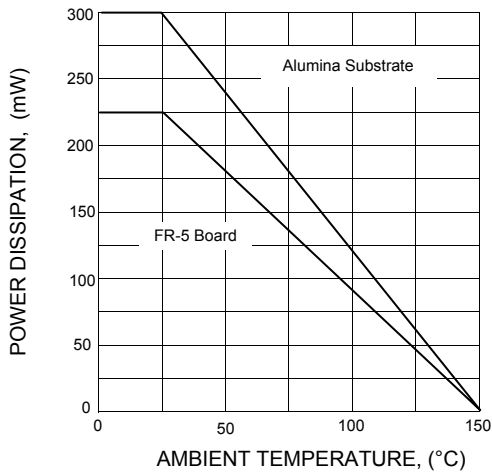


FIG.2 - TYPE CAPACITANCE VS. REVERSE VOLTAGE

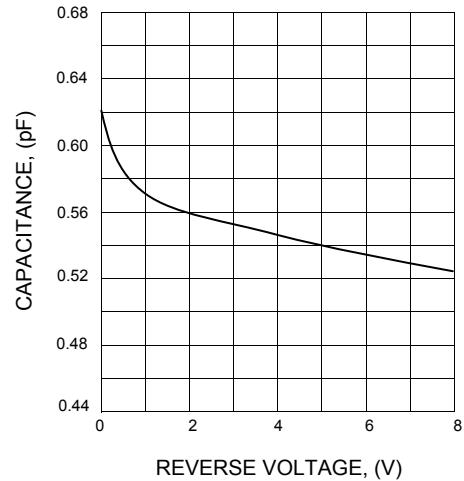


FIG.3 - FORWARD CHARACTERISTICS

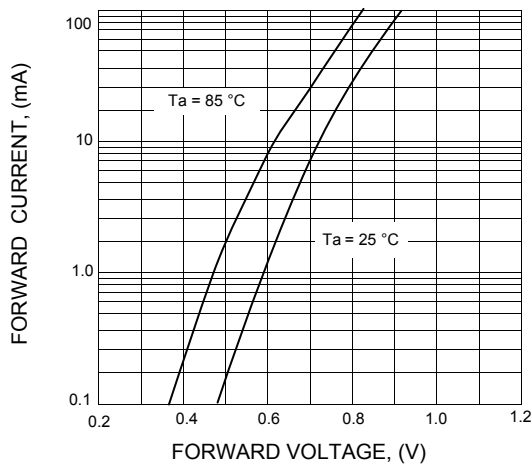


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

