

MBRS4201

PRV : 200 Volts
I_o : 4.0 Amperes

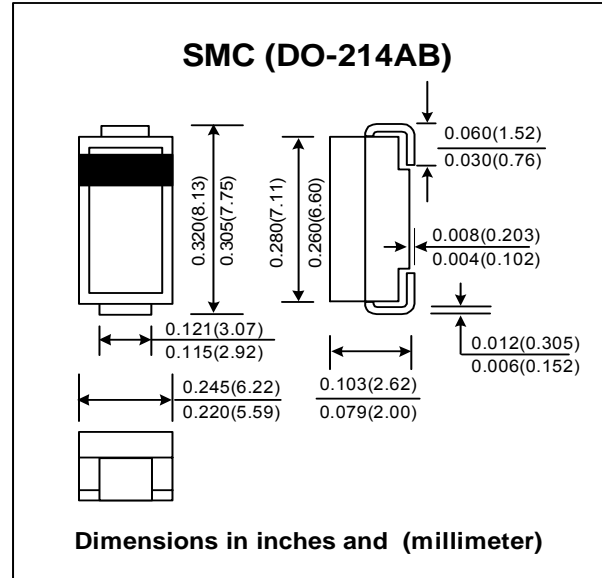
FEATURES :

- * Lower forward voltage than any ultrafast rectifier: $V_F < 0.61 \text{ V}$ at $150 \text{ }^\circ\text{C}$
- * Fast switching speed
- * Soft recovery characteristics
- * Highly stable over temperature
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : SMC Molded plastic
- * Epoxy : UL94V-O rate flame retardant
- * Lead : Lead Formed for Surface Mount
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.21 gram

SCHOTTKY FAST SOFT-RECOVERY POWER RECTIFIER



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at $25 \text{ }^\circ\text{C}$ ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Reverse Voltage	V_{RRM}	200	V
Maximum Working Peak Reverse Voltage	V_{RWM}	200	V
Maximum DC Blocking Voltage	V_R	200	V
Maximum Average Rectified Forward Current ($T_L = 70 \text{ }^\circ\text{C}$)	$I_{F(AV)}$	4.0	A
Maximum Non-Repetitive Peak Surge Current (Surge applied at rated load conditions half wave, single phase, 60 Hz)	I_{FSM}	100	A
Maximum Instantaneous Forward Voltage (Note 1) ($I_F = 4 \text{ A}$, $T_J = 25 \text{ }^\circ\text{C}$) ($I_F = 4 \text{ A}$, $T_J = 150 \text{ }^\circ\text{C}$)	V_F	0.86 0.61	V
Maximum Instantaneous Reverse Current (Note1) (Rated dc Voltage, $T_J = 25 \text{ }^\circ\text{C}$) (Rated dc Voltage, $T_J = 150 \text{ }^\circ\text{C}$)	I_R $I_{R(H)}$	1.0 5.0	mA
Maximum Reverse Recovery Time($I_F = 1 \text{ A}$, $di/dt = 100 \text{ A}/\mu\text{s}$, $V_R = 30 \text{ V}$)	T_{rr}	35	ns
Thermal Resistance Junction to Lead	$R_{\theta JL}$	11	$^\circ\text{C}/\text{W}$
Operating Junction Temperature	T_J	- 55 to +150	$^\circ\text{C}$

RATING AND CHARACTERISTIC CURVES (MBR54201)

FIG.1 - CURRENT DERATING

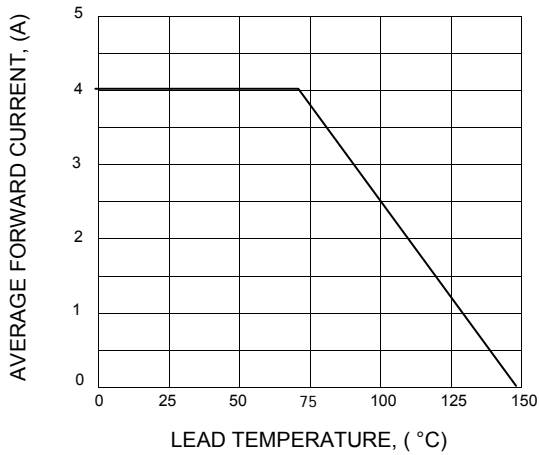


FIG.2 - POWER DISSIPATION

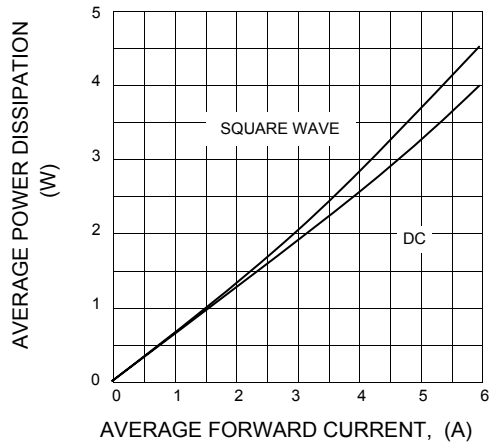


FIG.3 - TYPICAL FORWARD VOLTAGE

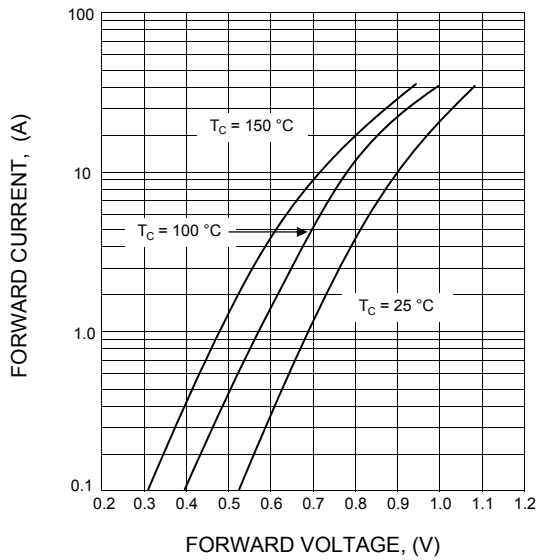


FIG.4 - TYPICAL REVERSE CURRENT

