

# MBRS3201

**PRV : 200 Volts**  
**I<sub>o</sub> : 3.0 Amperes**

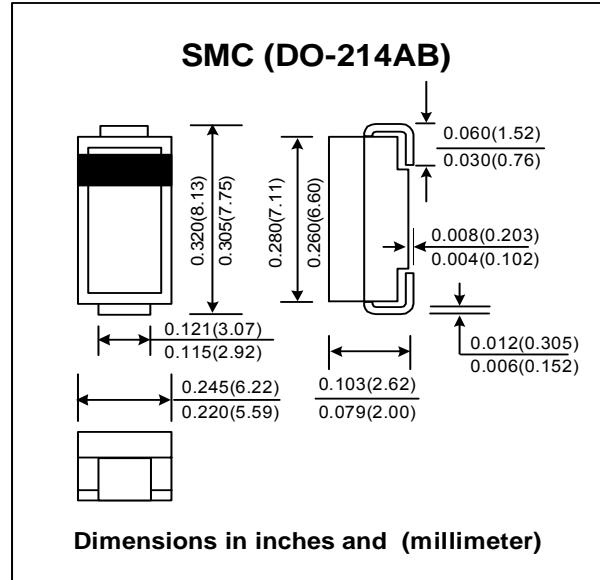
## FEATURES :

- \* Lower forward voltage than any ultrafast rectifier:  $V_F < 0.59 \text{ V}$  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 ( $T_C = 70 \text{ }^\circ\text{C}$ )	$I_{F(AV)}$	3.0	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) ( $I_F = 3.0 \text{ A}$ , $T_J = 25 \text{ }^\circ\text{C}$ ) ( $I_F = 3.0 \text{ A}$ , $T_J = 150 \text{ }^\circ\text{C}$ )	$V_F$	0.84 0.59	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 Ambient	$R_{\theta JA}$	60	$^\circ\text{C}/\text{W}$
Thermal Resistance Junction to Lead	$R_{\theta JL}$	12	$^\circ\text{C}/\text{W}$
Operating Junction Temperature	$T_J$	- 55 to +150	$^\circ\text{C}$

## RATING AND CHARACTERISTIC CURVES ( MBR3201 )

FIG.1 - CURRENT DERATING

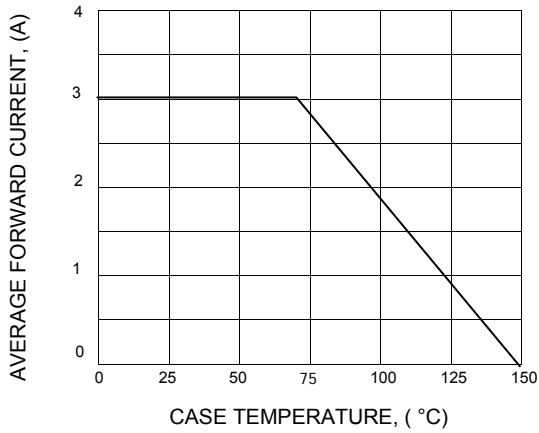


FIG.2 - POWER DISSIPATION

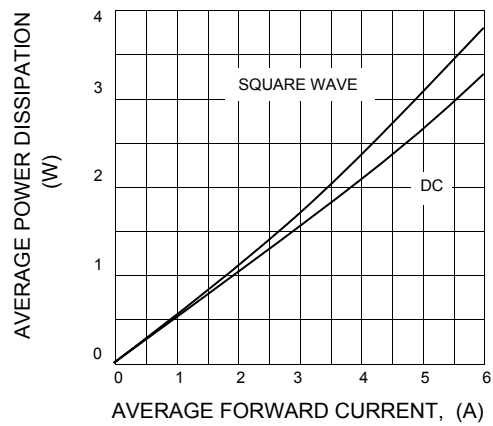


FIG.3 - TYPICAL FORWARD VOLTAGE

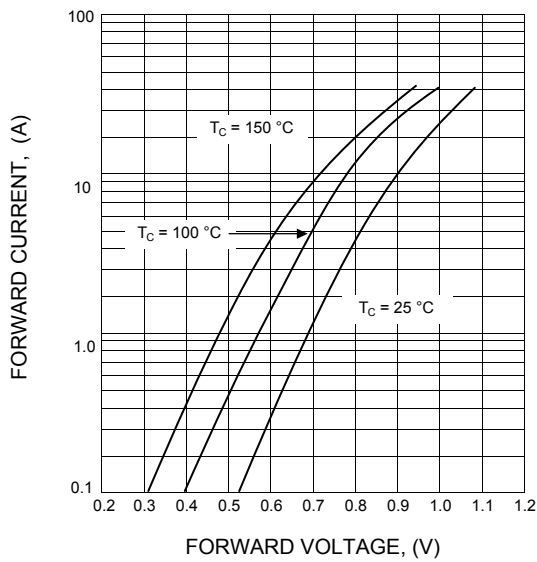


FIG.4 - TYPICAL REVERSE CURRENT

