

# SMC2000D

# SURFACE MOUNT FAST RECOVERY RECTIFIER DIODE

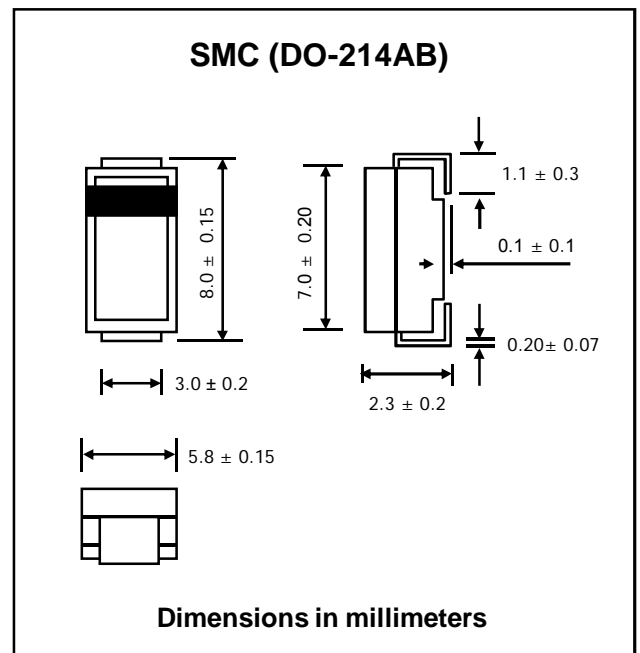
**PRV : 200 Volts**  
**I<sub>o</sub> : 20 Ampere**

### FEATURES :

- \* Glass passivated junction chip
- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : SMC Molded plastic
- \* Epoxy : UL94V-0 rate flame retardant
- \* Lead : Lead Formed for Surface Mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.26 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

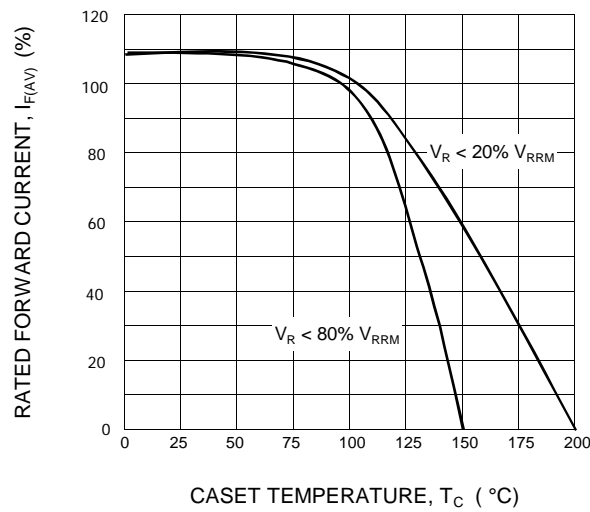
Rating at 25 °C ambient temperature unless otherwise specified.

RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	200	V
Maximum Surge Peak Reverse Voltage	$V_{RSM}$	200	V
Maximum Average Forward Current, $T_C = 75\text{ }^\circ\text{C}$	$I_{F(AV)}$	20	A
Maximum Peak Rectified Forward Current, $f > 15\text{ Hz}$ (Note 1)	$I_{FRM}$	80	A
Maximum Peak Forward Surge Current, 50 Hz half sine wave 60 Hz half sine wave	$I_{FSM}$	375	A
		390	
Maximum Forward Voltage $I_F = 5\text{ A}, T_j = 25\text{ }^\circ\text{C}$ $I_F = 20\text{ A}, T_j = 25\text{ }^\circ\text{C}$	$V_F$	0.84	V
		0.96	
Maximum Reverse Current, $V_R = V_{RRM}, T_j = 25\text{ }^\circ\text{C}$	$I_R$	25	$\mu\text{A}$
Maximum Reverse Recovery Time, ( $I_F = 0.5\text{ A}, I_R = 1\text{ A}; I_{rr} = 0.25\text{ A}$ )	$T_{rr}$	200	ns
Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.5	K / W
Junction Temperature Range, at reduced reverse voltage, $V_R \leq 80\% V_{RRM}$ $V_R \leq 20\% V_{RRM}$ in DC forward mode	$T_J$	- 50 to + 150	$^\circ\text{C}$
		- 50 to + 200	
		- 50 to + 200	
Storage Temperature Range	$T_{STG}$	- 50 to + 175	$^\circ\text{C}$

Note : (1) Max. temperature of the case  $T_C = 100\text{ }^\circ\text{C}$ .

**RATING AND CHARACTERISTIC CURVES ( SMC2000D )**

**FIG.1 - RATED FORWARD CURRENT VS. CASE TEMPERATURE**



**FIG.2 - TYPICAL FORWARD CHARACTERISTICS**

