

SMC1520

SURFACE MOUNT ULTRAFAST RECTIFIER

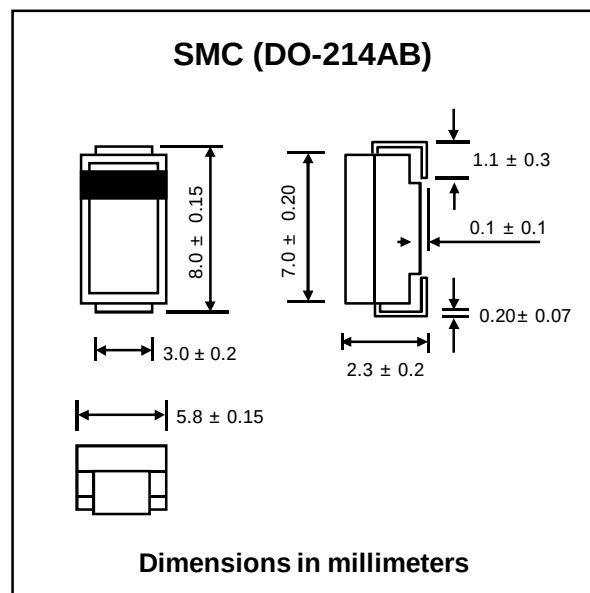
PRV : 200 Volts
Io : 15 Ampere

FEATURES :

- * Glass passivated junction chip
- * High current capability
- * High surge current capability
- * Low forward drop
- * Low leakage
- * 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 Peak 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 Forward Current, $T_C = 75^\circ\text{C}$	$I_{F(AV)}$	15	A
Maximum Non-repetitive Peak Surge Current (Surge applied at rated load conditions halfwave, single phase, 60 Hz)	I_{FSM}	200	A
Maximum Instantaneous Forward Voltage ($I_F = 15\text{ A}$, $T_C = 25^\circ\text{C}$) (Note 1)	V_F	1.05	V
		0.85	
Maximum Instantaneous Reverse Current at $T_C = 25^\circ\text{C}$	I_R	10	μA
Rated DC Voltage (Note 1) at $T_C = 150^\circ\text{C}$	$I_{R(H)}$	500	μA
Maximum Reverse Recovery Time ($I_F = 1.0\text{ Amp}$, $di/dt = 50\text{ A}/\mu\text{s}$)	T_{rr}	35	ns
Maximum Thermal Resistance, Junction to Case	$R_{\theta JC}$	1.5	$^\circ\text{C}/\text{W}$
Operating Junction Temperature	T_J	- 50 to + 175	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 50 to + 175	$^\circ\text{C}$

Note :

(1) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$.

RATING AND CHARACTERISTIC CURVES (SMC1520)

FIG.1 - CURRENT DERATING, CASE

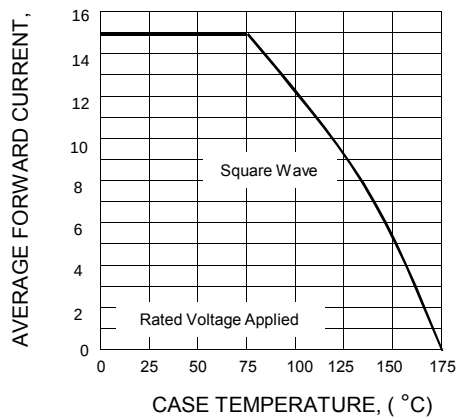


FIG.2 - POWER DISSIPATION

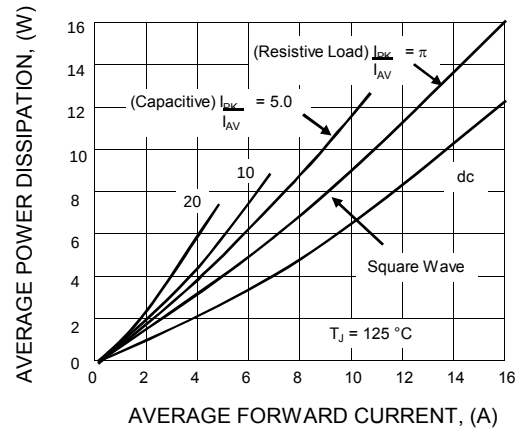


FIG.3 - TYPICAL FORWARD VOLTAGE

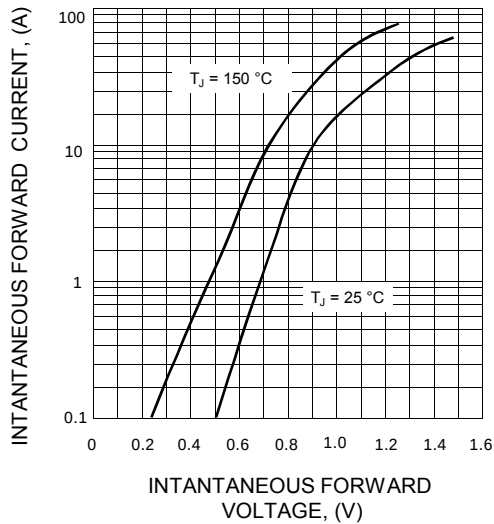


FIG. 4 - TYPICAL REVERSE CURRENT

