

# SMCJ200 - 440A

**Stand-off Voltage : 200 - 440 V**  
**Peak Pulse Power : 1500 W**

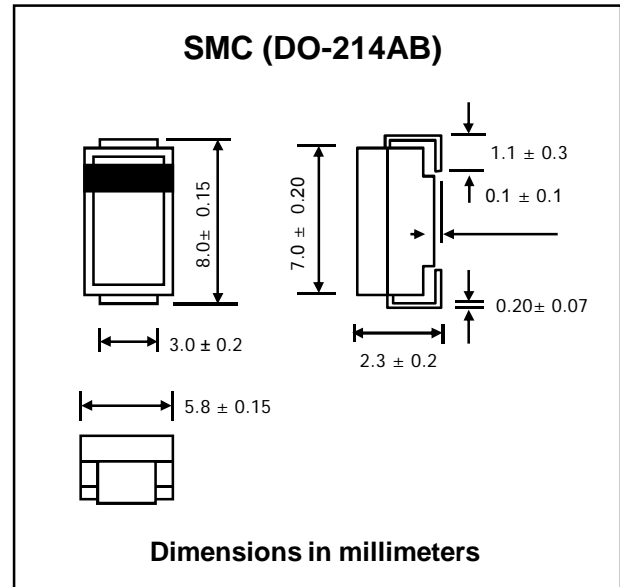
## FEATURES :

- \* Unidirectional transient voltage suppressor
- \* 1500W peak pulse power capability with a 10/1000 $\mu$ s waveform
- \* Excellent clamping capability
- \* Very fast response time
- \* **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

## SURFACE MOUNT UNI-DIRECTIONAL TRANSIENT VOLTAGE SUPPRESSOR



## MAXIMUM RATINGS (Rating at 25 °C ambient temperature unless otherwise specified.)

Rating	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000 $\mu$ s waveform <sup>(1)(2)</sup>	P <sub>PPM</sub>	1500	W
Peak Forward Surge Current per Fig. 5 <sup>(2)</sup>	I <sub>FSM</sub>	150	A
Peak Pulse Current on 10/1000 $\mu$ s waveform <sup>(1)</sup>	I <sub>PPM</sub>	See Next Table	A
Maximum Instantaneous Forward Voltage at I <sub>F</sub> = 100A	V <sub>FM</sub>	5.0	V
Typical Thermal Resistance , Junction to Ambient <sup>(3)</sup>	R <sub>θJA</sub>	75	°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	- 65 to + 150	°C

## ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified)

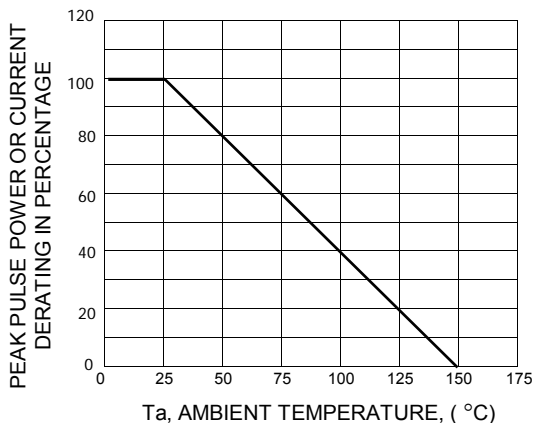
Type No.	Breakdown Voltage @ I <sub>T</sub> <sup>(3)</sup>		Working Peak Reverse Voltage	Maximum Reverse Leakage @ V <sub>WM</sub>	Maximum Peak Pulse Surge Current	Maximum Clamping Voltage @ I <sub>PPM</sub>	
	V <sub>BR</sub> (V)						V <sub>WM</sub>
	Min.	Max.	I <sub>T</sub> (mA)	(V)	( $\mu$ A)	(A)	(V)
SMCJ200A	224	247	1.0	200	1.0	4.6	324
SMCJ220A	246	272	1.0	220	1.0	4.2	356
SMCJ250A	279	309	1.0	250	1.0	3.7	405
SMCJ300A	335	371	1.0	300	1.0	3.1	486
SMCJ350A	391	432	1.0	350	1.0	2.6	567
SMCJ400A	447	494	1.0	400	1.0	2.3	648
SMCJ440A	492	543	1.0	440	1.0	2.1	713

### Notes :

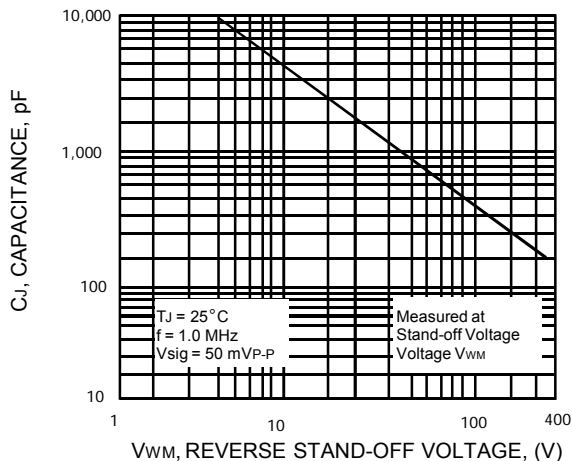
- (1) Non-repetitive Current pulse, per Fig. 3 and derated above Ta = 25 °C per Fig. 1
- (2) Mounted on 0.31x 0.31" (8.0 x 8.0mm) copper pads to each terminal.
- (3) Mounted on minimum recommended pad layout
- (4) For part without A , the V<sub>BR</sub> is  $\pm$  10% and V<sub>C</sub> is  $\pm$  5% higher than with A parts.

## RATING AND CHARACTERISTIC CURVES ( SMCJ200 - 440A )

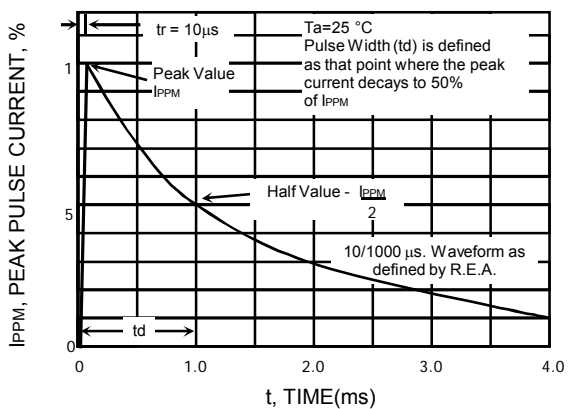
**FIG.1 - PULSE DERATING CURVE**



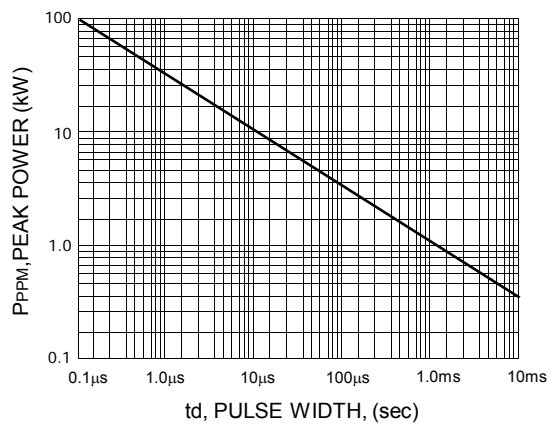
**FIG.2 - TYPICAL JUNCTION CAPACITANCE**



**FIG.3 - PULSE WAVEFORM**



**FIG.4 - PEAK PULSE POWER RATING CURVE**



**FIG.5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**

