



Surface mount transient voltage suppressor power 450 watts

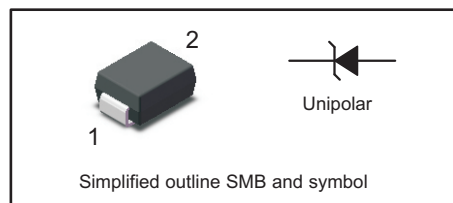
Stand-Off Voltage: 400 V

### FEATURES

- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Excellent clamping capability
- Low incremental surge resistance

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.1g / 0.0034oz

### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on 10/1000 s waveform (Note1,Note2, Fig.1).	$P_{PPM}$	450	W
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 3,Fig4).	$I_{FSM}$	100	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 3)	$I_{PPM}$	see Table 1	A
ESD Voltage per IEC61000-4-2	Contact	$V_{ESD1}$	$\pm 30$
	Air	$V_{ESD2}$	$\pm 30$
Typical Thermal Resistance Junction to Ambient(Note 4)	$R_{\theta JA}$	43	°C/W
Operating Junction Temperature and Storage Temperature Range	$T_j, T_{stg}$	-55 ~ +150	°C

#### NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_a = 25\text{ °C}$  per Fig. 2.
2. Mounted on 5x5 mm (0.13mm thick) land areas.
3. Measured on 8.3ms,single half sine-wave or equivalent square wave,duty cycle=4 pulses per minute maximum.
4. P.C.B. mounted with 1.5" X 1.5" (3.8 X 3.8 cm) copper pad areas.



Characteristics at Ta = 25°C

Table 1

Type	Marking	V <sub>RWM</sub>	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current
			V <sub>BR</sub> @ I <sub>T</sub>		I <sub>T</sub>	I <sub>R</sub> @ V <sub>RWM</sub>	V <sub>C</sub> @ I <sub>PP</sub>	I <sub>PP</sub>
			Min	Max				
UNI	UNI	V	V	V	mA	μA	V	A
SMB4.5J400AA	QK	400	447	494	1	1	648	0.72

Fig.1 Peak Pulse Power Rating Curve

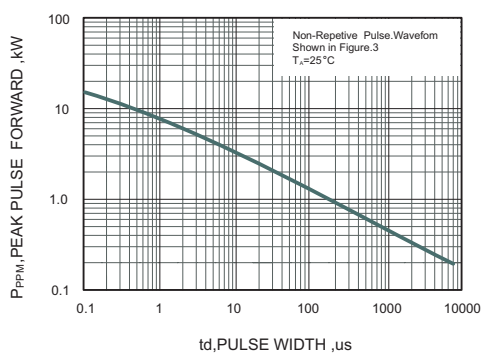


Fig.2 Forward Current Derating Curve

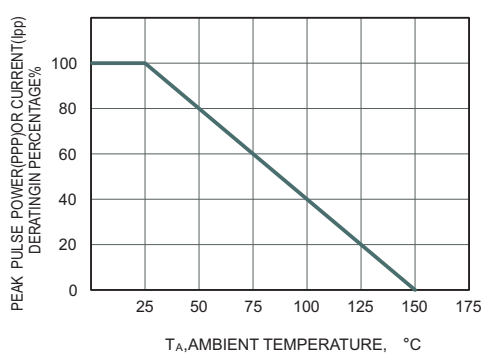


Fig.3 Pulse Waveform

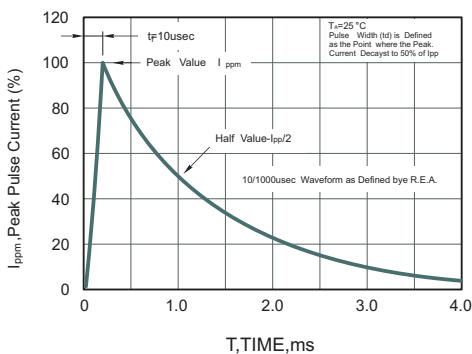
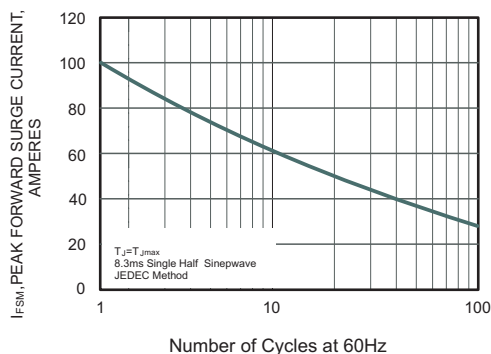


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

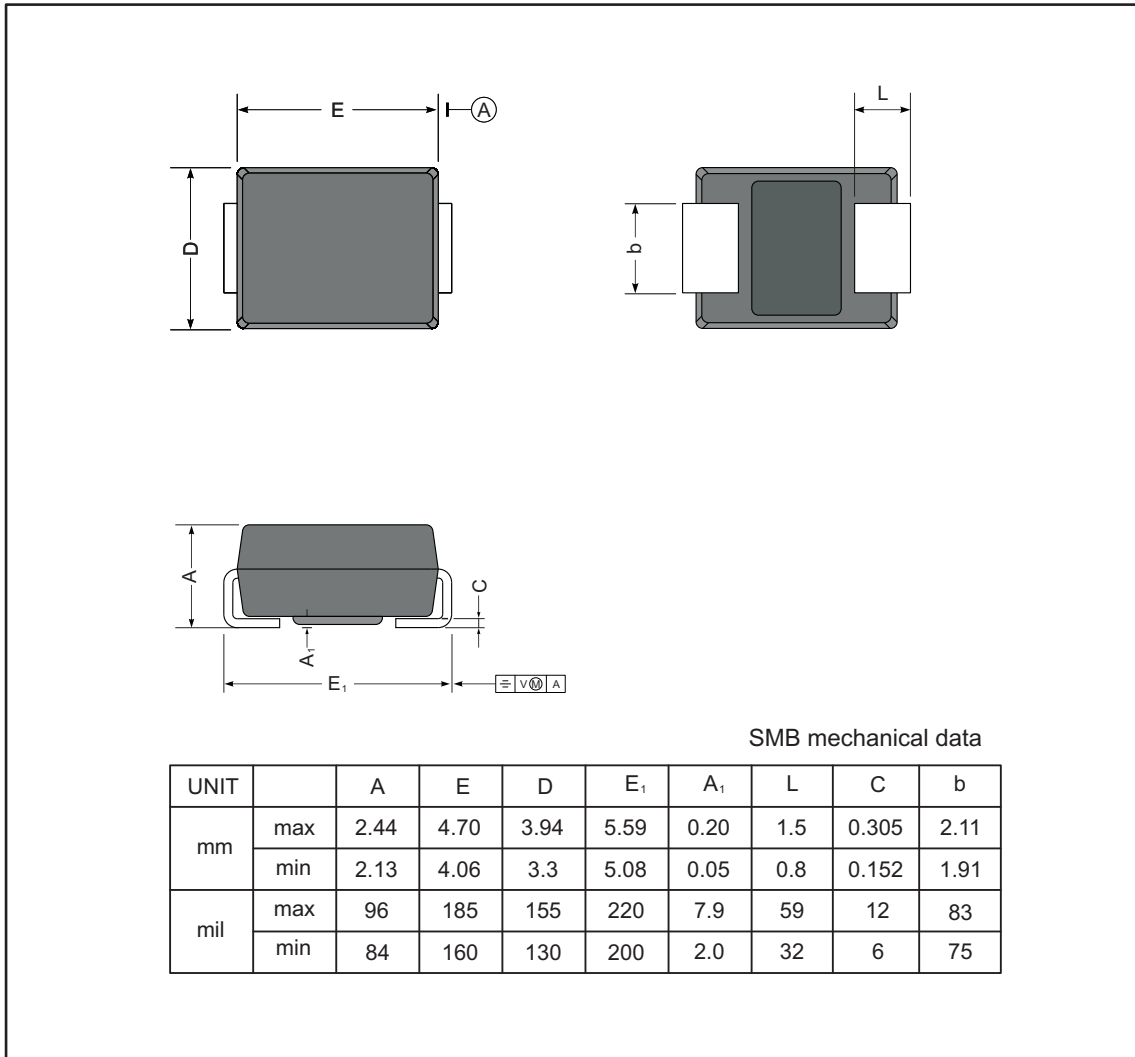




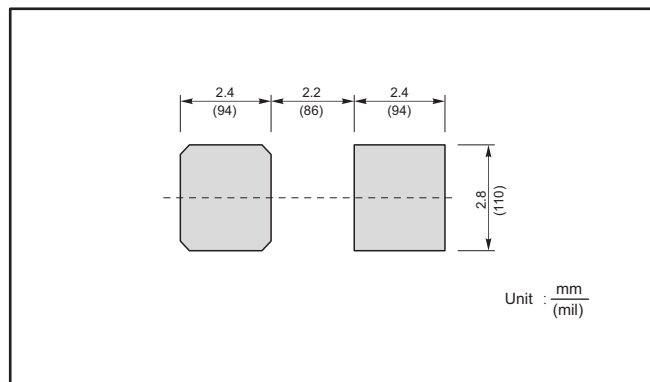
**PACKAGE OUTLINE**

Plastic surface mounted package; 2 leads

SMB



**The recommended mounting pad size**





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