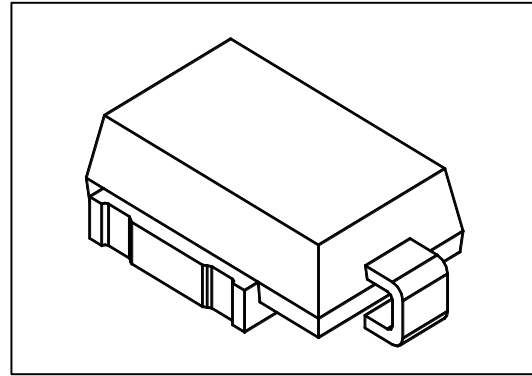


## Automotive Protection Surface Mount Transient Voltage Suppressors

**Working Voltage: 10 to 48 V**  
**Peak Pulse Power: 6600 W**

### Features

- Optimized glass passivated chip
- $T_J = 175\text{ }^\circ\text{C}$  capability suitable for high reliability and automotive requirement
- 6600 W peak pulse power capability with a 10/1000  $\mu\text{s}$  waveform, repetitive rate (duty cycle):0.01 %
- Meet ISO 7637-2 5a/5b and ISO 16750 load dump test (varied by test condition)
- AEC-Q101 qualified
- Low leakage current
- Low forward voltage drop
- Uni-directional polarity
- Excellent clamping capability
- Very fast response time
- RoHS compliant



DO-218AB

### Mechanical Data

- Case: DO-218AB
- Molding compound: UL94V-0 flammability
- Polarity: Heatsink is anode

### Maximum Ratings( $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 $\mu\text{s}$ waveform <sup>(1)</sup>	$P_{PP}$	6600	W
Peak power dissipation with a 10/10,000 $\mu\text{s}$ waveform	$P_{PP}$	5200	W
Peak pulse current with a 10/1000 $\mu\text{s}$ waveform <sup>(1)</sup>	$I_{PP}$	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 25\text{ }^\circ\text{C}$	$P_D$	8.0	W
Peak forward surge current 8.3 ms single half sine-wave	$I_{FSM}$	700	A
Operating junction and storage temperature range	$T_J, T_{STG}$	- 55 to +175	$^\circ\text{C}$

**Note:**

(1)Non-repetitive current pulse per Fig.2 and derated above  $T_A = 25\text{ }^\circ\text{C}$  per Fig.1



**Ratings and Characteristics Curves ( $T_A=25^\circ\text{C}$  unless otherwise noted)**

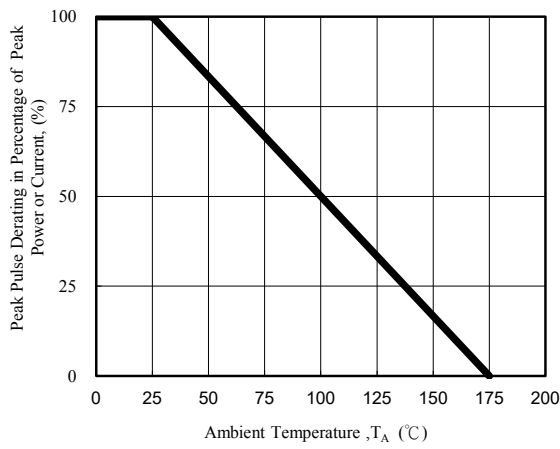


Fig. 1 - Pulse Derating Curve

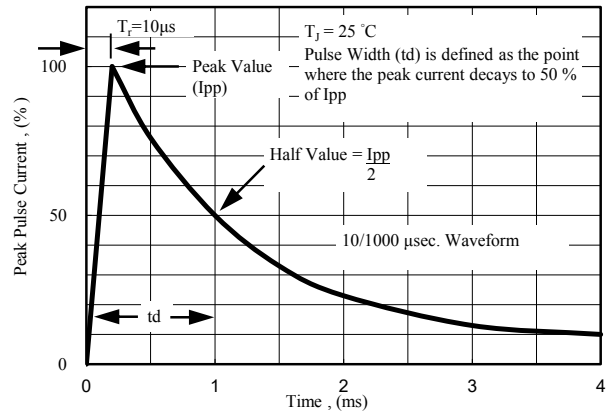


Fig. 2 - Pulse Waveform

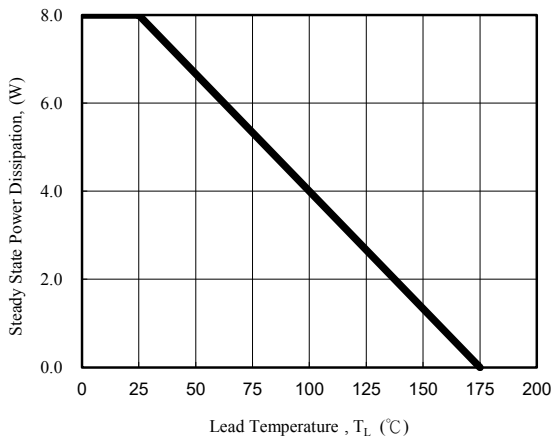


Fig. 3 - Steady State Power Derating Curve

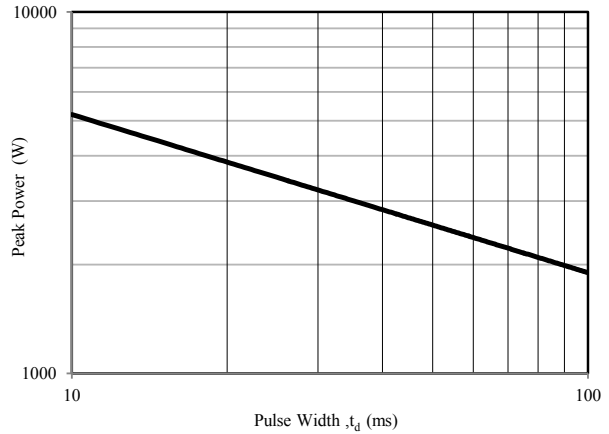
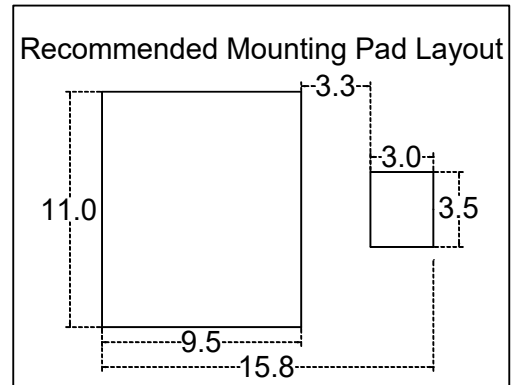
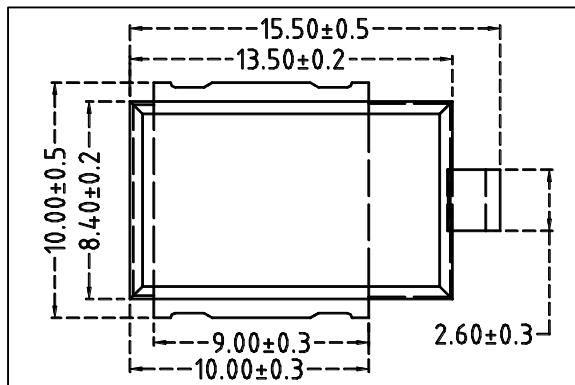


Fig. 4 - Peak Pulse Power Rating Curve

**PACKAGE OUTLINE DIMENSIONS(millimeters)**





Electrical Characteristics( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

Part Number (Uni)	Breakdown Voltage $V_{BR}$ @ $I_T$			Maximum Reverse Leakage $I_R$ @ $V_{RWM}$ (uA)	Maximum $I_R$ @ $V_{RWM}$ $T_J=175$ (uA)	Working Peak Reverse Voltage $V_{RWM}$ (V)	Maximum Reverse Surge Current $I_{PP}$ (A) <sup>(1)</sup>	Maximum Clamping Voltage $V_C$ @ $I_{PP}$ (V)
	Min (V)	Max (V)	$I_T$ (mA)					
SM8S10AHE3_A/I	11.1	12.3	5.0	15	250	10	388	17.0
SM8S11AHE3_A/I	12.2	13.5	5.0	10	150	11	363	18.2
SM8S12AHE3_A/I	13.3	14.7	5.0	10	150	12	332	19.9
SM8S13AHE3_A/I	14.4	15.9	5.0	10	150	13	307	21.5
SM8S14AHE3_A/I	15.6	17.2	5.0	10	150	14	284	23.2
SM8S15AHE3_A/I	16.7	18.5	5.0	10	150	15	270	24.4
SM8S16AHE3_A/I	17.8	19.7	5.0	10	150	16	254	26.0
SM8S17AHE3_A/I	18.9	20.9	5.0	10	150	17	239	27.6
SM8S18AHE3_A/I	20.0	22.1	5.0	10	150	18	226	29.2
SM8S20AHE3_A/I	22.2	24.5	5.0	10	150	20	204	32.4
SM8S22AHE3_A/I	24.4	26.9	5.0	10	150	22	186	35.5
SM8S24AHE3_A/I	26.7	29.5	5.0	10	150	24	170	38.9
SM8S26AHE3_A/I	28.9	31.9	5.0	10	150	26	157	42.1
SM8S28AHE3_A/I	31.1	34.4	5.0	10	150	28	145	45.4
SM8S30AHE3_A/I	33.3	36.8	5.0	10	150	30	136	48.4
SM8S33AHE3_A/I	36.7	40.6	5.0	10	150	33	124	53.3
SM8S36AHE3_A/I	40.0	44.2	5.0	10	150	36	114	58.1
SM8S40AHE3_A/I	44.4	49.1	5.0	10	150	40	102	64.5
SM8S43AHE3_A/I	47.8	52.8	5.0	10	150	43	95.1	69.4
SM8S48AHE3_A/I	53.3	58.9	5.0	10	150	48	85.2	77.4

NOTE:

1. Surge current waveform is defined at 10/1000uS waveform