



Micro Commercial Components



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# SM8S10A THRU SM8S43A

## 6600 Watt Transient Voltage Suppressors 10 to 43 Volts

### Features

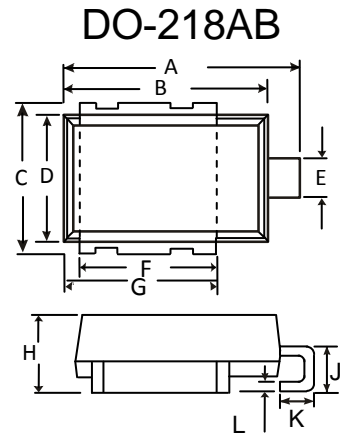
- Low Leakage
- Glass passivated junction
- Excellent clamping capability
- Uni-directional polarity
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"
- Polarity: Heatsink is anode
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Meet ISO7637-2 5a surge specification
- AEC-Q101 Qualified
- UL Recognized File # E480232

### Maximum Rating:

- Operating Temperature: -55°C to +175°C
- Storage Temperature: -55°C to +175°C

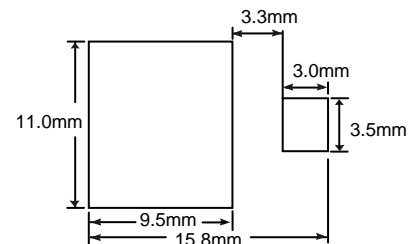
Peak Pulse Current with a 10/1000us waveform	I <sub>PPM</sub>	See Table 1	Note 2
Peak Power Dissipation with a 10/1000us waveform	P <sub>PPM</sub>	6600W	Note 2
Peak Power Dissipation with a 10/10000us waveform	P <sub>PPM</sub>	5200W	
Peak Forward Surge Current	I <sub>FSM</sub>	700A	
Power Dissipation On Infinite Heatsink At T <sub>L</sub> =25°C	P <sub>D</sub>	8.0W	

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7.  
 2. Non-repetitive current pulse, per Fig.2 and derated above T<sub>A</sub>=25°C per Fig.1



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.590	0.630	15.00	16.00	
B	0.524	0.539	13.30	13.70	
C	0.374	0.413	9.50	10.50	
D	0.323	0.339	8.20	8.60	
E	0.091	0.114	2.30	2.90	
F	0.343	0.366	8.70	9.30	
G	0.382	0.406	9.70	10.30	
H	0.189	0.205	4.80	5.20	
J	0.098	0.138	2.50	3.50	
K	0.067	0.106	1.70	2.70	
L	0.020	0.028	0.50	0.70	

### SUGGESTED SOLDER PAD LAYOUT



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

Part Number (Uni)	Breakdown Voltage $V_{BR}$ @ $I_T$			Maximum Reverse Leakage $I_R$ @ $V_{RWM}$ ( $\mu\text{A}$ )	Maximum $I_R$ @ $V_{RWM}$ $T_J=175$ ( $\mu\text{A}$ )	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)					
SM8S10A	11.1	12.3	5.0	15	250	10	388	17.0
SM8S11A	12.2	13.5	5.0	10	150	11	363	18.2
SM8S12A	13.3	14.7	5.0	10	150	12	332	19.9
SM8S13A	14.4	15.9	5.0	10	150	13	307	21.5
SM8S14A	15.6	17.2	5.0	10	150	14	284	23.2
SM8S15A	16.7	18.5	5.0	10	150	15	270	24.4
SM8S16A	17.8	19.7	5.0	10	150	16	254	26.0
SM8S17A	18.9	20.9	5.0	10	150	17	239	27.6
SM8S18A	20.0	22.1	5.0	10	150	18	226	29.2
SM8S20A	22.2	24.5	5.0	10	150	20	204	32.4
SM8S22A	24.4	26.9	5.0	10	150	22	186	35.5
SM8S24A	26.7	29.5	5.0	10	150	24	170	38.9
SM8S26A	28.9	31.9	5.0	10	150	26	157	42.1
SM8S28A	31.1	34.4	5.0	10	150	28	145	45.4
SM8S30A	33.3	36.8	5.0	10	150	30	136	48.4
SM8S33A	36.7	40.6	5.0	10	150	33	124	53.3
SM8S36A	40.0	44.2	5.0	10	150	36	114	58.1
SM8S40A	44.4	49.1	5.0	10	150	40	102	64.5
SM8S43A	47.8	52.8	5.0	10	150	43	95.1	69.4

**NOTE:**

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

2. For all types maximum VF = 1.9 V at IF = 100 A measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

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

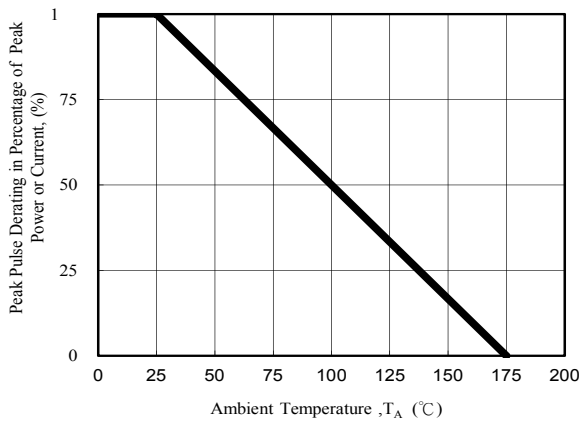


Fig. 1 - Pulse Derating Curve

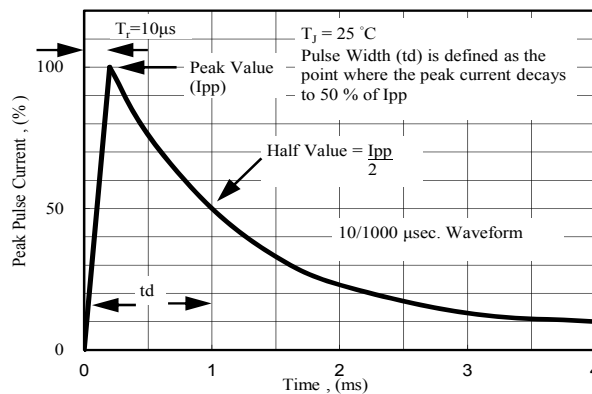


Fig. 2 - Pulse Waveform

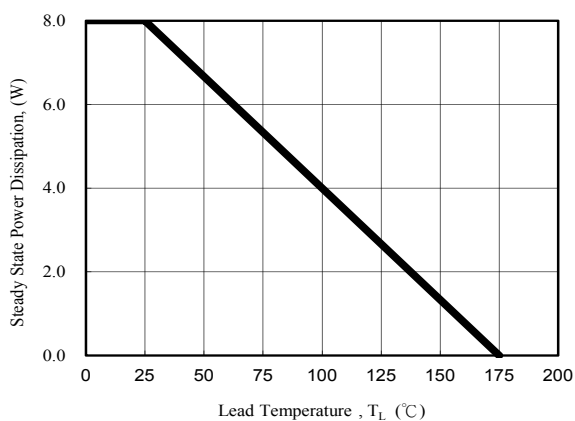


Fig. 3 - Steady State Power Derating Curve



Fig. 4 - Peak Pulse Power Rating Curve



## Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel; 750pcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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