



# THE DATASHEET OF SM8S24A-TP



# SM8S14A THRU SM8S43A

## 6600 Watt Transient Voltage Suppressors 14 to 43 Volts

### Features

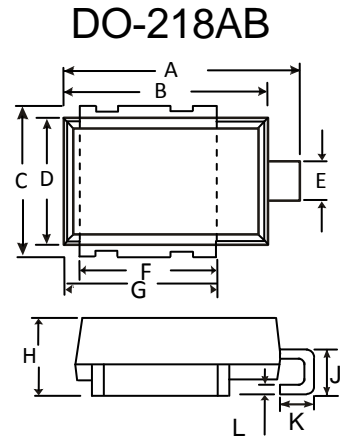
- Low Leakage
- Glass passivated junction
- Excellent clamping capability
- Uni-directional polarity
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"
- Epoxy meets UL 94 V-0 flammability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

### Maximum Rating:

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

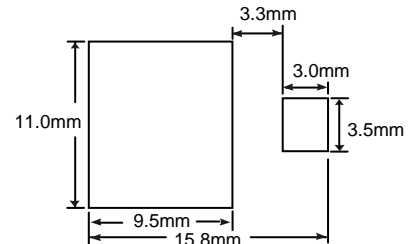
Peak Pulse Current with a 10/1000us waveform	$I_{PPM}$	See Table 1	Note 2
Peak Power Dissipation with a 10/1000us waveform	$P_{PPM}$	6600W	Note 2
Peak Power Dissipation with a 10/10000us waveform	$P_{PPM}$	5200W	Note 2
Peak Forward Surge Current	$I_{FSM}$	700A	Note:3
Power Dissipation On Infinite Heatsink At $T_L=25^\circ\text{C}$	$P_D$	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  $T_A=25^\circ\text{C}$  per Fig.1  
 3. Peak forward surge current 8.3 ms single half sine



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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



# SM8S14A THRU SM8S43A

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

Part Number	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)					
SM8S14A	15.60	17.20	5	10	150	14	284.0	23.2
SM8S15A	16.70	18.50	5	10	150	15	270.0	24.4
SM8S16A	17.80	19.70	5	10	150	16	254.0	26.0
SM8S17A	18.90	20.90	5	10	150	17	239.0	27.6
SM8S18A	20.00	22.10	5	10	150	18	226.0	29.2
SM8S20A	22.20	24.50	5	10	150	20	204.0	32.4
SM8S22A	24.40	26.90	5	10	150	22	186.0	35.5
SM8S24A	26.70	29.50	5	10	150	24	170.0	38.9
SM8S26A	28.90	31.90	5	10	150	26	157.0	42.1
SM8S28A	31.10	34.40	5	10	150	28	145.0	45.4
SM8S30A	33.30	36.80	5	10	150	30	136.0	48.4
SM8S33A	36.70	40.60	5	10	150	33	124.0	53.3
SM8S36A	40.00	44.20	5	10	150	36	114.0	58.1
SM8S40A	44.40	49.10	5	10	150	40	102.0	64.5
SM8S43A	47.80	52.80	5	10	150	43	95.1	69.4

NOTE 1: Surge current waveform is defined at 10/1000uS waveform

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

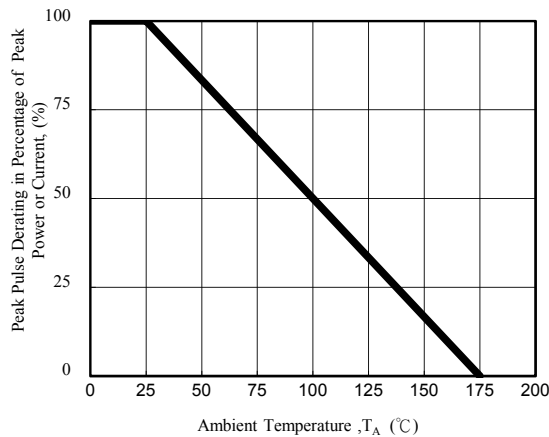


Fig. 1 - Pulse Derating Curve

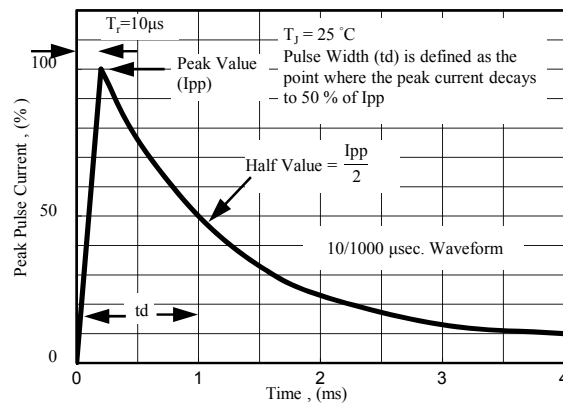


Fig. 2 - Pulse Waveform

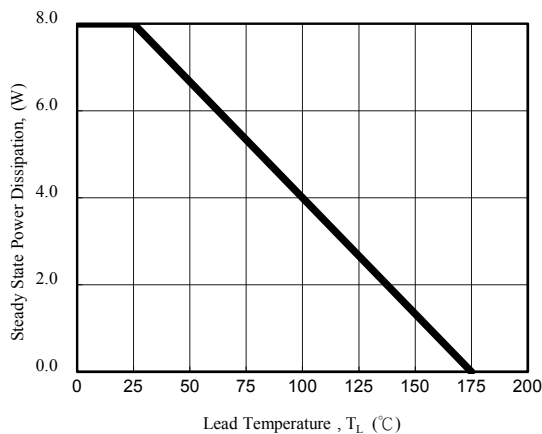


Fig. 3 - Steady State Power Derating Curve

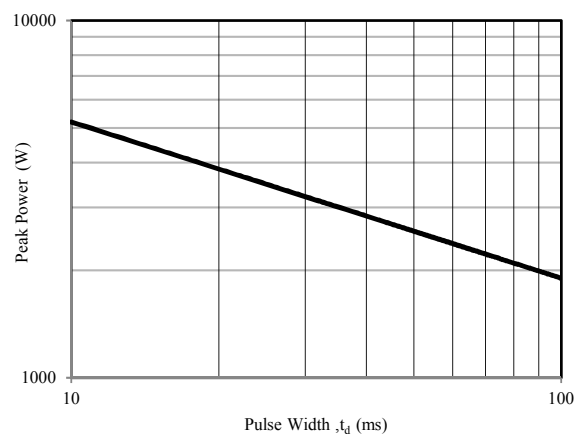


Fig. 4 - Peak Pulse Power Rating Curve



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## 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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