



# THE DATASHEET OF SM8S43A-TP



	<b>E480232</b>
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**Features**

- AEC-Q101 Qualified
- Meet ISO7637-2 5a Surge Specification
- Low Leakage
- Glass Passivated Junction
- Polarity: Heatsink is Anode
- Excellent Clamping Capability
- Uni-directional Polarity
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

**Maximum Ratings**

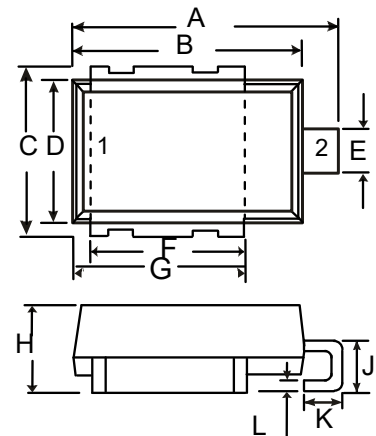
- Operating Junction Temperature Range: -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C

Peak Pulse Power Surge Current with a 10/1000µs Waveform	$I_{PPM}$	See the Table	Note 2
Peak Pulse Power Dissipation with a 10/1000µs Waveform	$P_{PPM}$	6600W	Note 2
Peak Pulse Power Dissipation with a 10/10000µs Waveform	$P_{PPM}$	5200W	
Power Dissipation On Infinite Heatsink	$P_D$	8.0W	$T_L=25^\circ C$
Peak forward surge current	$I_{FSM}$	700A	

Note: 1. High Temperature Solder Exemptions Applied, see EU Directive Annex 7a.  
2. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ C$  per Fig.4

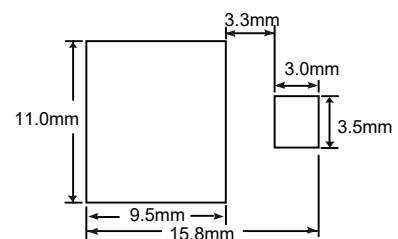
**6600 Watt  
TVS  
10 to 43 Volts**

**DO-218AB**



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 @ 25°C Unless Otherwise Specified**

MCC Part Number (Uni)	Breakdown Voltage $V_{BR}$ @ $I_T$			Maximum Reverse Leakage $I_R$ @ $V_{RWM}$ ( $\mu A$ )	Maximum $I_R$ @ $V_{RWM}$ $T_J=175$ ( $\mu A$ )	Working Peak Reverse Voltage $V_{RWM}$ (V)	Maximum Reverse Surge Current IPP (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  $V_F = 1.9V$  at  $I_F = 100A$  measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

**Curve Characteristics**

Fig. 1 - Peak Pulse Power Rating Curve

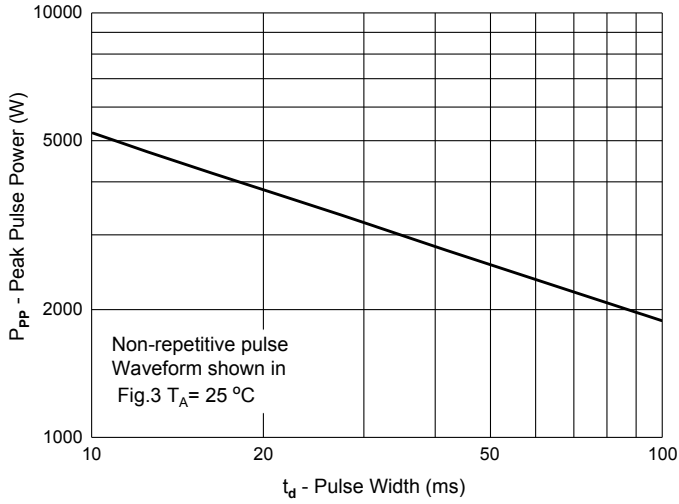


Fig. 2 - Typical Junction Capacitance

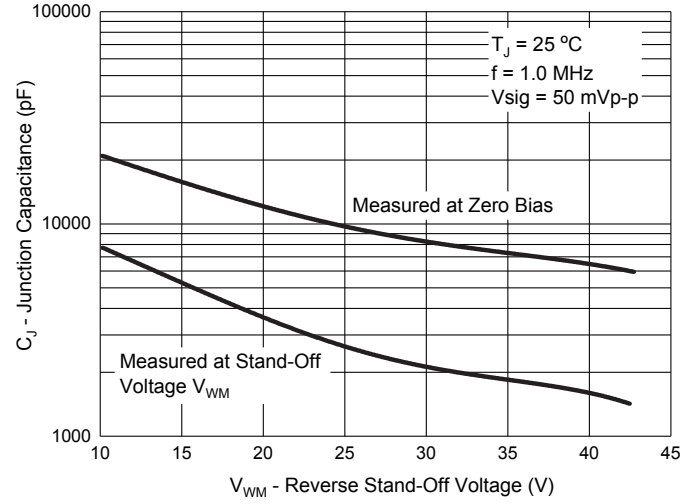


Fig. 3 - Pulse Waveform

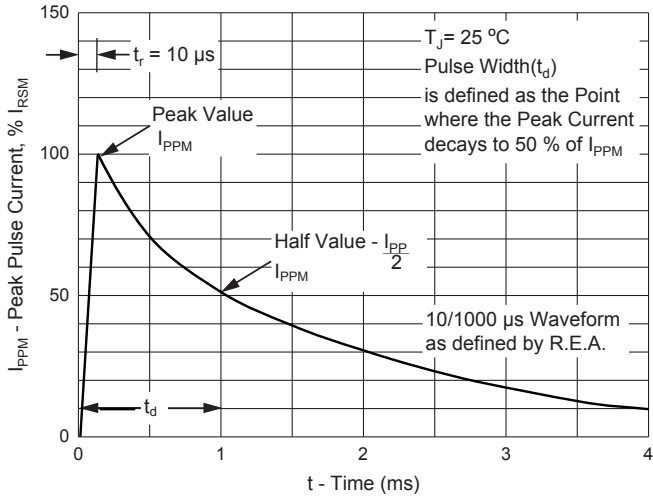
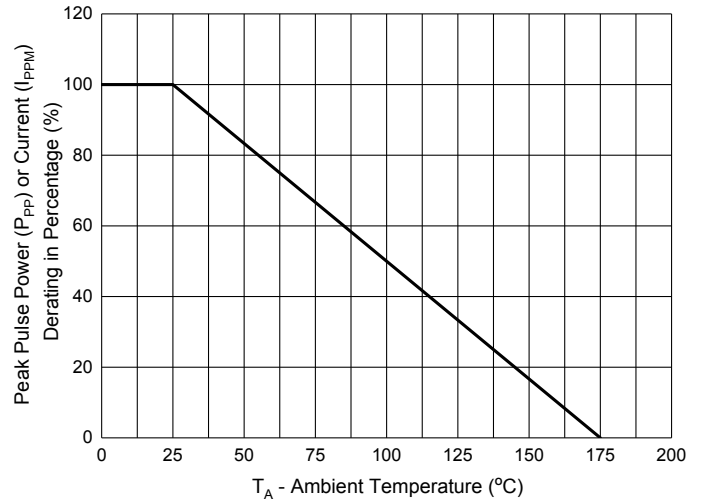


Fig. 4 - Pulse Derating Curve



## Ordering Information

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

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