



THE DATASHEET OF SM5S33A-TP





Micro Commercial Components



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SM5S14A THRU SM5S36A

3600 Watt Transient Voltage Suppressors 14 to 36 Volts

Features

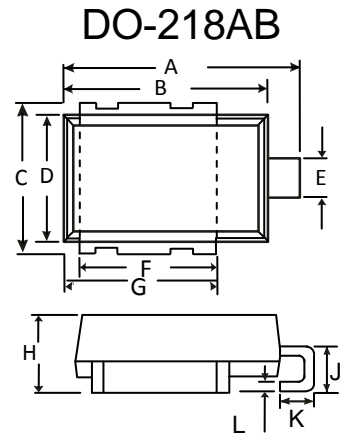
- Low Leakage
- Glass passivated junction
- Excellent clamping capability
- Uni-directional polarity
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"
- Polarity: Heatsink is anode
- Epoxy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

Maximum Rating:

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

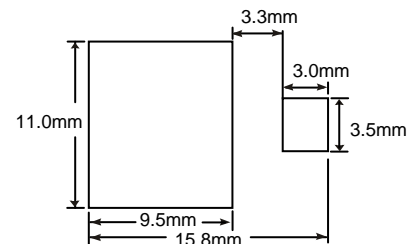
Peak Pulse Current with a 10/1000us waveform	I _{PPM}	See Table 1	Note 2
Peak Power Dissipation with a 10/1000us waveform	P _{PPM}	3600W	Note 2
Peak Power Dissipation with a 10/10000us waveform	P _{PPM}	2800W	Note 2
Peak Forward Surge Current	I _{FSM}	500A	Note:3
Power Dissipation On Infinite Heatsink At T _L =25°C	P _D	5.0W	

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°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



SM5S14A THRU SM5S36A

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} (μA)	Maximum I_R @ V_{RWM} $T_J=175$ (μA)	Working Peak Reverse Voltage V_{RWM} (V)	Maximum Reverse Surge Current I_{PP} (A) ⁽¹⁾	Maximum Clamping Voltage V_C @ I_{PP} (V)
	Min (V)	Max (V)	I_T (mA)					
SM5S14A	15.60	17.20	5	10	150	14	155.0	23.2
SM5S15A	16.70	18.50	5	10	150	15	148.0	24.4
SM5S16A	17.80	19.70	5	10	150	16	138.0	26.0
SM5S17A	18.90	20.90	5	10	150	17	130.0	27.6
SM5S18A	20.00	22.10	5	10	150	18	123.0	29.2
SM5S20A	22.20	24.50	5	10	150	20	111.0	32.4
SM5S22A	24.40	26.90	5	10	150	22	101.0	35.5
SM5S24A	26.70	29.50	5	10	150	24	93.0	38.9
SM5S26A	28.90	31.90	5	10	150	26	86.0	42.1
SM5S28A	31.10	34.40	5	10	150	28	79.0	45.4
SM5S30A	33.30	36.80	5	10	150	30	74.0	48.4
SM5S33A	36.70	40.60	5	10	150	33	68.0	53.3
SM5S36A	40.00	44.20	5	10	150	36	62.0	58.1

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

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

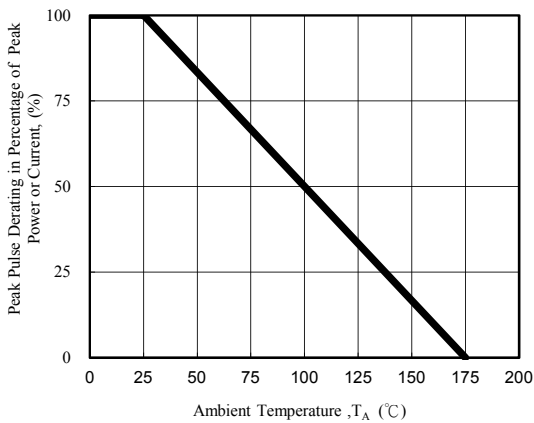


Fig. 1 - Pulse Derating Curve

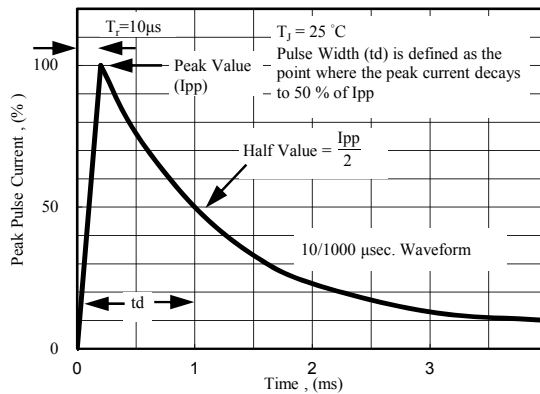


Fig. 2 - Pulse Waveform

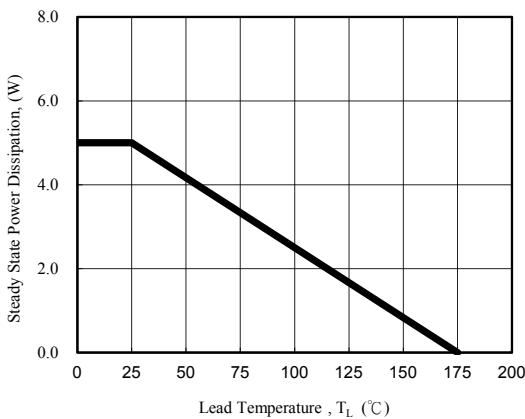


Fig. 3 - Steady State Power Derating Curve

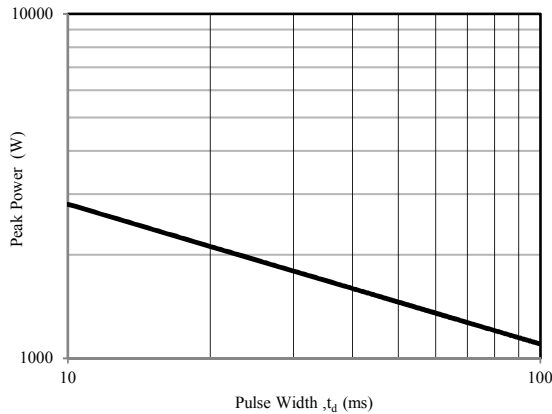


Fig. 4 - Peak Pulse Power Rating Curve



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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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