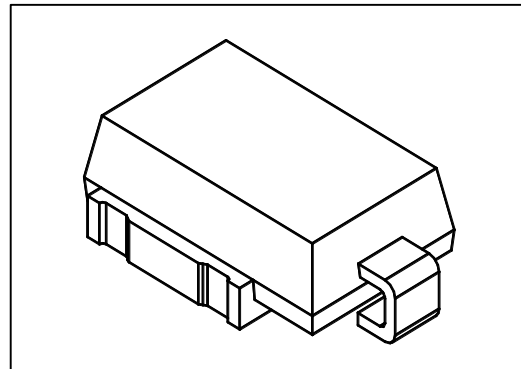


Working Voltage: 14 to 43 V
Peak Pulse Power: 3600 W

Surface Mount Transient Voltage Suppressors

Features

- Optimized glass passivated chip
- $T_J = 175\text{ }^\circ\text{C}$ capability suitable for high reliability and automotive requirement
- 3600 W peak pulse power capability with a 10/1000 μs 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
- Bi-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($T_A=25\text{ }^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	UNIT
Peak power dissipation with a 10/1000 μs waveform ⁽¹⁾	P_{PP}	3600	W
Peak power dissipation with a 10/10,000 μs waveform	P_{PP}	2800	W
Peak pulse current with a 10/1000 μs waveform ⁽¹⁾	I_{PP}	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 25\text{ }^\circ\text{C}$	P_D	5.0	W
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)

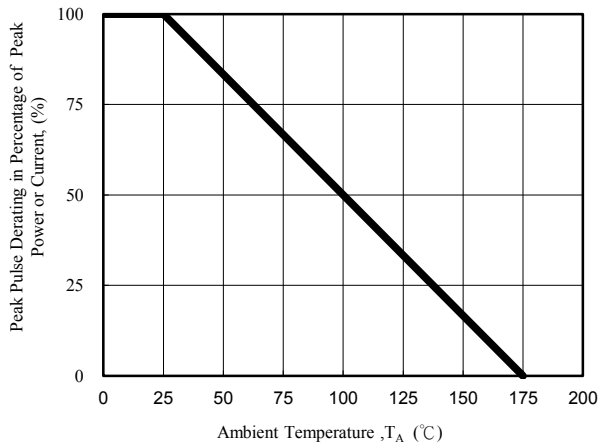


Fig. 1 - Pulse Derating Curve

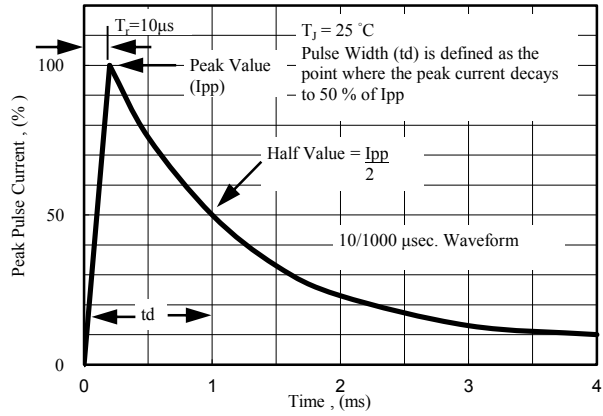


Fig. 2 - Pulse Waveform

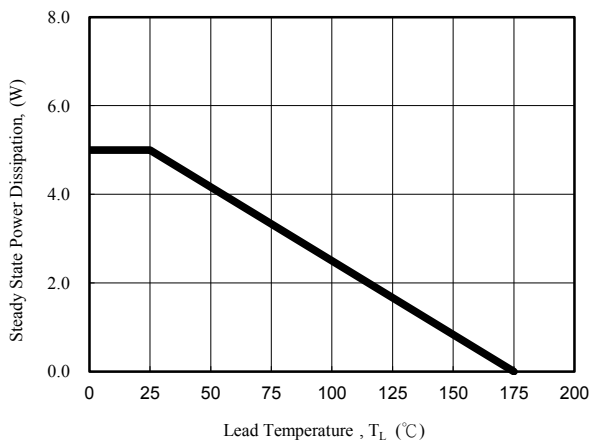


Fig. 3 - Steady State Power Derating Curve

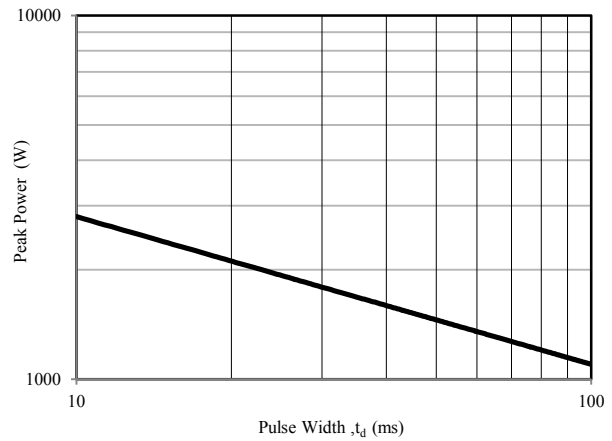
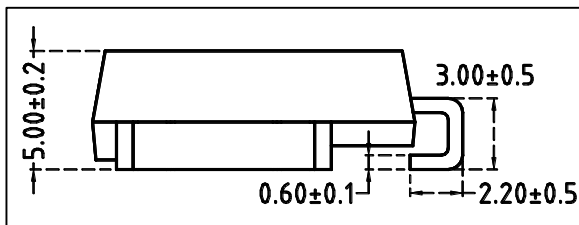
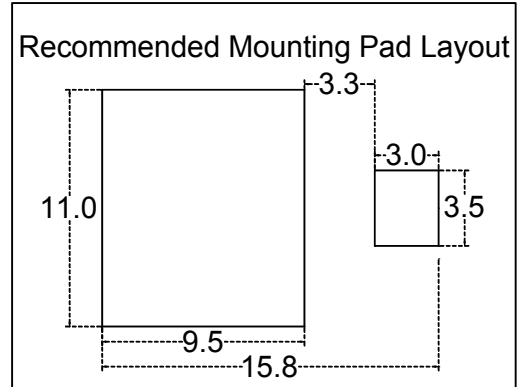
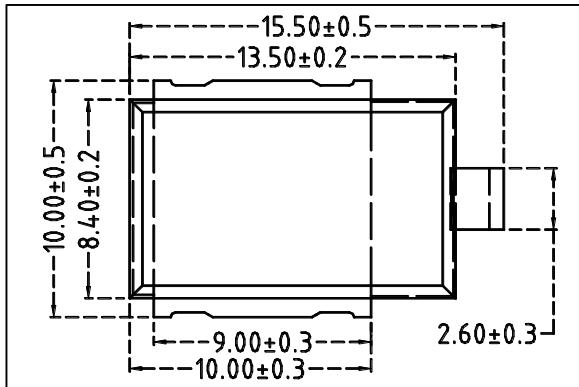


Fig. 4 - Peak Pulse Power Rating Curve

PACKAGE OUTLINE DIMENSIONS(millimeters)

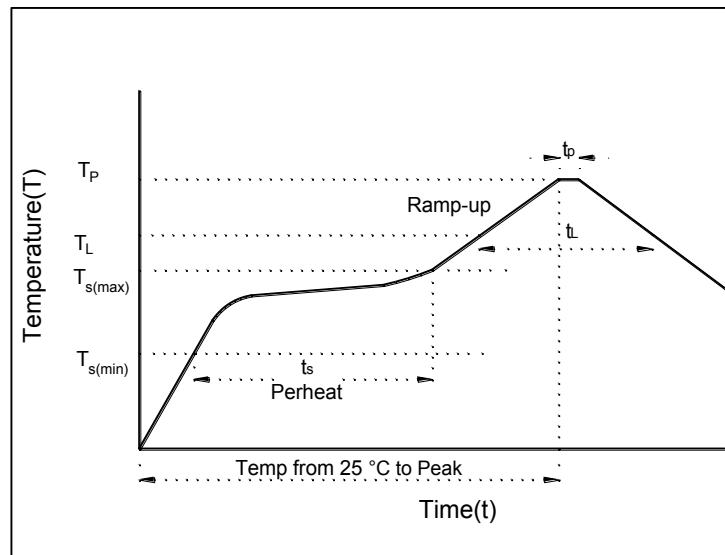


Recommended Soldering Parameters

IR-Reflow Condition			
Pre Heat	Temp. min	150	°C
	Temp. max	200	°C
	Time(min to max)	60-180	sec
Ramp up rate (150-200°C)		<3	°C/sec

Reflow	Liquidus Temp.	>220	°C
	Peak Temp.	245	°C
	Time(Liq. to Peak)	60-150	sec
Ramp up rate (220-200°C)		<3	°C/sec
Time within actual peak temp.		10-30	sec

Ramp down Rate		<5	°C/sec
Time(25°C to Peak temp.)		<6	min
Do not exceed		280	°C



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

Part Number (Bi)	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)					
SM5S14CA	15.6	17.2	5.0	10	150	14	155	23.2
SM5S15CA	16.7	18.5	5.0	10	150	15	148	24.4
SM5S16CA	17.8	19.7	5.0	10	150	16	138	26.0
SM5S17CA	18.9	20.9	5.0	10	150	17	130	27.6
SM5S18CA	20.0	22.1	5.0	10	150	18	123	29.2
SM5S20CA	22.2	24.5	5.0	10	150	20	111	32.4
SM5S22CA	24.4	26.9	5.0	10	150	22	101	35.5
SM5S24CA	26.7	29.5	5.0	10	150	24	93	38.9
SM5S26CA	28.9	31.9	5.0	10	150	26	86	42.1
SM5S28CA	31.1	34.4	5.0	10	150	28	79	45.4
SM5S30CA	33.3	36.8	5.0	10	150	30	74	48.4
SM5S33CA	36.7	40.6	5.0	10	150	33	68	53.3
SM5S36CA	40.0	44.2	5.0	10	150	36	62	58.1
SM5S40CA	44.4	49.1	5.0	10	150	40	56	64.5
SM5S43CA	47.8	52.8	5.0	10	150	43	52	69.4

NOTE:

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

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