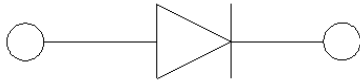


Surface Mount Transient Voltage Suppressors

DO-218AB



Features

- Optimized glass passivated chip
- $T_J = 175\text{ }^\circ\text{C}$ capability suitable for high reliability and automotive requirement
- 6600 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
- Uni-directional polarity
- Excellent clamping capability
- Very fast response time
- RoHS compliant

Mechanical Data

- **Package:** DO-218AB
- **Molding compound:** UL94V-0 flammability
- **Polarity:** Heatsink is anode

■ Maximum Ratings ($T_a=25\text{ }^\circ\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	Value
Peak power dissipation with a 10/1000 μs waveform(1)	P _{pp}	W	6600
Peak power dissipation with a 10/10,000 μs waveform	P _{pp}	W	5200
Peak pulse current with a 10/1000 μs waveform(1)	I _{pp}	A	See Next Table
Power dissipation on infinite heatsink at $T_L = 25\text{ }^\circ\text{C}$	PD	W	8.0
Peak forward surge current 8.3 ms single half sine-wave	IFSM	A	700
Operating junction and storage temperature range	T _J , T _{STG}	$^\circ\text{C}$	- 55 to +175

Note:

(1) Non-repetitive current pulse per Fig.2 and derated above $T_A = 25\text{ }^\circ\text{C}$ per Fig.1



SM8S10A THRU SM8S43A

■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

Part Number	Breakdown Voltage VBR @IT			Maximum Reverse Leakage IR @VRWM (μA)	Maximum IR @VRWM T _J =175 (μA)	Working Peak Reverse Voltage VRWM (V)	Maximum Reverse Surge Current IPP (A) (1)	Maximum Clamping Voltage VC @IPP (V)
	Min (V)	Max (V)	IT (mA)					
SM8S10A	11.10	12.30	5.0	15	250	10	388.00	17.0
SM8S11A	12.20	13.50	5.0	10	150	11	363.00	18.2
SM8S12A	13.30	14.70	5.0	10	150	12	332.00	19.9
SM8S13A	14.40	15.90	5.0	10	150	13	307.00	21.5
SM8S14A	15.60	17.20	5.0	10	150	14	284.00	23.2
SM8S15A	16.70	18.50	5.0	10	150	15	270.00	24.4
SM8S16A	17.80	19.70	5.0	10	150	16	254.00	26.0
SM8S17A	18.90	20.90	5.0	10	150	17	239.00	27.6
SM8S18A	20.00	22.10	5.0	10	150	18	226.00	29.2
SM8S20A	22.20	24.50	5.0	10	150	20	204.00	32.4
SM8S22A	24.40	26.90	5.0	10	150	22	186.00	35.5
SM8S24A	26.70	29.50	5.0	10	150	24	170.00	38.9
SM8S26A	28.90	31.90	5.0	10	150	26	157.00	42.1
SM8S28A	31.10	34.40	5.0	10	150	28	145.00	45.4
SM8S30A	33.30	36.80	5.0	10	150	30	136.00	48.4
SM8S33A	36.70	40.60	5.0	10	150	33	124.00	53.3
SM8S36A	40.00	44.20	5.0	10	150	36	114.00	58.1
SM8S40A	44.40	49.10	5.0	10	150	40	102.00	64.5
SM8S43A	47.80	52.80	5.0	10	150	43	95.10	69.4

Note:

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

2. For all types maximum VF = 1.8 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



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■ Characteristics (Typical)

FIG.1 Pulse Derating Curve

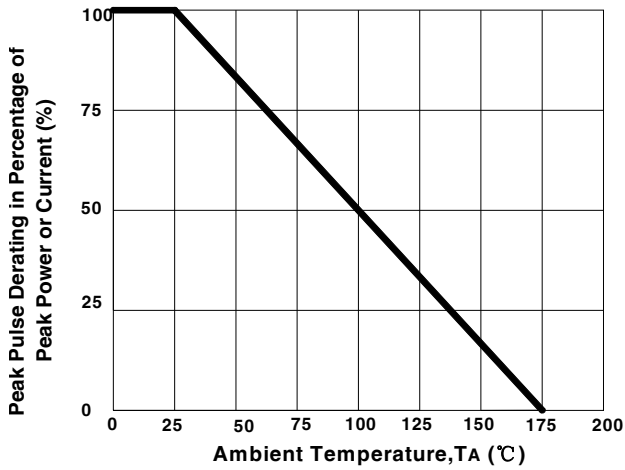


FIG.2 Pulse Waveform

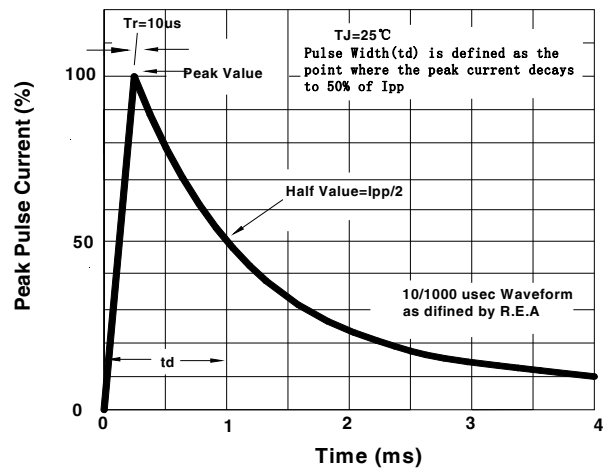


FIG.3 Steady State Power Derating Curve

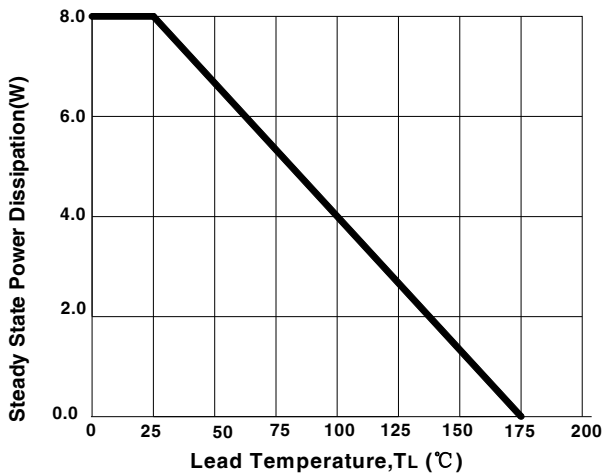
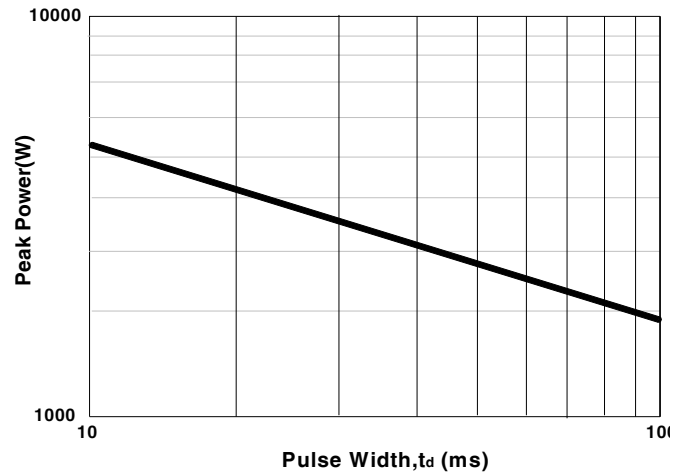


FIG.4 Peak Pulse Power Rating Curve



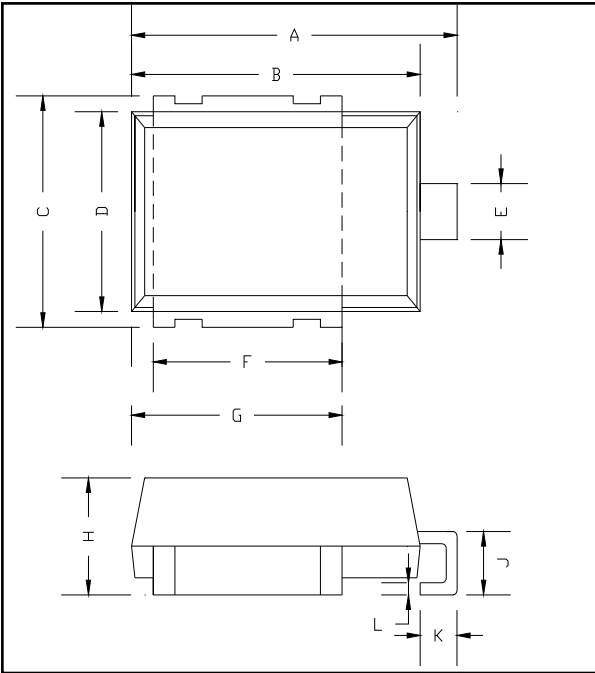
■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SM8S10A-SM8S43A	F1	Approximate 2.86	750	750	3750	13"reel



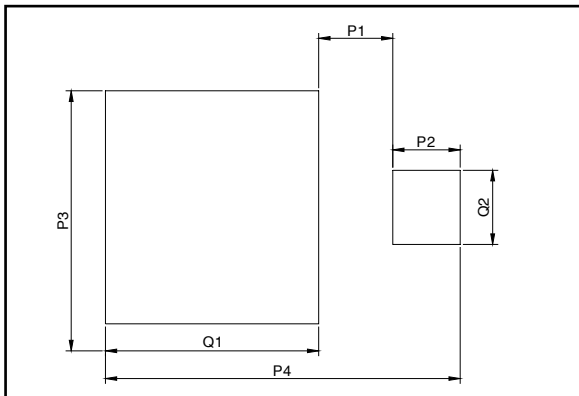
SM8S10A THRU SM8S43A

■ Outline Dimensions



DO-218AB		
DIM	MIN (mm)	MAX(mm)
A	15.00	16.00
B	13.30	13.70
C	9.50	10.50
D	8.20	8.60
E	2.30	2.90
F	8.70	9.30
G	9.70	10.30
H	4.80	5.20
J	2.50	3.50
K	1.70	2.70
L	0.50	0.70

■ Suggested pad layout



DO-218AB	
Dim	Millimeters
P1	3.3
P2	3.0
P3	11.0
P4	15.8
Q1	9.5
Q2	3.5



SM8S10A THRU SM8S43A

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