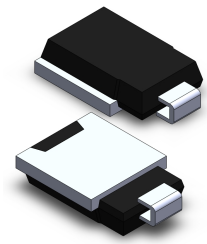
SM8S10A/CA - SM8S43A/CA

SURFACE MOUNT AUTOMOTIVE TRANSIENT VOLTAGE SUPPRESSORS

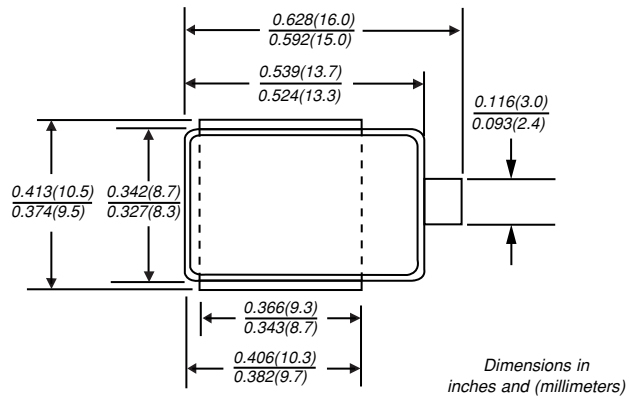


VOLTAGE RANGE: 10- 43V
POWER: 6600Watts

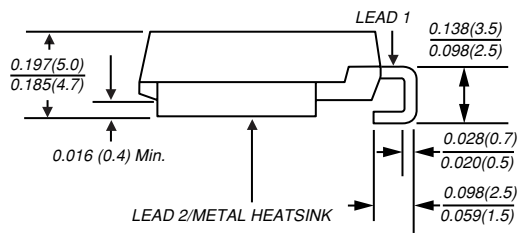
Features

- Ideally suited for load dump protection
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature stability due to unique oxide passivation and patented PAR® construction
- Integrally molded heatsink provides a very low thermal resistance for maximum heat dissipation
- Low leakage current at TJ = 175°C
- High temperature soldering guaranteed: 260°C for 10 seconds at terminals
- Low forward voltage drop

DO-218AB



Dimensions in inches and (millimeters)



Mechanical Data

- Case: DO-218AB integrally mounted in the encapsulation
- Terminals: Plated, solderable per MIL-STD-750, Method 2026
- Polarity: Heatsink is anode
- Mounting Position: Any

RoHS COMPLIANT

Maximum Ratings @ T_A = 25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Peak pulse power dissipation with 10/1000μs waveform 10/10,000μs waveform	P_{PPM}	6600 5200	W
Steady state power dissipation	P_D	8.0	W
Peak pulse current with a 10/1000μs waveform(1)	I_{PPM}	See Table 1	A
Peak forward surge current, 8.3ms single half sine-wave	I_{FSM}	700	A
Typical thermal resistance junction to case	$R_{\theta JC}$	0.90	°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +175	°C

Notes: (1) Non-repetitive current pulse derated above T_A=25°C

Type	Breakdown Voltage $V_{(BR)}$ (V)		Test Current I_T	Stand-off Voltage V_{WM}	Maximum Reverse Leakage at V_{WM} I_D	Maximum Reverse Leakage at V_{WM} Tc = 175°C	Max. Peak Pulse Current at 10/1000μs Waveform	Maximum Clamping Voltage at I_{PPM} V_C
	Min.	Max.	(mA)	(V)	(μA)	I_D(μA)	(A)	(V)
SM8S10	11.1	13.6	5.0	10	15	250	351	18.8
SM8S10A	11.1	12.3	5.0	10	15	250	388	17.0
SM8S11	12.2	14.9	5.0	11	10	150	328	20.1
SM8S11A	12.2	13.5	5.0	11	10	150	363	18.2
SM8S12	13.3	16.3	5.0	12	10	150	300	22.0
SM8S12A	13.3	14.7	5.0	12	10	150	332	19.9
SM8S13	14.4	17.6	5.0	13	10	150	277	23.8
SM8S13A	14.4	15.9	5.0	13	10	150	307	21.5
SM8S14	15.6	19.1	5.0	14	10	150	256	25.8
SM8S14A	15.6	17.2	5.0	14	10	150	284	23.2
SM8S15	16.7	20.4	5.0	15	10	150	245	26.9
SM8S15A	16.7	18.5	5.0	15	10	150	270	24.4
SM8S16	17.8	21.8	5.0	16	10	150	229	28.8
SM8S16A	17.8	19.7	5.0	16	10	150	254	26.0
SM8S17	18.9	23.1	5.0	17	10	150	216	30.5
SM8S17A	18.9	20.9	5.0	17	10	150	239	27.6
SM8S18	20.0	24.4	5.0	18	10	150	205	32.2
SM8S18A	20.0	22.1	5.0	18	10	150	226	29.2
SM8S20	22.2	27.1	5.0	20	10	150	184	35.8
SM8S20A	22.2	24.5	5.0	20	10	150	204	32.4
SM8S22	24.4	29.8	5.0	22	10	150	168	39.4
SM8S22A	24.4	26.9	5.0	22	10	150	186	35.5
SM8S24	26.7	32.6	5.0	24	10	150	153	43.0
SM8S24A	26.7	29.5	5.0	24	10	150	170	38.9
SM8S26	28.9	35.3	5.0	26	10	150	142	46.6
SM8S26A	28.9	31.9	5.0	26	10	150	157	42.1
SM8S28	31.1	38.0	5.0	28	10	150	132	50.1
SM8S28A	31.1	34.4	5.0	28	10	150	145	45.4
SM8S30	33.3	40.7	5.0	30	10	150	123	53.5
SM8S30A	33.3	36.8	5.0	30	10	150	136	48.4
SM8S33	36.7	44.9	5.0	33	10	150	112	59.0
SM8S33A	36.7	40.6	5.0	33	10	150	124	53.3
SM8S36	40.0	48.9	5.0	36	10	150	103	64.3
SM8S36A	40.0	44.2	5.0	36	10	150	114	58.1
SM8S40	44.4	54.3	5.0	40	10	150	92.4	71.4
SM8S40A	44.4	49.1	5.0	40	10	150	102	64.5
SM8S43	47.8	58.4	5.0	43	10	150	86.0	76.7
SM8S43A	47.8	52.8	5.0	43	10	150	95.1	69.4

Note: For all types maximum V_F = 1.8V at I_F = 100A measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum

Figure 1- Power Derating Curve

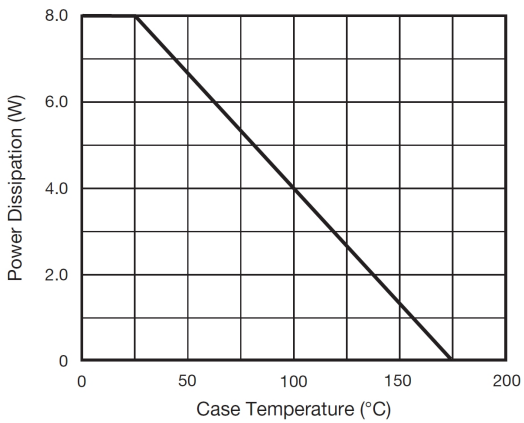
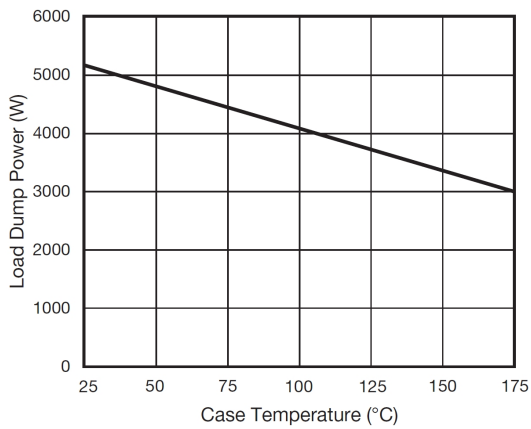


Figure 2-Load DumpPowerCharacteristics
(10 msExponential Waveform)



gure 3 -Pulse Waveform

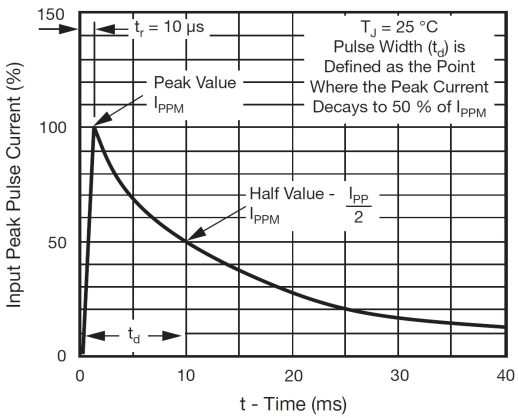
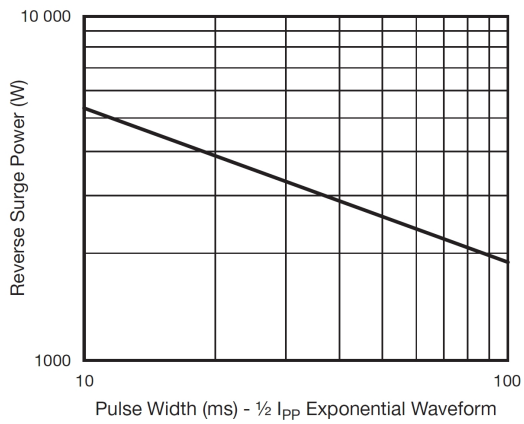


Figure 4 - Reverse Power Capability



gure 5 -Typical TransientThermal Impedance

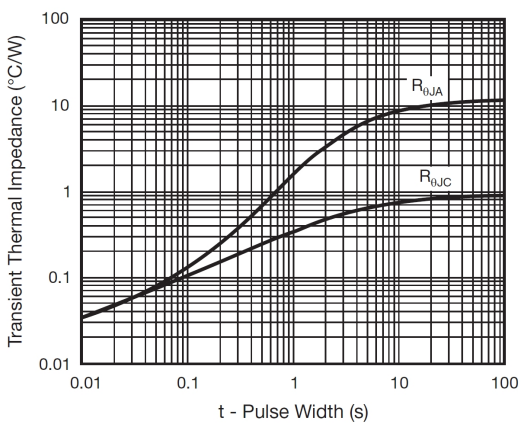


Figure 6 -Typical Junction Capacitance