



SM6S10A(CA) - SM6S36A(CA)

SURFACE MOUNT AUTOMOTIVE TRANSIENT VOLTAGE SUPPRESSORS

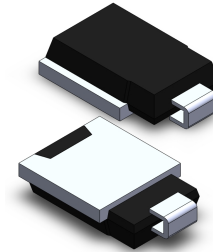
VOLTAGE RANGE: 10 - 36V
POWER: 4600Watts

Features

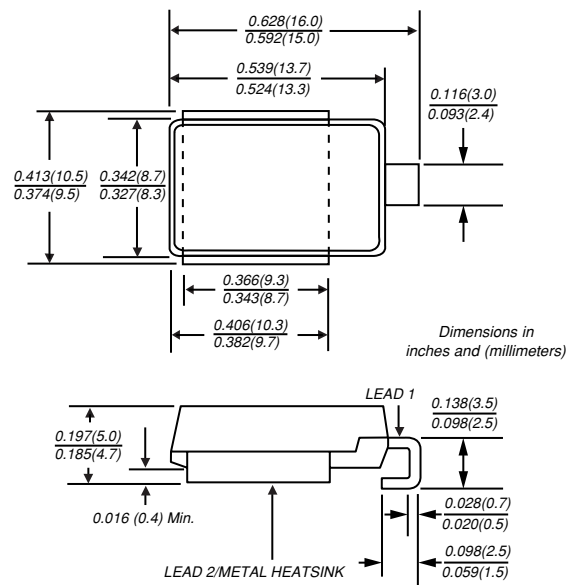
- Ideally suited for load dump protection
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Integrally molded heatsink provides a very low thermal resistance for maximum heat dissipation
- Low leakage current at $T_J = 175^\circ\text{C}$
- High temperature soldering guaranteed: 260°C for 10 seconds at terminals

Mechanical Data

- Case: DO-218AB
- Mounting Position: Any
- Weight: 0.091 oz., 2.58 g



DO-218AB



Maximum Ratings and Thermal Characteristics (T_C = 25°C unless otherwise noted)

Characteristic	Symbol	Value	Unit
Peak pulse power dissipation with 10/1000μs waveform 10/10,000μs waveform	PPPM	4600 3600	W
Steady state power dissipation	P _D	6.0	W
Peak pulse current with a 10/1000μs waveform (NOTE 1)	I _{PPM}	See Table 1	A
Peak forward surge current, 8.3ms single half sine-wave	I _{FSM}	600	A
Typical thermal resistance junction to case	R _{θJC}	0.95	°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



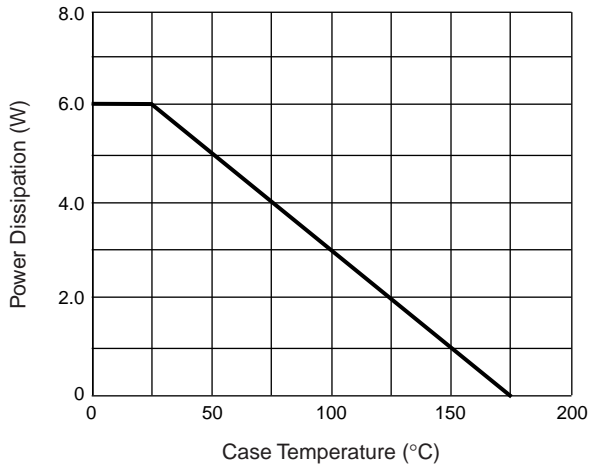
Electrical Characteristics (T_C = 25°C unless otherwise noted)

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} T _C =175°C I _D (μA)	Max. Peak Pulse Current at 10/1000μs Waveform (A)	Maximum Clamping Voltage at I _{PPM} V _C (V)
	Min.	Max.	(mA)	(V)	(μA)	I _D (μA)	(A)	(V)
SM6S10CA	11.1	13.6	5.0	10.0	15	250	245	18.8
SM6S10A	11.1	12.3	5.0	10.0	15	250	271	17.0
SM6S11CA	12.2	14.9	5.0	11.0	10	150	229	20.1
SM6S11A	12.2	13.5	5.0	11.0	10	150	253	18.2
SM6S12CA	13.3	16.3	5.0	12.0	10	150	209	22.0
SM6S12A	13.3	14.7	5.0	12.0	10	150	231	19.9
SM6S13CA	14.4	17.6	5.0	13.0	10	150	193	23.8
SM6S13A	14.4	15.9	5.0	13.0	10	150	214	21.5
SM6S14CA	15.6	19.1	5.0	14.0	10	150	178	25.8
SM6S14A	15.6	17.2	5.0	14.0	10	150	198	23.2
SM6S15CA	16.7	20.4	5.0	15.0	10	150	171	26.9
SM6S15A	16.7	18.5	5.0	15.0	10	150	189	24.4
SM6S16CA	17.8	21.8	5.0	16.0	10	150	160	28.8
SM6S16A	17.8	19.7	5.0	16.0	10	150	177	26.0
SM6S17CA	18.9	23.1	5.0	17.0	10	150	151	30.5
SM6S17A	18.9	20.9	5.0	17.0	10	150	167	27.6
SM6S18CA	20.0	24.4	5.0	18.0	10	150	143	32.2
SM6S18A	20.0	22.1	5.0	18.0	10	150	158	29.2
SM6S20CA	22.2	27.1	5.0	20.0	10	150	128	35.8
SM6S20A	22.2	24.5	5.0	20.0	10	150	142	32.4
SM6S22CA	24.4	29.8	5.0	22.0	10	150	117	39.4
SM6S22A	24.4	26.9	5.0	22.0	10	150	130	35.5
SM6S24CA	26.7	32.6	5.0	24.0	10	150	107	43.0
SM6S24A	26.7	29.5	5.0	24.0	10	150	118	38.9
SM6S26CA	28.9	35.3	5.0	26.0	10	150	99	46.6
SM6S26A	28.9	31.9	5.0	26.0	10	150	109	42.1
SM6S28CA	31.1	38.0	5.0	28.0	10	150	92	50.1
SM6S28A	31.1	34.4	5.0	28.0	10	150	101	45.4
SM6S30CA	33.3	40.7	5.0	30.0	10	150	86	53.5
SM6S30A	33.3	36.8	5.0	30.0	10	150	95	48.4
SM6S33CA	36.7	44.9	5.0	33.0	10	150	78	59.0
SM6S33A	36.7	40.6	5.0	33.0	10	150	86	53.3
SM6S36CA	40.0	48.9	5.0	36.0	10	150	72	64.3
SM6S36A	40.0	44.2	5.0	36.0	10	150	79	58.1

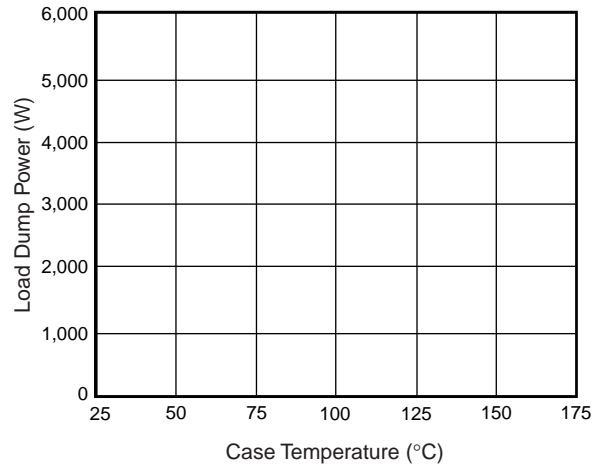
Note: For all types maximum V_F = 1.9V at I_F = 100A measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum



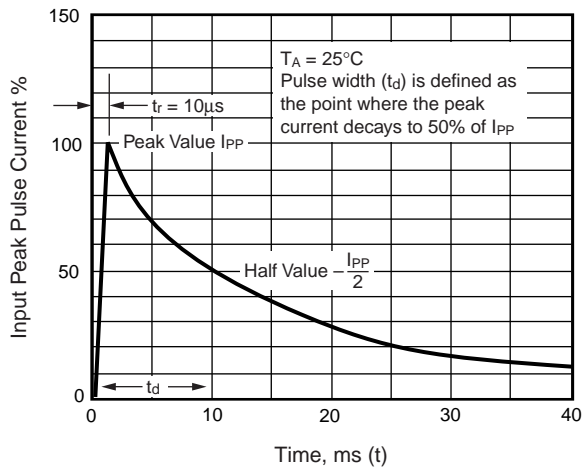
Power Derating Curve



Load Dump Power Characteristics (10ms Exponential Waveform)



Pulse Waveform



Reverse Power Capability

