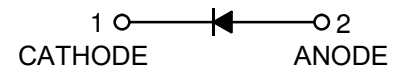
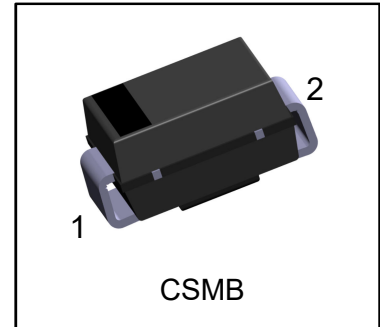


S-CP6SMB***A

Surface Mount Transient Voltage Suppressors
600 Watt Peak Pulse Power

1. FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Excellent clamping capability
- Repetition Rate (duty cycle):0.01%
- Fast response time: typically less than 1.0ps from 0 Volts to V(BR) for unidirectional types
- Typical IR less than 1mA above 10V
- High temperature soldering guaranteed: 260°C/10 seconds
- We declare that the material of product complies with RoHS requirements and Halogen Free.
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable.
- MSL: Level 1



2. MECHANICAL DATA

Case: Epoxy, Molded JEDEC DO-214AA

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Quantity: 3500 Units / Tape&Reel

3. MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	VALUE	UNITS
Peak Power Dissipation at $T_A=25^\circ\text{C}$, $T_P=1\text{ms}$ (Note 1)	PPPM	600	W
Steady State Power Dissipation at $T_L=75^\circ\text{C}$ (Note 2)	PM(AV)	5	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 2)	IFSM	100	A
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

NOTES:

1. Non-repetitive current pulse per Fig. 3 and derated above $T_a=25^\circ\text{C}$ Per Fig. 2
2. Mounted on Copper Leaf area of 1.57in² (40mm²).
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

4. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

UNI-DIRECTIONAL PART NUMBER	DEVICE MARKING CODE	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) @IT MIN.	BREAKDOWN VOLTAGE VBR (V) @IT MAX.	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE VC (V) @IPP	PEAK PULSE CURRENT IPPM (A)	REVERSE LEAKAGE IR (uA) @VRWM
S-CP6SMB6.8A	6.8A	5.8	6.45	7.14	10	10.5	58.1	800
S-CP6SMB7.5A	7.5A	6.4	7.13	7.88	10	11.3	54.0	500
S-CP6SMB8.2A	8.2A	7.02	7.79	8.61	10	12.1	50.4	200
S-CP6SMB9.1A	9.1A	7.78	8.65	9.5	1	13.4	45.5	100
S-CP6SMB10A	10A	8.55	9.5	10.5	1	14.5	42.1	10
S-CP6SMB11A	11A	9.4	10.5	11.6	1	15.6	39.1	2
S-CP6SMB12A	12A	10.2	11.4	12.6	1	16.7	36.5	1
S-CP6SMB13A	13A	11.1	12.4	13.7	1	18.2	33.5	1
S-CP6SMB15A	15A	12.8	14.3	15.8	1	21.2	28.8	1
S-CP6SMB16A	16A	13.6	15.2	16.8	1	22.5	27.1	1
S-CP6SMB18A	18A	15.3	17.1	18.9	1	25.2	24.2	1
S-CP6SMB20A	20A	17.1	19	21	1	27.7	21.7	1
S-CP6SMB22A	22A	18.8	20.9	23.1	1	30.6	19.7	1
S-CP6SMB24A	24A	20.5	22.8	25.2	1	33.2	18.4	1
S-CP6SMB27A	27A	23.1	25.7	28.4	1	37.5	16.3	1
S-CP6SMB30A	30A	25.6	28.5	31.5	1	41.4	14.7	1
S-CP6SMB33A	33A	28.2	31.4	34.7	1	45.7	13.3	1
S-CP6SMB36A	36A	30.8	34.2	37.8	1	49.9	12.2	1
S-CP6SMB39A	39A	33.3	37.1	41	1	53.9	11.3	1
S-CP6SMB43A	43A	36.8	40.9	45.2	1	59.3	10.3	1
S-CP6SMB47A	47A	40.2	44.7	49.4	1	64.8	9.3	1
S-CP6SMB51A	51A	43.6	48.5	53.6	1	70.1	8.6	1
S-CP6SMB56A	56A	47.8	53.2	58.8	1	77	7.8	1
S-CP6SMB62A	62A	53	58.9	65.1	1	85	7.1	1
S-CP6SMB68A	68A	58.1	64.6	71.4	1	92	6.6	1
S-CP6SMB75A	75A	64.1	71.3	78.8	1	103	5.9	1
S-CP6SMB82A	82A	70.1	77.9	86.1	1	113	5.4	1
S-CP6SMB91A	91A	77.8	86.5	95.5	1	125	4.8	1
S-CP6SMB100A	100A	85.5	95	105	1	137	4.4	1
S-CP6SMB110A	110A	94	105	116	1	152	4.0	1
S-CP6SMB120A	120A	102	114	126	1	165	3.7	1
S-CP6SMB130A	130A	111	124	137	1	179	3.4	1
S-CP6SMB150A	150A	128	143	158	1	207	2.9	1
S-CP6SMB160A	160A	136	152	168	1	219	2.8	1
S-CP6SMB170A	170A	145	162	179	1	234	2.6	1
S-CP6SMB180A	180A	154	171	189	1	246	2.5	1
S-CP6SMB200A	200A	171	190	210	1	274	2.2	1
S-CP6SMB220A	220A	185	209	231	1	328	1.9	1
S-CP6SMB250A	250A	214	237	263	1	344	1.8	1
S-CP6SMB300A	300A	256	285	315	1	414	1.5	1
S-CP6SMB350A	350A	300	332	368	1	482	1.3	1
S-CP6SMB400A	400A	342	380	420	1	548	1.1	1
S-CP6SMB440A	440A	376	418	462	1	602	1.0	1

5. ELECTRICAL CHARACTERISTIC CURVES

Fig. 1-Peak Pulse Power Rating Curve

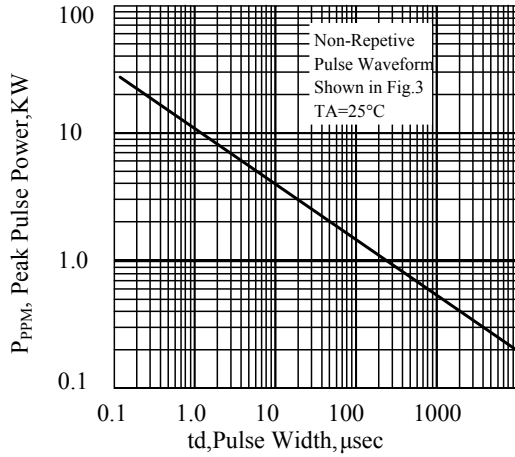


Fig. 2-Pulse Derating Curve

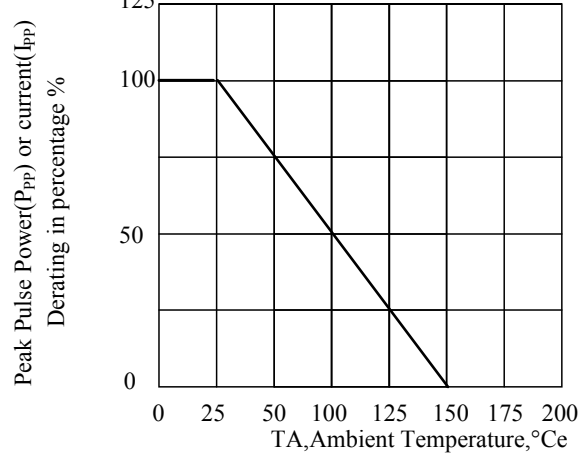


Fig. 3-Pulse Waveform

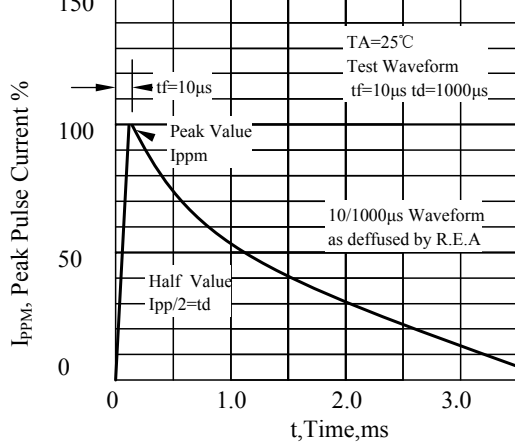


Fig. 4-Typical Junction Capacitance Unidirectional

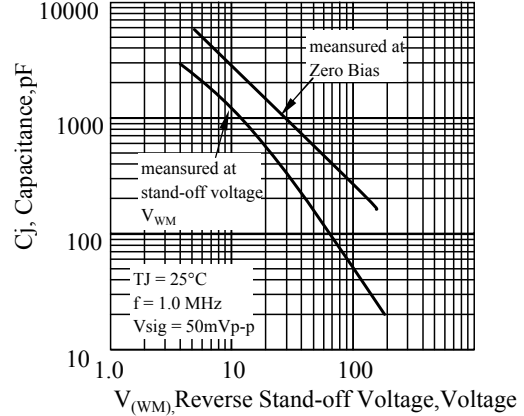


Fig 5. - typical transient thermal impedance

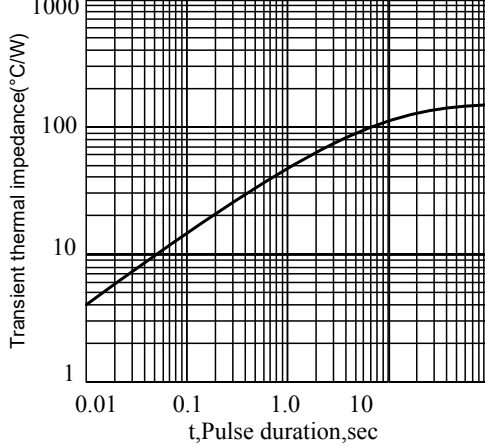
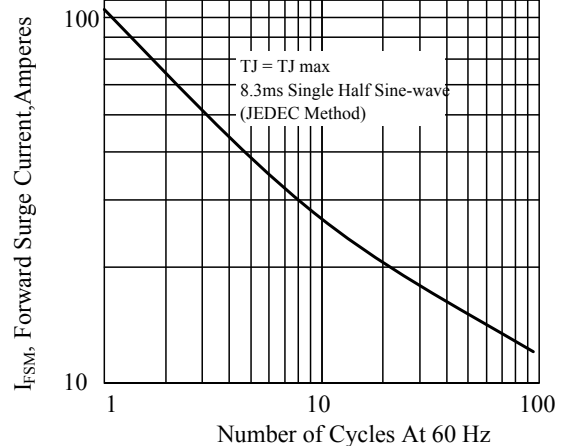
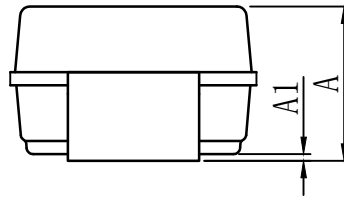
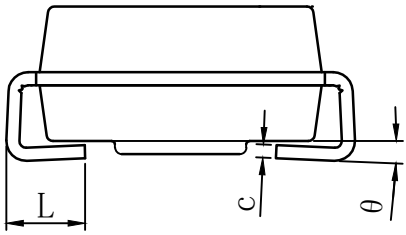


Fig. 6-Maximum Non-Repetitive Peak Forward Surge Current Unidirectional

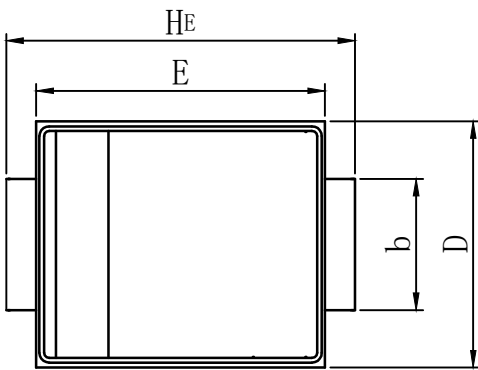


6. OUTLINE AND DIMENSIONS

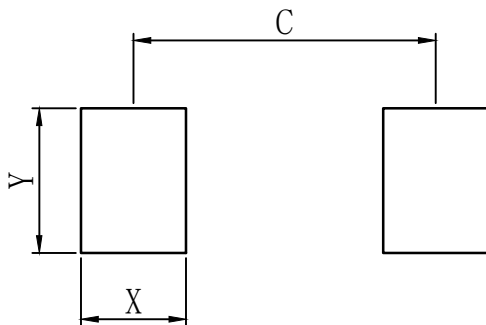


CSMB			
DIM	MIN	TYP	MAX
A	2.20	2.35	2.50
A1	0.05	0.10	0.20
b	1.80	2.00	2.20
c	0.10	0.20	0.30
D	3.30	3.75	3.94
E	4.06	4.40	4.60
HE	5.20	5.31	5.45
L	0.90	1.30	1.60
θ	0°	~	8°

All Dimensions in mm(Except "θ")



7. SOLDERING FOOTPRINT



CSMB	
DIM	(mm)
X	1.60
Y	2.20
C	4.60

DISCLAIMER

- Curve guarantee in the specification. The curve of test items with electric parameter is used as quality guarantee. The curve of test items without electric parameter is used as reference only.
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