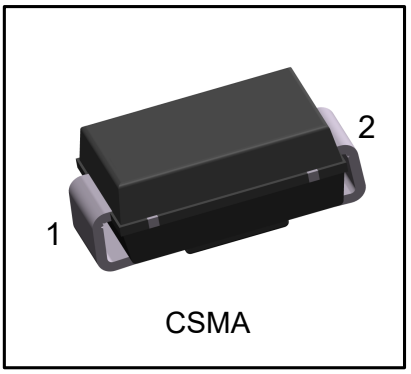
S-CP6SMAJ***CA

Surface Mount Transient Voltage Suppressor
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
- Low inductance
- Excellent clamping capability
- Repetition Rate (duty cycle):0.01%
- Fast response time: typically less than 1.0ps
- 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.



2. MECHANICAL DATA

Case: JEDEC DO-214AC, molded plastic over glass die

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

Polarity: Bipolar without color band

Mounting Position: Any

Weight: 0.07g

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°C, T_P=1ms (Note 1)	P_{PPM}	Minimum 600	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JECED Method) (Note 2)	I_{FSM}	60	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 Ta=25°C Per Fig. 2
2. Mounted on Copper Leaf area of 1.57in^2 (40mm^2).
3. 8.3ms single half sine-wave, duty cycle= 4 pulses per minutes maximum.

4. ELECTRICAL CHARACTERISTICS (Ta= 25ºC)

BI-DIRECTIONAL PART NUMBER	DEVICE MARKING	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE @IT VBR (V)		TEST CURRENT IT (mA)	MAXIMUMN CLAMPING VOLTAGE @IPP VC (V)	PEAK PULSE CURRENT IPP (A)	REVERSE LEAKAGE @VRWM IR (uA)
			MIN.	MAX.				
S-CP6SMAJ5.0CA	P6J5.0CA	5	6.4	7.0	10.0	9.2	65.3	800
S-CP6SMAJ6.0CA	P6J6.0CA	6	6.7	7.4	10.0	10.3	58.3	800
S-CP6SMAJ6.5CA	P6J6.5CA	6.5	7.2	8.0	10.0	11.2	53.6	500
S-CP6SMAJ7.0CA	P6J7.0CA	7	7.8	8.6	10.0	12.0	50.0	200
S-CP6SMAJ7.5CA	P6J7.5CA	7.5	8.3	9.2	1.0	12.9	46.6	100
S-CP6SMAJ8.0CA	P6J8.0CA	8	8.9	9.8	1.0	13.6	44.2	50
S-CP6SMAJ8.5CA	P6J8.5CA	8.5	9.4	10.4	1.0	14.4	41.7	20
S-CP6SMAJ9.0CA	P6J9.0CA	9	10.0	11.1	1.0	15.4	39.0	10
S-CP6SMAJ10CA	P6J10CA	10	11.1	12.3	1.0	17.0	35.3	1
S-CP6SMAJ11CA	P6J11CA	11	12.2	13.5	1.0	18.2	33.0	1
S-CP6SMAJ12CA	P6J12CA	12	13.3	14.7	1.0	19.9	30.2	1
S-CP6SMAJ13CA	P6J13CA	13	14.4	15.9	1.0	21.5	28.0	1
S-CP6SMAJ14CA	P6J14CA	14	15.6	17.2	1.0	23.2	25.9	1
S-CP6SMAJ15CA	P6J15CA	15	16.7	18.5	1.0	24.4	24.6	1
S-CP6SMAJ16CA	P6J16CA	16	17.8	19.7	1.0	26.0	23.1	1
S-CP6SMAJ17CA	P6J17CA	17	18.9	20.9	1.0	27.6	21.8	1
S-CP6SMAJ18CA	P6J18CA	18	20.0	22.1	1.0	29.2	20.6	1
S-CP6SMAJ20CA	P6J20CA	20	22.2	24.5	1.0	32.4	18.6	1
S-CP6SMAJ22CA	P6J22CA	22	24.4	26.9	1.0	35.5	16.9	1
S-CP6SMAJ24CA	P6J24CA	24	26.7	29.5	1.0	38.9	15.5	1
S-CP6SMAJ26CA	P6J26CA	26	28.9	31.9	1.0	42.1	14.3	1
S-CP6SMAJ28CA	P6J28CA	28	31.1	34.4	1.0	45.4	13.3	1
S-CP6SMAJ30CA	P6J30CA	30	33.3	36.8	1.0	48.4	12.4	1
S-CP6SMAJ33CA	P6J33CA	33	36.7	40.6	1.0	53.3	11.3	1
S-CP6SMAJ36CA	P6J36CA	36	40.0	44.2	1.0	58.1	10.4	1
S-CP6SMAJ40CA	P6J40CA	40	44.4	49.1	1.0	64.5	9.3	1
S-CP6SMAJ43CA	P6J43CA	43	47.8	52.8	1.0	69.4	8.7	1
S-CP6SMAJ45CA	P6J45CA	45	50.0	55.3	1.0	72.7	8.3	1
S-CP6SMAJ48CA	P6J48CA	48	53.3	58.9	1.0	77.4	7.8	1
S-CP6SMAJ51CA	P6J51CA	51	56.7	62.7	1.0	82.4	7.3	1
S-CP6SMAJ54CA	P6J54CA	54	60.0	66.3	1.0	87.1	6.9	1
S-CP6SMAJ58CA	P6J58CA	58	64.4	71.2	1.0	93.6	6.5	1
S-CP6SMAJ60CA	P6J60CA	60	66.7	73.7	1.0	96.8	6.2	1
S-CP6SMAJ64CA	P6J64CA	64	71.1	78.6	1.0	103.0	5.9	1
S-CP6SMAJ70CA	P6J70CA	70	77.8	86.0	1.0	113.0	5.3	1
S-CP6SMAJ75CA	P6J75CA	75	83.3	92.1	1.0	121.0	5.0	1
S-CP6SMAJ78CA	P6J78CA	78	86.7	95.8	1.0	126.0	4.8	1
S-CP6SMAJ85CA	P6J85CA	85	94.4	104.0	1.0	137.0	4.4	1
S-CP6SMAJ90CA	P6J90CA	90	100.0	111.0	1.0	146.0	4.1	1
S-CP6SMAJ100CA	P6J100CA	100	111.0	123.0	1.0	162.0	3.7	1
S-CP6SMAJ110CA	P6J110CA	110	122.0	135.0	1.0	177.0	3.4	1
S-CP6SMAJ120CA	P6J120CA	120	133.0	147.0	1.0	193.0	3.1	1
S-CP6SMAJ130CA	P6J130CA	130	144.0	159.0	1.0	209.0	2.9	1
S-CP6SMAJ150CA	P6J150CA	150	167.0	185.0	1.0	243.0	2.5	1
S-CP6SMAJ160CA	P6J160CA	160	178.0	197.0	1.0	259.0	2.3	1
S-CP6SMAJ170CA	P6J170CA	170	189.0	209.0	1.0	275.0	2.2	1
S-CP6SMAJ180CA	P6J180CA	180	198.0	221.0	1.0	291.0	2.1	1
S-CP6SMAJ190CA	P6J190CA	190	209.0	233.0	1.0	307.0	2.0	1
S-CP6SMAJ200CA	P6J200CA	200	220.0	246.0	1.0	324.0	1.9	1
S-CP6SMAJ220CA	P6J220CA	220	246.0	272.0	1.0	356.0	1.7	1
S-CP6SMAJ250CA	P6J250CA	250	279.0	309.0	1.0	405.0	1.5	1

5. ELECTRICAL CHARACTERISTIC CURVES

Fig. 1-Peak Pulse Power Rating Curve

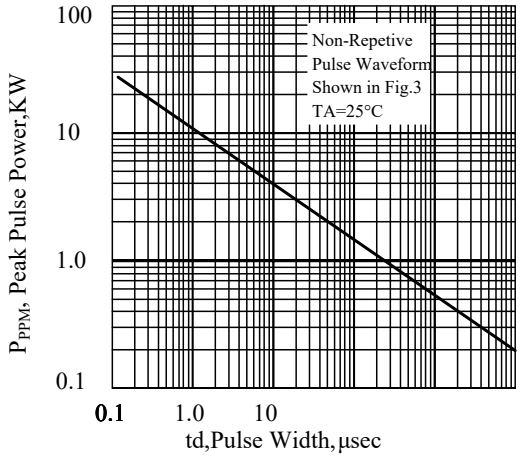


Fig. 2-Pulse Derating Curve

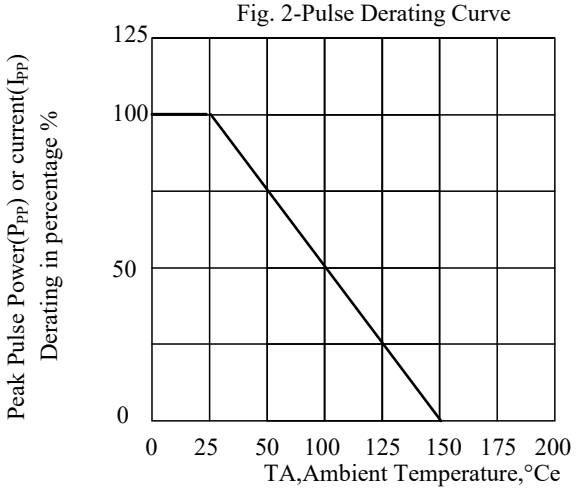


Fig. 3-Pulse Waveform

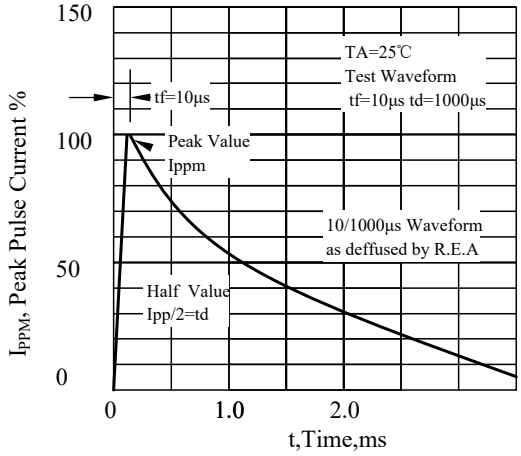


Fig. 4-Typical Junction Capacitance
Bidirectional

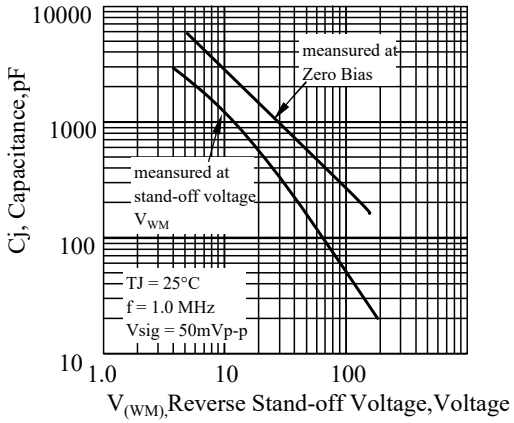


Fig. 5-Typical Transient Thermal
Impedance

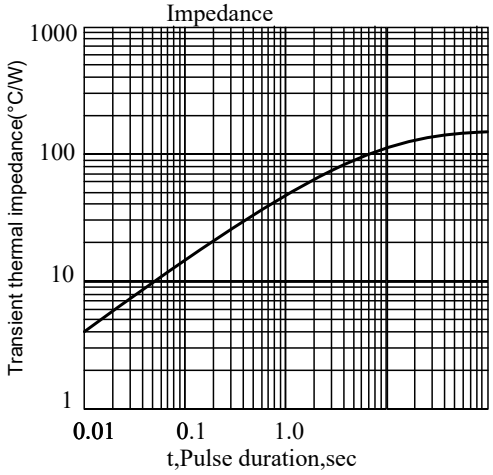
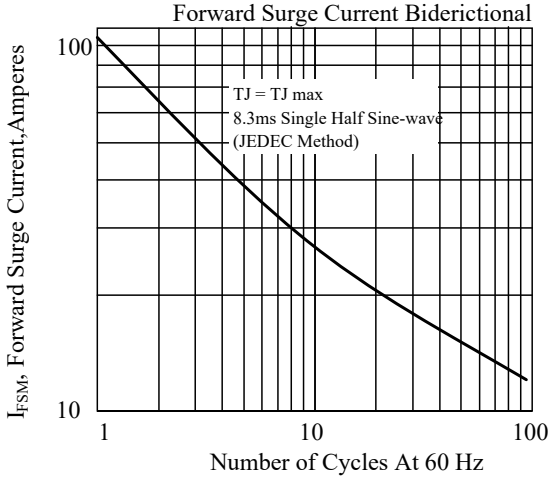
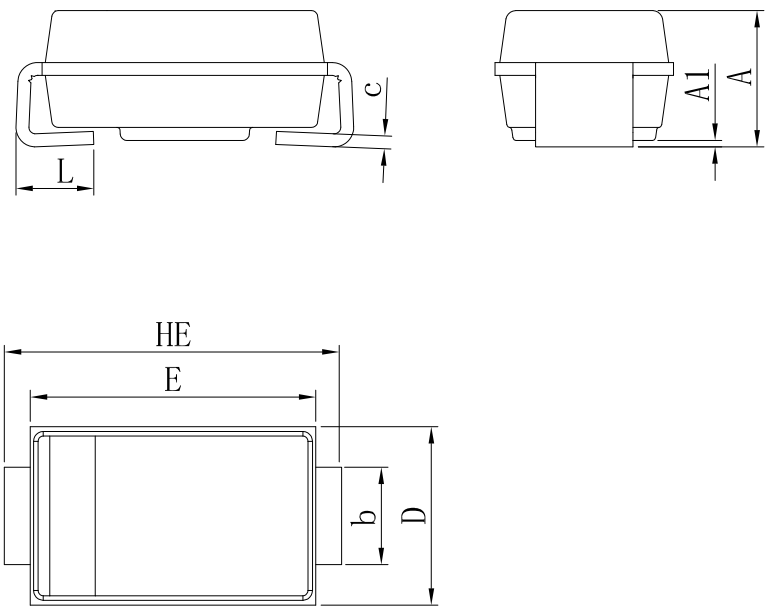


Fig. 6-Maximum Non-Repetitive Peak
Forward Surge Current Biderictional

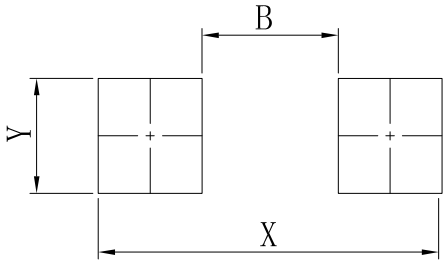


6. OUTLINE AND DIMENSIONS



CSMA			
DIM	MIN	TYP	MAX
A	1.97	2.10	2.29
A1	0.05	0.10	0.20
b	1.35	1.50	1.65
c	0.10	0.20	0.30
D	2.40	2.75	2.92
E	4.10	4.40	4.57
HE	4.70	5.27	5.59
L	0.76	1.20	1.52
All Dimensions in mm			

7. SOLDERING FOOTPRINT



CSMA		
DIM	MIN	MAX
X	5.30REF	
Y	1.72	1.82
B	1.90	2.30

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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