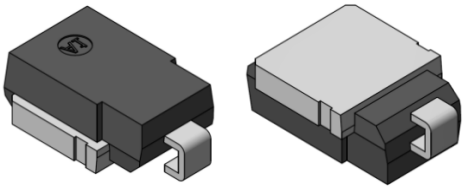
S-SM5SXXCA

Surface Mount Transient Voltage Suppressor

1. FEATURES

- Junction passivation optimized design passivated anisotropic rectifier technology
- TJ=175℃ capability suitable for high reliability and automotive requirement
- Bidirectional
- Low leakage current
- Meets RoHS2.0 (2011/65/EU)
- Meets MSL level 1, per J-STD-020
- Meet ISO7637-2 surge specification
- S- prefix for automotive and other applications requiring unique site and control change requirements; AEC-Q101 qualified and PPAP capable



DO-218AB

2. MECHANICAL DATA

Case: DO-218AB
Molding comound meets UL 94V-0 falmmability rating
Base P/NHE3-RoHS-compliant,AEC-Q101 qualified

Terminals: Matte tin plated leads, solderable per J-STD-002

Weight: 2.7g

3. MAXIMUM RATINGS(Tc=25ºC)

Parameter	Symbol	Limit	Unit
Peak pulse power dissipation at 10/1000μs waveform	P_{PPM}	3600	W
Peak pulse power dissipation at 10/10000μs waveform		2800	W
Power dissipation on infinite heat sink at TC=25℃	P_D	5.0	W
Operating junction and storage temperature range	T_J,T_{STG}	-55 ~ +175	℃
Typical themal resistance junction to case	$R_{\theta JC}$	1.0	℃/W

4. ELECTRICAL CHARACTERISTICS

Bi-Directional Part Number	Device Marking Code	Reverse Stand-off Voltage VRWM (V)	Breakdown Voltage VBR (V) Min. @IT	Breakdown Voltage VBR (V) Max. @IT	Test Current IT (mA)	Maximum Clamping Voltage VC(V)@IPP	Peak Pulse Current Ipp (A)	Reverse Leakage @VRWM IR (uA)
S-SM5S10CA	SM5S10CA	10.0	11.1	12.3	5	17.0	212	15
S-SM5S11CA	SM5S11CA	11.0	12.2	13.5	5	18.2	198	10
S-SM5S12CA	SM5S12CA	12.0	13.3	14.7	5	19.9	181	10
S-SM5S13CA	SM5S13CA	13.0	14.4	15.9	5	21.5	167	10
S-SM5S14CA	SM5S14CA	14.0	15.6	17.2	5	23.2	155	10
S-SM5S15CA	SM5S15CA	15.0	16.7	18.5	5	24.4	148	10
S-SM5S16CA	SM5S16CA	16.0	17.8	19.7	5	26.0	138	10
S-SM5S17CA	SM5S17CA	17.0	18.9	20.9	5	27.6	130	10
S-SM5S18CA	SM5S18CA	18.0	20.0	22.1	5	29.2	123	10
S-SM5S20CA	SM5S20CA	20.0	22.2	24.5	5	32.4	111	10
S-SM5S22CA	SM5S22CA	22.0	24.4	26.9	5	35.5	101	10
S-SM5S24CA	SM5S24CA	24.0	26.7	29.5	5	38.9	92.5	10
S-SM5S26CA	SM5S26CA	26.0	28.9	31.9	5	42.1	85.5	10
S-SM5S28CA	SM5S28CA	28.0	31.1	34.4	5	45.4	79.3	10
S-SM5S30CA	SM5S30CA	30.0	33.3	36.8	5	48.4	74.4	10
S-SM5S33CA	SM5S33CA	33.0	36.7	40.6	5	53.3	67.5	10
S-SM5S36CA	SM5S36CA	36.0	40.0	44.2	5	58.1	62	10
S-SM5S40CA	SM5S40CA	40.0	44.4	49.1	5	64.5	55.8	10
S-SM5S43CA	SM5S43CA	43.0	47.8	52.8	5	69.4	52	10
S-SM5S45CA	SM5S45CA	45.0	50.0	55.3	5	72.7	49.5	10
S-SM5S48CA	SM5S48CA	48.0	53.2	58.7	5	77.4	46.5	10
S-SM5S51CA	SM5S51CA	51.0	56.7	62.7	5	82.4	43.7	10
S-SM5S54CA	SM5S54CA	54.0	60.0	66.3	5	87.1	41.3	10
S-SM5S58CA	SM5S58CA	58.0	64.4	71.2	5	93.6	38.5	10
S-SM5S60CA	SM5S60CA	60.0	66.7	73.7	5	96.8	37.2	10
S-SM5S64CA	SM5S64CA	64.0	71.1	78.6	5	103	35	10
S-SM5S70CA	SM5S70CA	70.0	77.8	86.0	5	113	32	10
S-SM5S75CA	SM5S75CA	75.0	83.3	92.1	5	121	30	10
S-SM5S78CA	SM5S78CA	78.0	86.7	95.8	5	126	28.6	10
S-SM5S85CA	SM5S85CA	85.0	94.4	104	5	137	26.3	10

5. ELECTRICAL CHARACTERISTICS CURVES

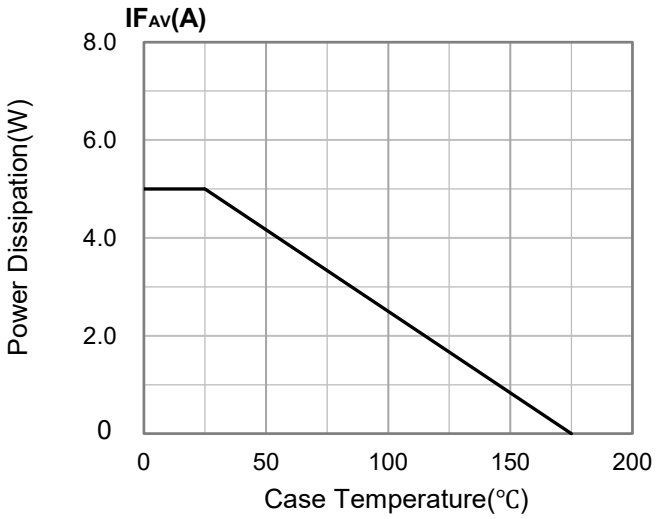


Fig.1: Power Derating Curve

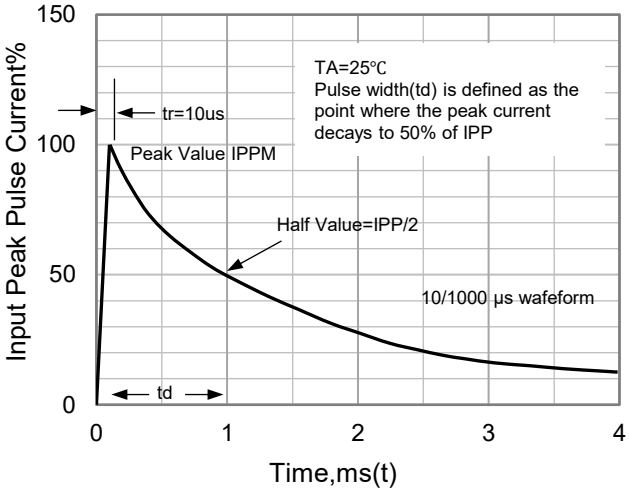


Fig.2: Pulse Waveform

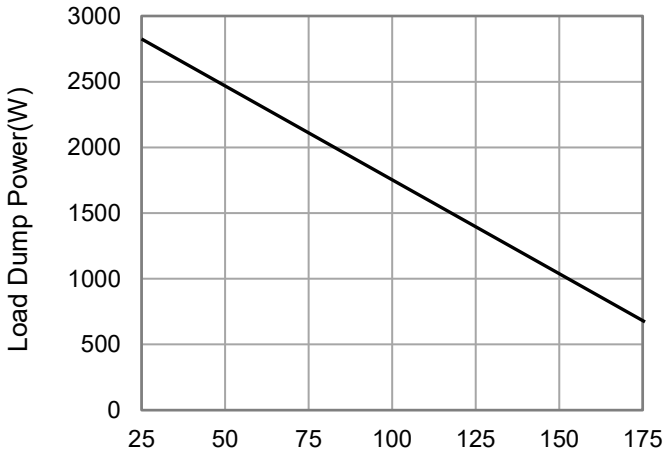


Fig.3: Load Dump Power Characteristics
(10 ms Exponential Waveform)

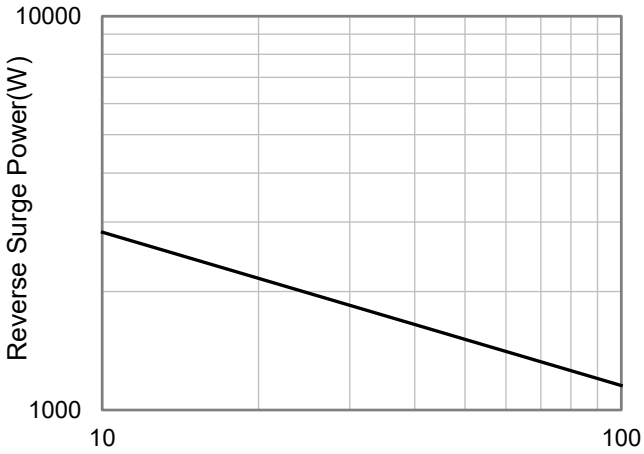
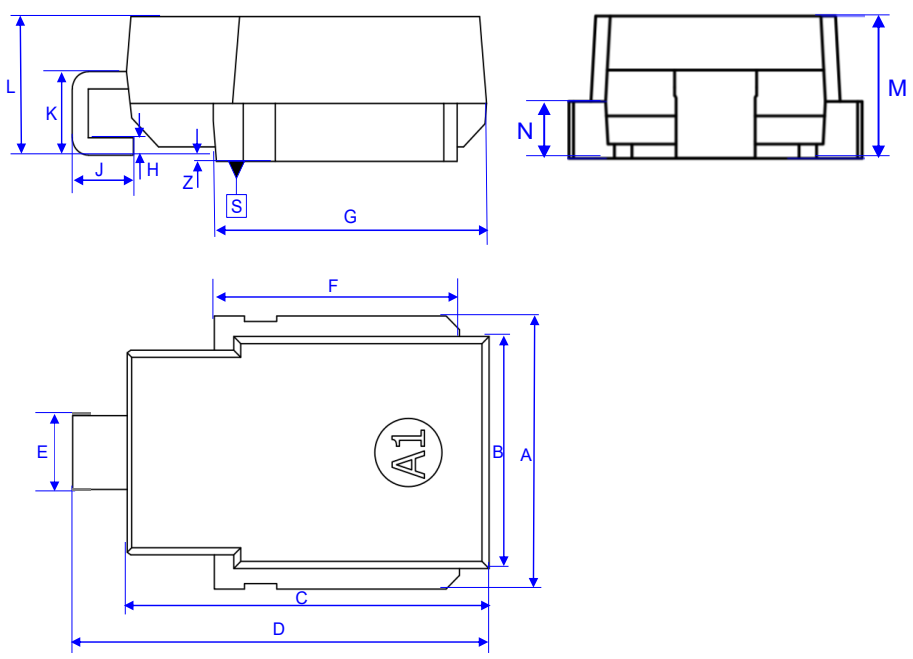


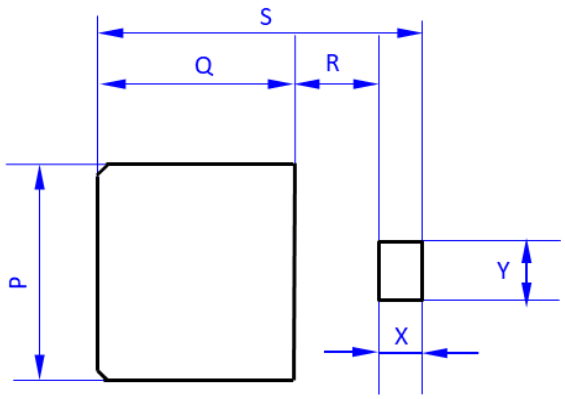
Fig.4: Reverse Power Capability

6. OUTLINE AND DIMENSIONS



DO-218AB			
DIM	Min	Max	Typ.
A	9.5	10.5	10.0
B	8.3	8.7	8.5
C	13.3	13.7	13.5
D	15.0	16.0	15.5
E	2.4	3.1	2.7
F	8.7	9.3	9.0
G	9.8	10.4	10.1
H	0.5	0.7	0.6
J	1.6	2.2	2.0
K	2.5	3.5	3.1
L	4.8	5.8	5.0
M	4.9	5.2	5.0
N	1.9	2.1	2.0
Z	-0.15	0.15	0.00
All Dimensions in mm			

7. SOLDERING FOOTPRINT



DO-218AB			
DIM	Min	Max	Typ.
P	9.5	10.5	10.0
Q	8.7	9.3	9.0
R	3.2	3.8	3.5
S	14.1	14.9	14.5
X	1.7	2.3	2.0
Y	2.4	3.0	2.7
All Dimensions in mm			

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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