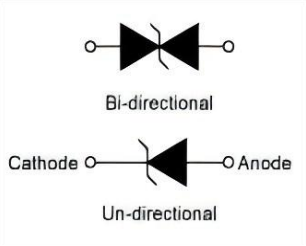
5000W Transient Voltage Suppressor 5.0SMDJ Series

Parameter	Value	Unit
P_{PP}	5000	W
PM(AV) (TL =75°C)	6.5	W
T_j	-55 to +125	°C



SMC/DO-214AB

FEATURES

- VRWM 12-190V，Excellent clamping capability
- 5000 W peak pulse power capability with a 10/1000μs Waveform.
- Low profile package and low inductance
- Typical IR less than 1uA above 12V
- Fast response time: typically less than 1.0ps from 0V to VBR min.

APPLICATIONS

- Computer system
- Domestic appliance
- Video input

MAXIMUM RATED VALUES (at TJ = 25 °C, unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak pulse power dissipation on 10/1000μs waveform	PPP	5000	W
Steady state power dissipation at TL=75℃	PM(AV)	6.5	W
Operating junction temperature range	Tj	-55 to +125	℃
Storage temperature range	Tstg	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (at TJ = 25°C unless otherwise specified)

Part Number		VR	IR@VR	VBR@IT		IT	VC@IPP	IPP①
Uni-Polar	Bi-Polar	V	μA	min(V)	max(V)	mA	max(V)	A
5.0SMDJ12A	5.0SMDJ12CA	12.0	1	13.30	14.70	1	19.9	251.3
5.0SMDJ13A	5.0SMDJ13CA	13.0	1	14.40	15.90	1	21.5	232.6
5.0SMDJ14A	5.0SMDJ14CA	14.0	1	15.60	17.20	1	23.2	215.6
5.0SMDJ15A	5.0SMDJ15CA	15.0	1	16.70	18.50	1	24.4	205.0

5.0SMDJ16A	5.0SMDJ16CA	16.0	1	17.80	19.70	1	26.0	192.4
5.0SMDJ17A	5.0SMDJ17CA	17.0	1	18.90	20.90	1	27.6	181.2
5.0SMDJ18A	5.0SMDJ18CA	18.0	1	20.00	22.10	1	29.2	171.3
5.0SMDJ20A	5.0SMDJ20CA	20.0	1	22.20	24.50	1	32.4	154.4
5.0SMDJ22A	5.0SMDJ22CA	22.0	1	24.40	26.90	1	35.5	140.9
5.0SMDJ24A	5.0SMDJ24CA	24.0	1	26.70	29.50	1	38.9	128.6
5.0SMDJ26A	5.0SMDJ26CA	26.0	1	28.90	31.90	1	42.1	118.8
5.0SMDJ28A	5.0SMDJ28CA	28.0	1	31.10	34.40	1	45.4	110.2
5.0SMDJ30A	5.0SMDJ30CA	30.0	1	33.30	36.80	1	48.4	103.4
5.0SMDJ33A	5.0SMDJ33CA	33.0	1	36.70	40.60	1	53.3	93.81
5.0SMDJ36A	5.0SMDJ36CA	36.0	1	40.00	44.20	1	58.1	86.06
5.0SMDJ40A	5.0SMDJ40CA	40.0	1	44.40	49.10	1	64.5	77.52
5.0SMDJ43A	5.0SMDJ43CA	43.0	1	47.80	52.80	1	69.4	72.05
5.0SMDJ45A	5.0SMDJ45CA	45.0	1	50.00	55.30	1	72.7	68.78
5.0SMDJ48A	5.0SMDJ48CA	48.0	1	53.30	58.90	1	77.4	64.60
5.0SMDJ51A	5.0SMDJ51CA	51.0	1	56.70	62.70	1	82.4	60.68
5.0SMDJ54A	5.0SMDJ54CA	54.0	1	60.00	66.30	1	87.1	57.41
5.0SMDJ58A	5.0SMDJ58CA	58.0	1	64.40	71.20	1	93.6	53.42
5.0SMDJ60A	5.0SMDJ60CA	60.0	1	66.70	73.70	1	96.8	51.66
5.0SMDJ64A	5.0SMDJ64CA	64.0	1	71.10	78.60	1	103.0	48.55
5.0SMDJ70A	5.0SMDJ70CA	70.0	1	77.80	86.00	1	113.0	44.25
5.0SMDJ75A	5.0SMDJ75CA	75.0	1	83.30	92.10	1	121.0	41.33
5.0SMDJ78A	5.0SMDJ78CA	78.0	1	86.70	95.80	1	126.0	39.69
5.0SMDJ85A	5.0SMDJ85CA	85.0	1	94.40	104.0	1	137.0	36.50
5.0SMDJ90A	5.0SMDJ90CA	90.0	1	100.0	111.0	1	146.0	34.25
5.0SMDJ100A	5.0SMDJ100CA	100.0	1	111.0	123.0	1	162.0	30.87
5.0SMDJ110A	5.0SMDJ110CA	110.0	1	122.0	135.0	1	177.0	28.25
5.0SMDJ120A	5.0SMDJ120CA	120.0	1	133.0	147.0	1	193.0	25.91
5.0SMDJ130A	5.0SMDJ130CA	130.0	1	144.0	159.0	1	209.0	23.93
5.0SMDJ150A	5.0SMDJ150CA	150.0	1	167.0	185.0	1	243.0	20.58

5.0SMDJ160A	5.0SMDJ160CA	160.0	1	178.0	197.0	1	259.0	19.31
5.0SMDJ170A	5.0SMDJ170CA	170.0	1	189.0	209.0	1	275.0	18.19
5.0SMDJ180A	5.0SMDJ180CA	180.0	1	201.0	222.0	1	292.0	17.13
5.0SMDJ190A	5.0SMDJ190CA	190.0	1	209.0	233.0	1	308.0	16.24

Notes：

① Surge wave form: 10/1000μs

VR: Stand-off Voltage -- Maximum voltage that can be applied

VBR: Breakdown Voltage

VC: Clamping Voltage -- Peak voltage measured across the suppressor at a specified Ipp

IR: Reverse Leakage Current

TYPICAL CHARACTERISTICS CURVES

Fig1: V-i cure characteristics

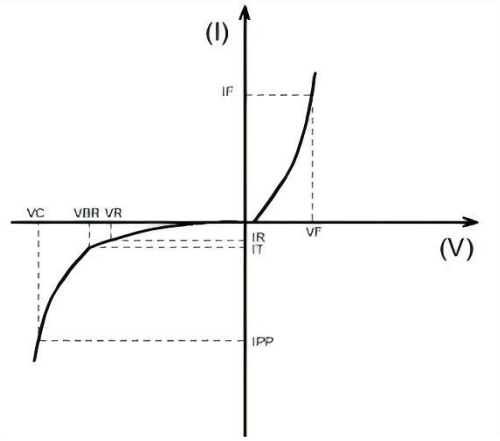


Fig2:Pulse derating curve

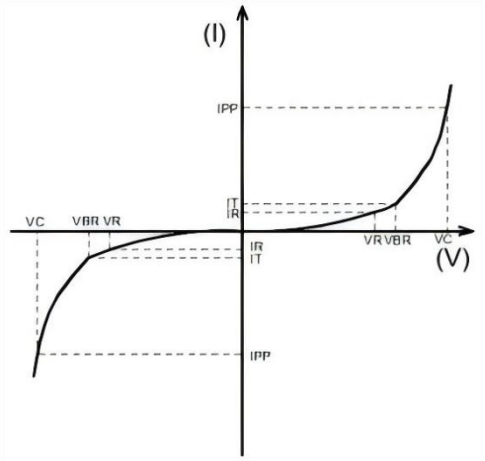
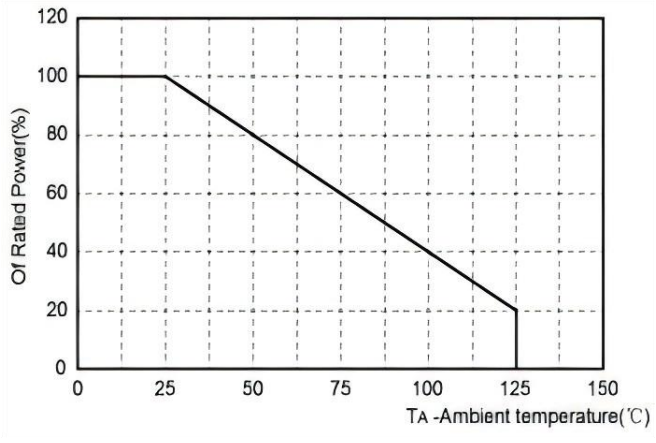


Fig3: Pulse waveform



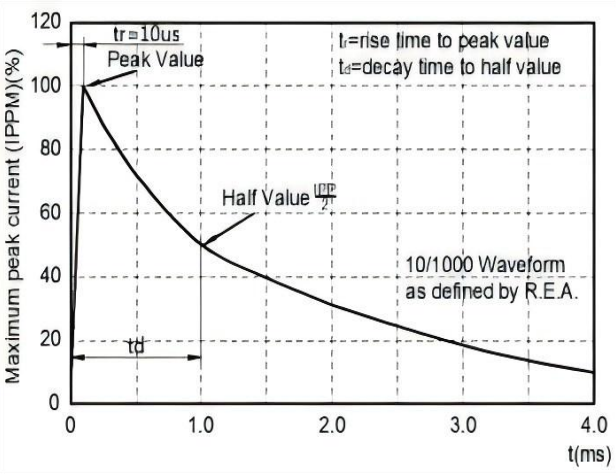


Fig4 : Peak Pulse Power Rating Curve

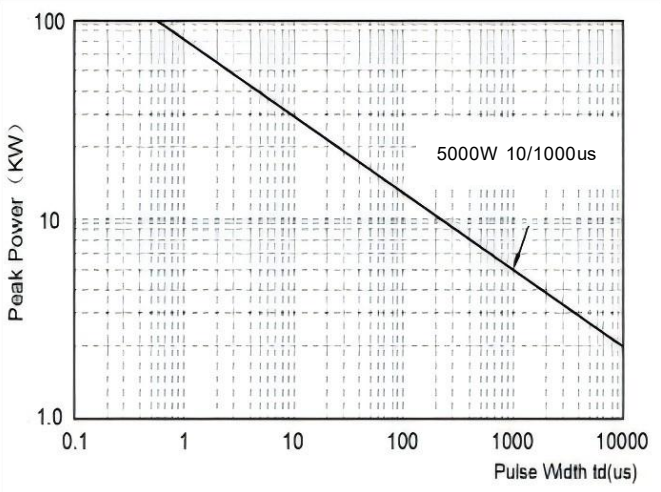
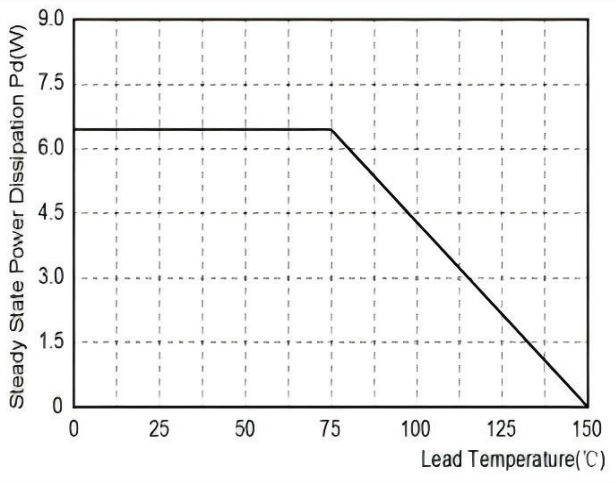
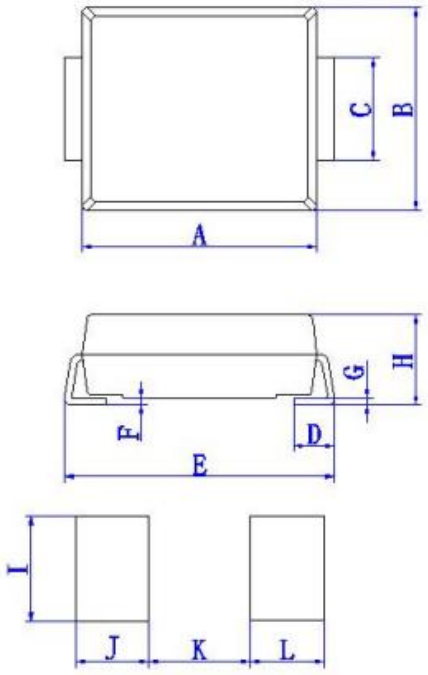


Fig5 :Steady State Power Dissipation



PACKAGE OUTLINES



Ref.(mm)	Millimeters	
	Min.	Max.
A	6.60	7.11
B	5.59	6.20
C	2.75	3.20
D	0.76	1.52
E	7.71	8.13
F	0.051	0.203
G	0.15	0.25
H	2.06	2.75
I	3.30	
J	1.30	
K		5.30
L	1.30	

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