

Surface mount transient voltage suppressor power 400 watts

Stand-Off Voltage : 5.0V~440V

## FEATURES

- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability

## MECHANICAL DATA

- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 0.002oz

## Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

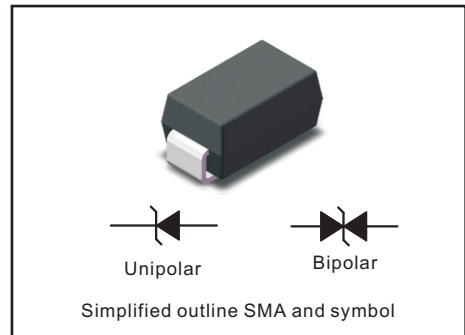
Parameter	Symbol	Value	Unit
Peak Pulse Power Dissipation on $T_A=25^{\circ}\text{C}$ (Note 1,2,4, Fig1)	$P_{PPM}$	400	W
Peak Forward Surge Current (Note 3, Fig 4)	$I_{FSM}$ (UNI)	60	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 3)	$I_{PPM}$	see Table 1	A
ESD Voltage per IEC6100-4-2 Contact Air	$V_{ESD1}$ $V_{ESD2}$	$\pm 30$ $\pm 30$	kV
Typical Thermal Resistance Junction to Ambient(Note 2)	$R_{\theta JA}$	30	$^{\circ}\text{C}/\text{W}$
Operating Junction Temperature and Storage Temperature Range	$T_j, T_{stg}$	-65 ~ +150	$^{\circ}\text{C}$

## NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A = 25^{\circ}\text{C}$  per Fig. 2.
2. Mounted on  $5\text{mm}^2$  copper pads to each terminal.
3. Peak Forward Surge Current : 8.3ms single half sine-wave Superimposed on rated load (JEDEC method).
4. Peak pulse power waveform is 10/1000 $\mu\text{S}$ .

## PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

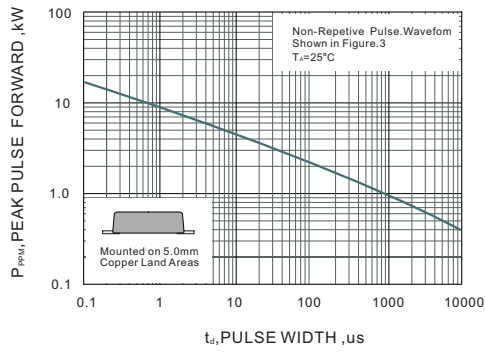


Characteristics at Ta = 25°C

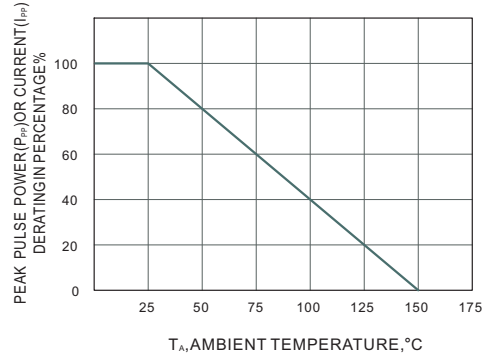
Table 1

Type		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current	Package	
			V <sub>BR</sub> @ I <sub>T</sub>						SMA	
		V <sub>RRM</sub>	Min	Max	I <sub>T</sub>	I <sub>R</sub> @ V <sub>RRM</sub>	V <sub>C</sub> @ I <sub>PP</sub>	I <sub>PP</sub>	Device Marking Ccode	
UNI	BI	V	V	V	mA	µA	V	A	UNI	BI
SMAJ5.0A	SMAJ5.0CA	5	6.4	7	10	800	9.2	43.5	HE	TE
SMAJ6.0A	SMAJ6.0CA	6	6.67	7.37	10	800	10.3	38.8	HG	TG
SMAJ6.5A	SMAJ6.5CA	6.5	7.22	7.98	10	500	11.2	35.7	HK	TK
SMAJ7.0A	SMAJ7.0CA	7	7.78	8.6	10	200	12.0	33.3	HM	TM
SMAJ7.5A	SMAJ7.5CA	7.5	8.33	9.21	1	100	12.9	31.0	HP	TP
SMAJ8.0A	SMAJ8.0CA	8	8.89	9.83	1	50	13.6	29.4	HR	TR
SMAJ8.5A	SMAJ8.5CA	8.5	9.44	10.4	1	20	14.4	27.8	HT	TT
SMAJ9.0A	SMAJ9.0CA	9	10	11.1	1	10	15.4	26.0	HV	TV
SMAJ10A	SMAJ10CA	10	11.1	12.3	1	5	17.0	23.5	HX	TX
SMAJ11A	SMAJ11CA	11	12.2	13.5	1	1	18.2	22.0	HZ	TZ
SMAJ12A	SMAJ12CA	12	13.3	14.7	1	1	19.9	20.1	IE	UE
SMAJ13A	SMAJ13CA	13	14.4	15.9	1	1	21.5	18.6	IG	UG
SMAJ14A	SMAJ14CA	14	15.6	17.2	1	1	23.2	17.2	IK	UK
SMAJ15A	SMAJ15CA	15	16.7	18.5	1	1	24.4	16.4	IM	UM
SMAJ16A	SMAJ16CA	16	17.8	19.7	1	1	26.0	15.4	IP	UP
SMAJ17A	SMAJ17CA	17	18.9	20.9	1	1	27.6	14.5	IR	UR
SMAJ18A	SMAJ18CA	18	20	22.1	1	1	29.2	13.7	IT	UT
SMAJ20A	SMAJ20CA	20	22.2	24.5	1	1	32.4	12.3	IV	UV
SMAJ22A	SMAJ22CA	22	24.4	26.9	1	1	35.5	11.3	IX	UX
SMAJ24A	SMAJ24CA	24	26.7	29.5	1	1	38.9	10.3	IZ	UZ
SMAJ26A	SMAJ26CA	26	28.9	31.9	1	1	42.1	9.5	JE	VE
SMAJ28A	SMAJ28CA	28	31.1	34.4	1	1	45.4	8.8	JG	VG
SMAJ30A	SMAJ30CA	30	33.3	36.8	1	1	48.4	8.3	JK	VK
SMAJ33A	SMAJ33CA	33	36.7	40.6	1	1	53.3	7.5	JM	VM
SMAJ36A	SMAJ36CA	36	40	44.2	1	1	58.1	6.9	JP	VP
SMAJ40A	SMAJ40CA	40	44.4	49.1	1	1	64.5	6.2	JR	VR
SMAJ43A	SMAJ43CA	43	47.8	52.8	1	1	69.4	5.8	JT	VT
SMAJ45A	SMAJ45CA	45	50	55.3	1	1	72.7	5.5	JV	VV
SMAJ48A	SMAJ48CA	48	53.3	58.9	1	1	77.4	5.2	JX	VX
SMAJ51A	SMAJ51CA	51	56.7	62.7	1	1	82.4	4.9	JZ	VZ
SMAJ54A	SMAJ54CA	54	60	66.3	1	1	87.1	4.6	RE	WE
SMAJ58A	SMAJ58CA	58	64.4	71.2	1	1	93.6	4.3	RG	WG
SMAJ60A	SMAJ60CA	60	66.7	73.7	1	1	96.8	4.1	RK	WK
SMAJ64A	SMAJ64CA	64	71.1	78.6	1	1	103.0	3.9	RM	WM
SMAJ70A	SMAJ70CA	70	77.8	86	1	1	113.0	3.5	RP	WP
SMAJ75A	SMAJ75CA	75	83.3	92.1	1	1	121.0	3.3	RR	WR
SMAJ78A	SMAJ78CA	78	86.7	95.8	1	1	126.0	3.2	RT	WT
SMAJ85A	SMAJ85CA	85	94.4	104	1	1	137.0	2.9	RV	WV
SMAJ90A	SMAJ90CA	90	100	111	1	1	146.0	2.7	RX	WX
SMAJ100A	SMAJ100CA	100	111	123	1	1	162.0	2.5	RZ	WZ
SMAJ110A	SMAJ110CA	110	122	135	1	1	177.0	2.3	SE	XE
SMAJ120A	SMAJ120CA	120	133	147	1	1	193.0	2.1	SG	XG
SMAJ130A	SMAJ130CA	130	144	159	1	1	209.0	1.9	SK	XK
SMAJ150A	SMAJ150CA	150	167	185	1	1	243.0	1.6	SM	XM
SMAJ160A	SMAJ160CA	160	178	197	1	1	259.0	1.5	SP	XP
SMAJ170A	SMAJ170CA	170	189	209	1	1	275.0	1.5	SR	XR
SMAJ180A	SMAJ180CA	180	201	222	1	1	292.0	1.4	ST	XT
SMAJ200A	SMAJ200CA	200	224	247	1	1	324.0	1.2	SX	XX
SMAJ220A	SMAJ220CA	220	246	272	1	1	356.0	1.1	ZE	YE
SMAJ250A	SMAJ250CA	250	279	309	1	1	405.0	1.0	ZG	YG
SMAJ300A	SMAJ300CA	300	335	371	1	1	486.0	0.8	ZK	YK
SMAJ350A	SMAJ350CA	350	391	432	1	1	567.0	0.7	ZM	YM
SMAJ400A	SMAJ400CA	400	447	494	1	1	648.0	0.6	ZP	YP
SMAJ440A	SMAJ440CA	440	492	543	1	1	713.0	0.6	ZR	YR

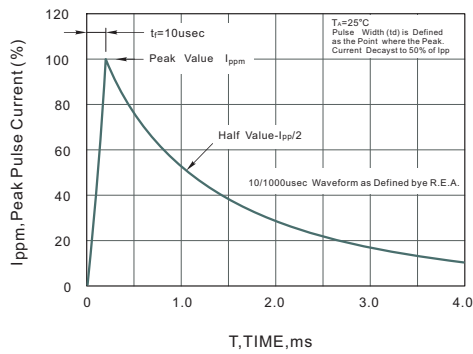
**Fig.1 Peak Pulse Power Rating Curve**



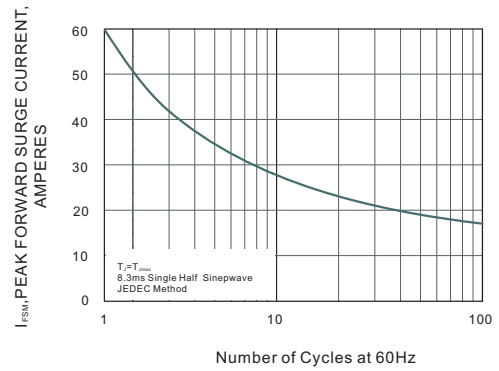
**Fig.2 Forward Current Derating Curve**



**Fig.3 Pulse Waveform**



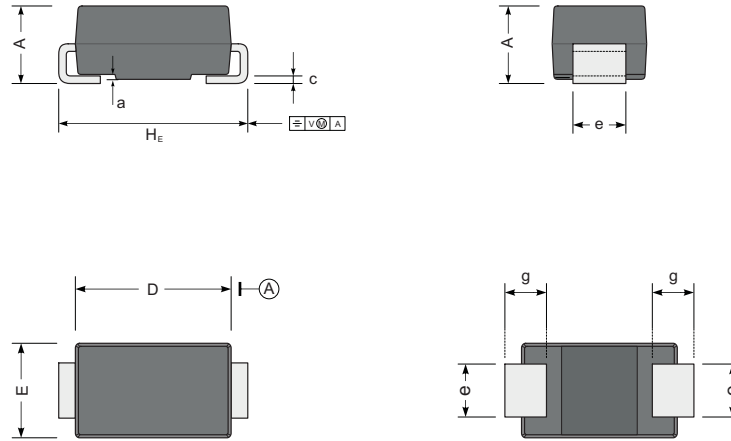
**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**



## PACKAGE OUTLINE

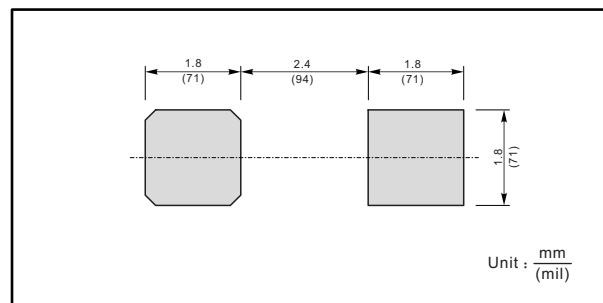
Plastic surface mounted package; 2 leads

SMA



UNIT		A	D	E	H <sub>E</sub>	c	e	g	a
mm	max	2.3	4.75	2.83	5.3	0.31	1.65	1.5	0.3
	min	1.9	4.0	2.30	4.7	0.15	1.25	0.76	0.08

### The recommended mounting pad size



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