

SMAJ SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Reverse Standoff Voltage: 5.0 to 440V

Peak Pulse Power: 400 W

FEATURES

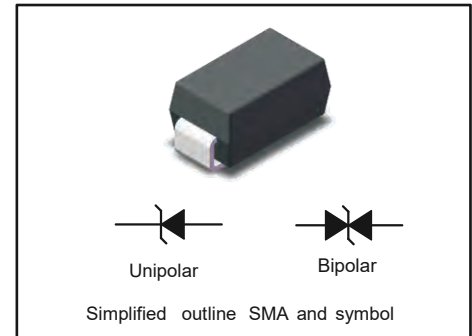
- ◆ For surface mounted applications in order to optimize board space.
- ◆ Low profile package
- ◆ Glass passivated junction
- ◆ Low inductance
- ◆ Plastic package has underwriters laboratory flammability

MECHANICAL DATA

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

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



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)	$I_{FSM}(\text{UNI})$	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}	± 30 ± 30	kV
Typical Thermal Resistance Junction to Ambient (Note 2)	$R_{\theta JA}$	30	$^{\circ}\text{C/W}$
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 5mm² 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 10/1000μS.

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ELECTRICAL CHARACTERISTICS

Ratings at TA = 25°C ambient temperature unless otherwise specified.

Type		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Clamp Voltage Max.	Peak Pulse Current
		V _{RWM}	V _(BR)		I _T	I _R @ V _{RRM}	V _C @ I _{PP}	I _{PP}
Uni	Bi	V	Min(V)	Max(V)	mA	μA	V	A
SMAJ5.0AT	SMAJ5.0CAT	5	6.4	7	10	800	9.2	43.5
SMAJ6.0AT	SMAJ6.0CAT	6	6.67	7.37	10	800	10.3	38.8
SMAJ6.5AT	SMAJ6.5CAT	6.5	7.22	7.98	10	500	11.2	35.7
SMAJ7.0AT	SMAJ7.0CAT	7	7.78	8.6	10	200	12.0	33.3
SMAJ7.5AT	SMAJ7.5CAT	7.5	8.33	9.21	1	100	12.9	31.0
SMAJ8.0AT	SMAJ8.0CAT	8	8.89	9.83	1	50	13.6	29.4
SMAJ8.5AT	SMAJ8.5CAT	8.5	9.44	10.4	1	20	14.4	27.8
SMAJ9.0AT	SMAJ9.0CAT	9	10	11.1	1	10	15.4	26.0
SMAJ10AT	SMAJ10CAT	10	11.1	12.3	1	5	17.0	23.5
SMAJ11AT	SMAJ11CAT	11	12.2	13.5	1	1	18.2	22.0
SMAJ12AT	SMAJ12CAT	12	13.3	14.7	1	1	19.9	20.1
SMAJ13AT	SMAJ13CAT	13	14.4	15.9	1	1	21.5	18.6
SMAJ14AT	SMAJ14CAT	14	15.6	17.2	1	1	23.2	17.2
SMAJ15AT	SMAJ15CAT	15	16.7	18.5	1	1	24.4	16.4
SMAJ16AT	SMAJ16CAT	16	17.8	19.7	1	1	26.0	15.4
SMAJ17AT	SMAJ17CAT	17	18.9	20.9	1	1	27.6	14.5
SMAJ18AT	SMAJ18CAT	18	20	22.1	1	1	29.2	13.7
SMAJ20AT	SMAJ20CAT	20	22.2	24.5	1	1	32.4	12.3
SMAJ22AT	SMAJ22CAT	22	24.4	26.9	1	1	35.5	11.3
SMAJ24AT	SMAJ24CAT	24	26.7	29.5	1	1	38.9	10.3
SMAJ26AT	SMAJ26CAT	26	28.9	31.9	1	1	42.1	9.5
SMAJ28AT	SMAJ28CAT	28	31.1	34.4	1	1	45.4	8.8
SMAJ30AT	SMAJ30CAT	30	33.3	36.8	1	1	48.4	8.3
SMAJ33AT	SMAJ33CAT	33	36.7	40.6	1	1	53.3	7.5
SMAJ36AT	SMAJ36CAT	36	40	44.2	1	1	58.1	6.9
SMAJ40AT	SMAJ40CAT	40	44.4	49.1	1	1	64.5	6.2
SMAJ43AT	SMAJ43CAT	43	47.8	52.8	1	1	69.4	5.8

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SMAJ45AT	SMAJ45CAT	45	50	55.3	1	1	72.7	5.5
SMAJ48AT	SMAJ48CAT	48	53.3	58.9	1	1	77.4	5.2
SMAJ51AT	SMAJ51CAT	51	56.7	62.7	1	1	82.4	4.9
SMAJ54AT	SMAJ54CAT	54	60	66.3	1	1	87.1	4.6
SMAJ58AT	SMAJ58CAT	58	64.4	71.2	1	1	93.6	4.3
SMAJ60AT	SMAJ60CAT	60	66.7	73.7	1	1	96.8	4.1
SMAJ64AT	SMAJ64CAT	64	71.1	78.6	1	1	103.0	3.9
SMAJ70AT	SMAJ70CAT	70	77.8	86	1	1	113.0	3.5
SMAJ75AT	SMAJ75CAT	75	83.3	92.1	1	1	121.0	3.3
SMAJ78AT	SMAJ78CAT	78	86.7	95.8	1	1	126.0	3.2
SMAJ85AT	SMAJ85CAT	85	94.4	104	1	1	137.0	2.9
SMAJ90AT	SMAJ90CAT	90	100	111	1	1	146.0	2.7
SMAJ100AT	SMAJ100CAT	100	111	123	1	1	162.0	2.5
SMAJ110AT	SMAJ110CAT	110	122	135	1	1	177.0	2.3
SMAJ120AT	SMAJ120CAT	120	133	147	1	1	193.0	2.1
SMAJ130AT	SMAJ130CAT	130	144	159	1	1	209.0	1.9
SMAJ150AT	SMAJ150CAT	150	167	185	1	1	243.0	1.6
SMAJ160AT	SMAJ160CAT	160	178	197	1	1	259.0	1.5
SMAJ170AT	SMAJ170CAT	170	189	209	1	1	275.0	1.5
SMAJ180AT	SMAJ180CAT	180	201	222	1	1	292.0	1.4
SMAJ200AT	SMAJ200CAT	200	224	247	1	1	324.0	1.2
SMAJ220AT	SMAJ220CAT	220	246	272	1	1	356.0	1.1
SMAJ250AT	SMAJ250CAT	250	279	309	1	1	405.0	1.0
SMAJ300AT	SMAJ300CAT	300	335	371	1	1	486.0	0.8
SMAJ350AT	SMAJ350CAT	350	391	432	1	1	567.0	0.7
SMAJ400AT	SMAJ400CAT	400	447	494	1	1	648.0	0.6
SMAJ440AT	SMAJ440CAT	440	492	543	1	1	713.0	0.6

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RATINGS AND CHARACTERISTIC CURVES

Fig.1 Peak Pulse Power Rating Curve

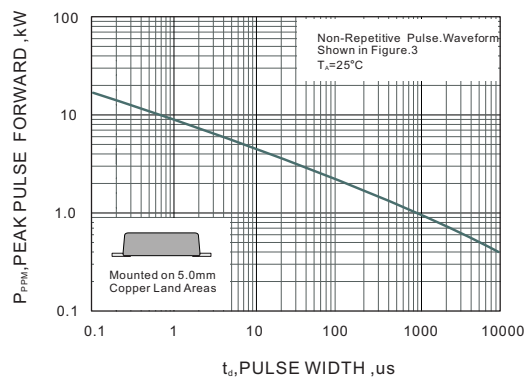


Fig.2 Forward Current Derating Curve

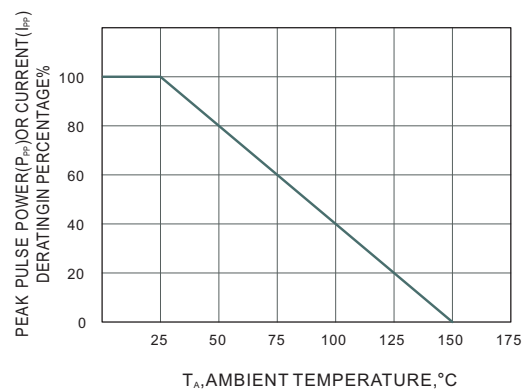


Fig.3 Pulse Waveform

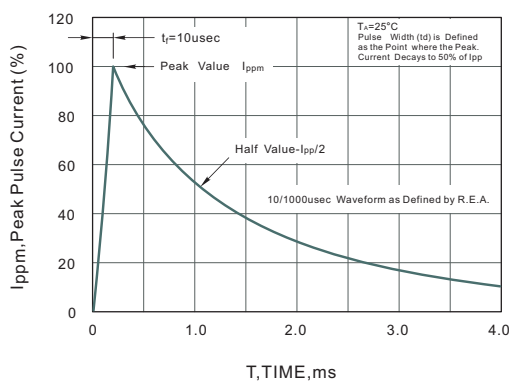
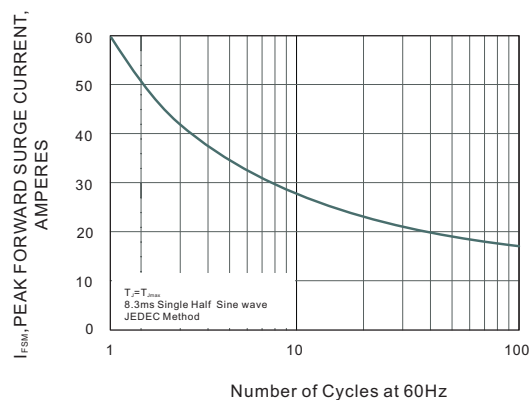


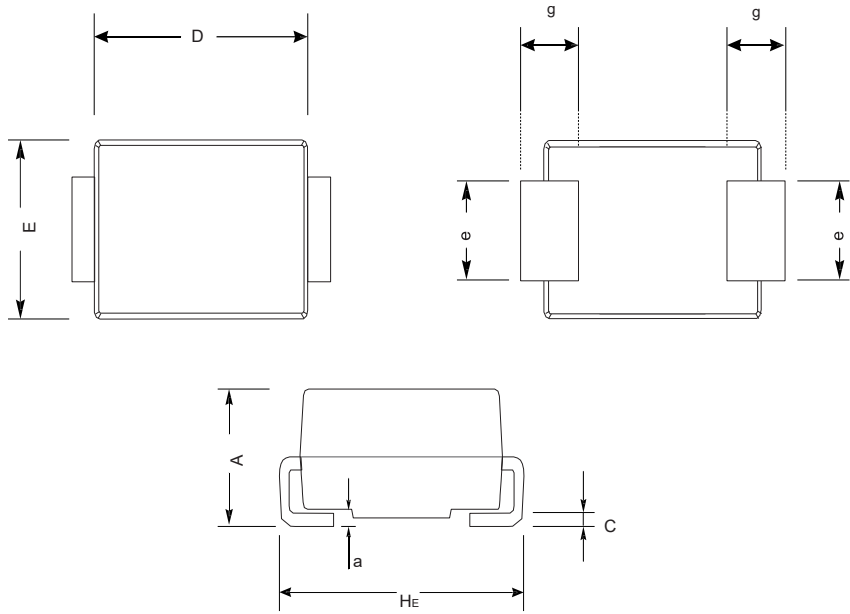
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



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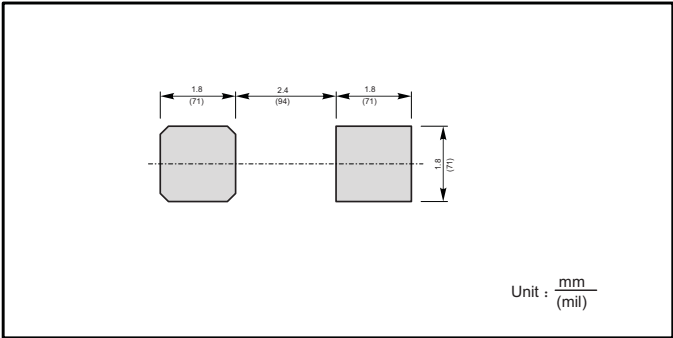
PACKAGE OUTLINE

SMA



UNIT		A	D	E	HE	C	e	g	a
mm	max	2.2	4.5	2.7	5.2	0.31	1.6	1.5	0.3
	min	1.9	4.0	2.3	4.7	0.15	1.3	0.9	

The recommended mounting pad size



ORDER INFORMATION

Device	Package	Shipping
SMAJ SERIES	SMA	5000PCS/Reel&Tape(13inch)