

SMAJ SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Reverse Standoff Voltage: 5.0 to 440V Peak Pulse Power: 400 W

FEATURES

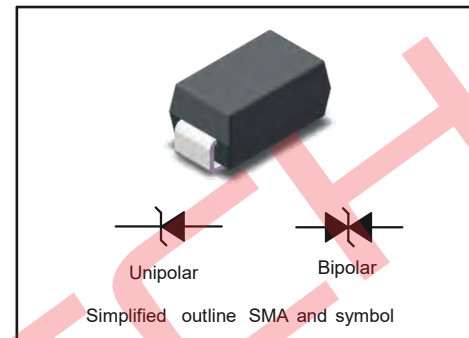
- ◆ For surface mounted applications in order to optimize board space.
- ◆ Low profile package
- ◆ Glass passivated junction
- ◆ Low inductance
- ◆ Plastic package has underwriters laboratory flammability

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	$^{\circ}\text{C}/\text{W}$
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 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

Fig.1 Peak Pulse Power Rating Curve

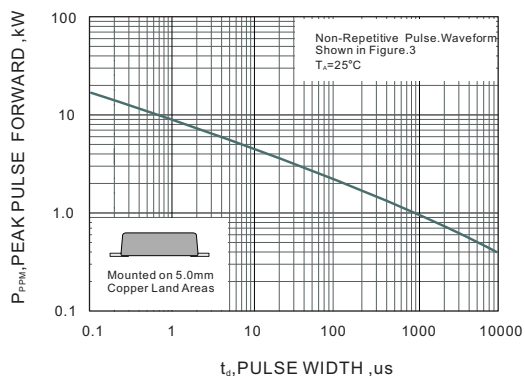


Fig.2 Forward Current Derating Curve

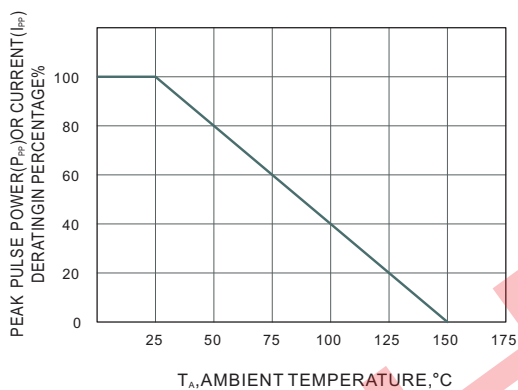


Fig.3 Pulse Waveform

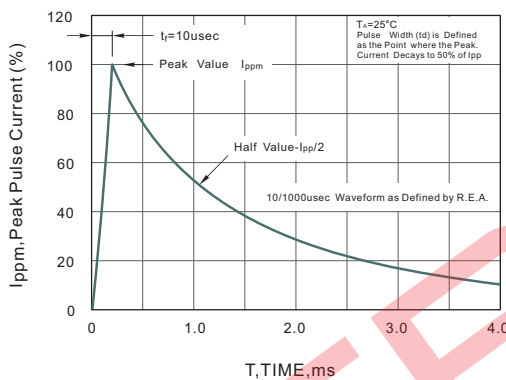
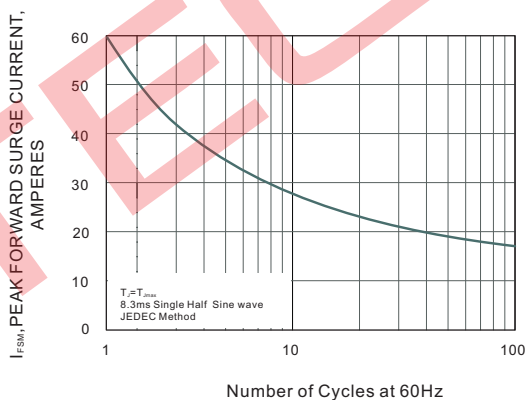


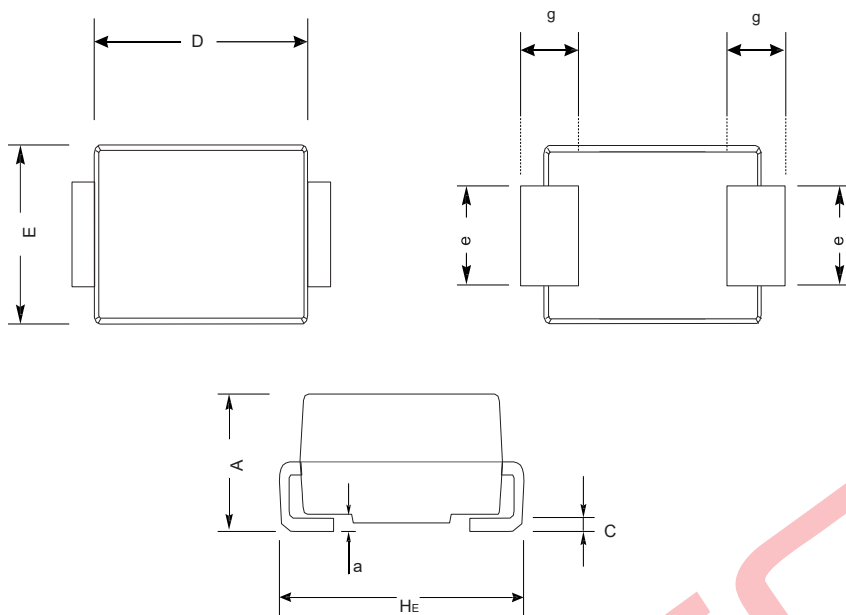
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



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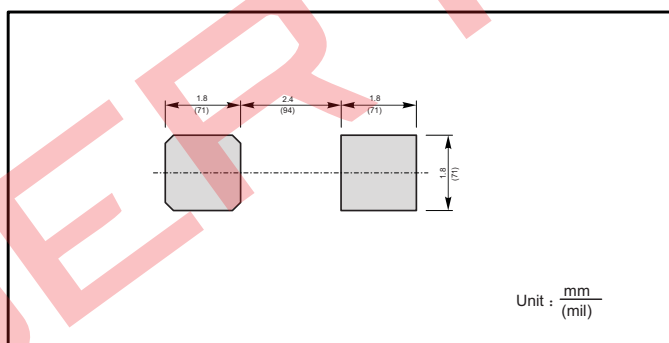
PACKAGE OUTLINE

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
ST0A1000U	SMA	5000PCS/Reel&Tape(13inch)