

Surface mount transient voltage suppressor power 400 watts

Stand-Off Voltage : 5.0V~440V

FEATURES

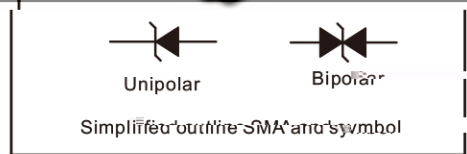
- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability

MECHANICAL DATA

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

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 (Note 1, Fig 4)	$P_{PPM}$	400	W
Peak Forward Surge Current (Note 3, Fig 4)	$I_{FSM}$ (UNI)	80	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 3)	$I_{PPM}$	1000	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)	$R_{\theta JA}$	33	°C/W
Operating Junction Temperature and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150	°C

NOTES:

1. Non-repetitive current pulse per Fig 3 and derated above  $T_j = 25^\circ C$  per Fig 2.
2. Mounted on 5mm<sup>2</sup> copper pads to each terminal.
3. Peak Forward Surge Current : 8.3ms single half sine wave superimposed on rated value (5LEO7 remod).
4. Peak pulse power waveform is 10/1000us.

Characteristics of the SMAJ Series

Type	Part Number	Max. Peak Inverse Voltage (V <sub>RM</sub> )	Max. Peak Forward Voltage (V <sub>FM</sub> )	Max. Peak Repetitive Reverse Voltage (V <sub>RRM</sub> )	Max. Peak Repetitive Forward Voltage (V <sub>FRM</sub> )	Max. Peak Reverse Current (I <sub>RM</sub> )	Max. Peak Forward Current (I <sub>FM</sub> )	Max. Peak Repetitive Reverse Current (I <sub>RRM</sub> )	Max. Peak Repetitive Forward Current (I <sub>FRM</sub> )	Max. Peak Surge Current (I <sub>SM</sub> )	Max. Peak Surge Power (P <sub>SM</sub> )	Max. Peak Surge Energy (E <sub>SM</sub> )	Max. Peak Surge Power (P <sub>SM</sub> )	Max. Peak Surge Energy (E <sub>SM</sub> )
SMAJ5.0A	SMAJ5.0CA	5.0	5.0	5.0	5.0	1.0	1.0	1.0	1.0	10.0	10.0	10.0	10.0	
SMAJ7.5A	SMAJ7.5CA	7.5	7.5	7.5	7.5	1.5	1.5	1.5	1.5	15.0	15.0	15.0	15.0	
SMAJ10A	SMAJ10CA	10	10	10	10	2.0	2.0	2.0	2.0	20.0	20.0	20.0	20.0	
SMAJ15A	SMAJ15CA	15	15	15	15	3.0	3.0	3.0	3.0	30.0	30.0	30.0	30.0	
SMAJ20A	SMAJ20CA	20	20	20	20	4.0	4.0	4.0	4.0	40.0	40.0	40.0	40.0	
SMAJ24A	SMAJ24CA	24	24	24	24	4.8	4.8	4.8	4.8	48.0	48.0	48.0	48.0	
SMAJ28A	SMAJ28CA	28	28	28	28	5.6	5.6	5.6	5.6	56.0	56.0	56.0	56.0	
SMAJ30A	SMAJ30CA	30	30	30	30	6.0	6.0	6.0	6.0	60.0	60.0	60.0	60.0	
SMAJ36A	SMAJ36CA	36	36	36	36	7.2	7.2	7.2	7.2	72.0	72.0	72.0	72.0	
SMAJ40A	SMAJ40CA	40	40	40	40	8.0	8.0	8.0	8.0	80.0	80.0	80.0	80.0	
SMAJ48A	SMAJ48CA	48	48	48	48	9.6	9.6	9.6	9.6	96.0	96.0	96.0	96.0	
SMAJ56A	SMAJ56CA	56	56	56	56	11.2	11.2	11.2	11.2	112.0	112.0	112.0	112.0	
SMAJ60A	SMAJ60CA	60	60	60	60	12.0	12.0	12.0	12.0	120.0	120.0	120.0	120.0	
SMAJ64A	SMAJ64CA	64	64	64	64	12.8	12.8	12.8	12.8	128.0	128.0	128.0	128.0	
SMAJ70A	SMAJ70CA	70	70	70	70	14.0	14.0	14.0	14.0	140.0	140.0	140.0	140.0	
SMAJ78A	SMAJ78CA	78	78	78	78	15.6	15.6	15.6	15.6	156.0	156.0	156.0	156.0	
SMAJ84A	SMAJ84CA	84	84	84	84	16.8	16.8	16.8	16.8	168.0	168.0	168.0	168.0	
SMAJ90A	SMAJ90CA	90	90	90	90	18.0	18.0	18.0	18.0	180.0	180.0	180.0	180.0	
SMAJ96A	SMAJ96CA	96	96	96	96	19.2	19.2	19.2	19.2	192.0	192.0	192.0	192.0	
SMAJ100A	SMAJ100CA	100	100	100	100	20.0	20.0	20.0	20.0	200.0	200.0	200.0	200.0	
SMAJ110A	SMAJ110CA	110	110	110	110	22.0	22.0	22.0	22.0	220.0	220.0	220.0	220.0	
SMAJ120A	SMAJ120CA	120	120	120	120	24.0	24.0	24.0	24.0	240.0	240.0	240.0	240.0	
SMAJ130A	SMAJ130CA	130	130	130	130	26.0	26.0	26.0	26.0	260.0	260.0	260.0	260.0	
SMAJ140A	SMAJ140CA	140	140	140	140	28.0	28.0	28.0	28.0	280.0	280.0	280.0	280.0	
SMAJ150A	SMAJ150CA	150	150	150	150	30.0	30.0	30.0	30.0	300.0	300.0	300.0	300.0	
SMAJ160A	SMAJ160CA	160	160	160	160	32.0	32.0	32.0	32.0	320.0	320.0	320.0	320.0	
SMAJ170A	SMAJ170CA	170	170	170	170	34.0	34.0	34.0	34.0	340.0	340.0	340.0	340.0	
SMAJ180A	SMAJ180CA	180	180	180	180	36.0	36.0	36.0	36.0	360.0	360.0	360.0	360.0	
SMAJ190A	SMAJ190CA	190	190	190	190	38.0	38.0	38.0	38.0	380.0	380.0	380.0	380.0	
SMAJ200A	SMAJ200CA	200	200	200	200	40.0	40.0	40.0	40.0	400.0	400.0	400.0	400.0	
SMAJ220A	SMAJ220CA	220	220	220	220	44.0	44.0	44.0	44.0	440.0	440.0	440.0	440.0	
SMAJ240A	SMAJ240CA	240	240	240	240	48.0	48.0	48.0	48.0	480.0	480.0	480.0	480.0	
SMAJ260A	SMAJ260CA	260	260	260	260	52.0	52.0	52.0	52.0	520.0	520.0	520.0	520.0	
SMAJ280A	SMAJ280CA	280	280	280	280	56.0	56.0	56.0	56.0	560.0	560.0	560.0	560.0	
SMAJ300A	SMAJ300CA	300	300	300	300	60.0	60.0	60.0	60.0	600.0	600.0	600.0	600.0	

Fig.1 Peak Pulse Power Rating Curve

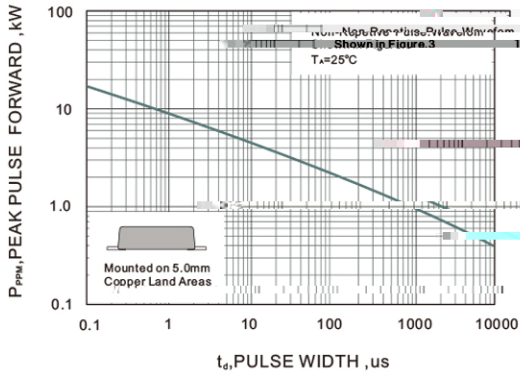


Fig.2 Forward Current Derating Curve

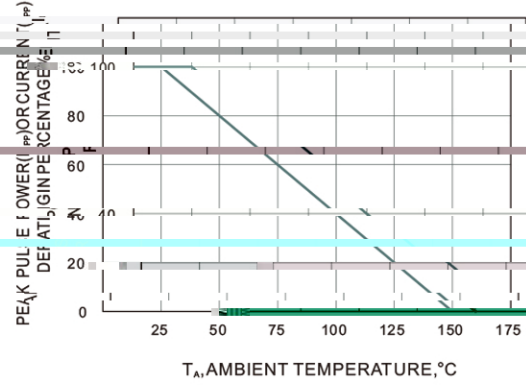


Fig.3 Pulse Waveform

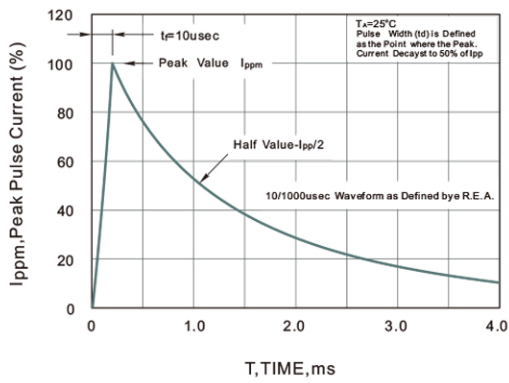
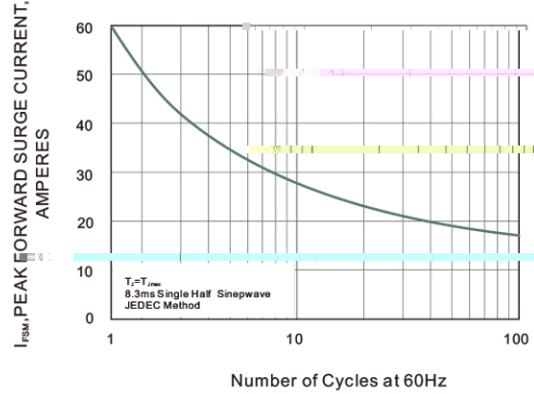
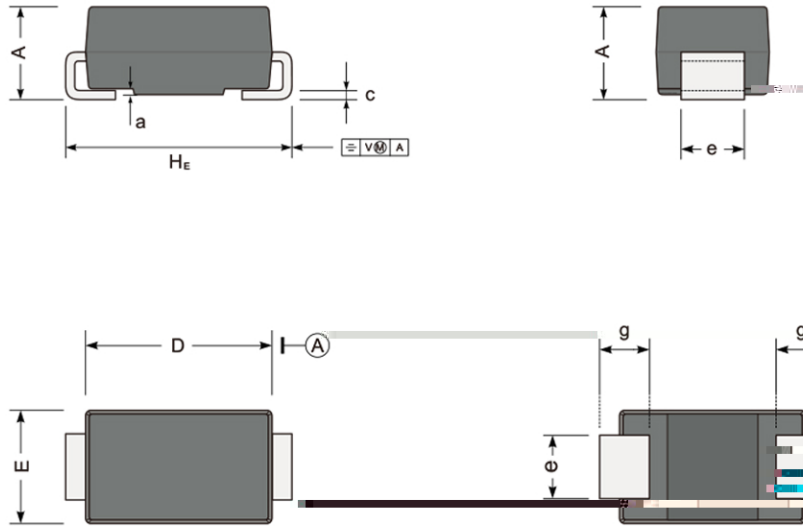


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



## PACKAGE OUTLINE

Plastic surface mounted package, 2 leads



UNIT		A	D	E	$H_E$	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	
mil	max	87	181	106	209	12	63	59	12
	min	75	157	91	185	6	51	35	

The recommended mounting pad size is

