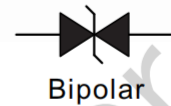


## Features

- Optimized for LAN protection applications
- Low profile package with built-in strain relief for SMT applications
- Low incremental surge resistance, excellent clamping capability
- 400W peak pulse power capability with very fast response time
- High temperature soldering guaranteed: 260°C / 10s at terminals
- Bi-directional applications
- RoHS compliant with Halogen-free



## Mechanical Data

- Case: SMA molded plastic
- Molding compound: UL flammability classification rating 94V-0
- Terminals: Solder plated; solderable per MIL-STD-202, Method 208

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

## Maximum Ratings (@T<sub>A</sub> = 25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000µs waveform *1 (FIG.1)	P <sub>PPM</sub>	Minimum 400	W
Peak pulse current with a 10/1000µs waveform *1	I <sub>PPM</sub>	see E. Characteristics	A
Typical Thermal Resistance *2	R <sub>θJA</sub>	70	°C/W
	R <sub>θJC</sub>	25	
	R <sub>θJL</sub>	30	
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 ~ +150	°C

Note \*1: Non-repetitive current pulses, per Fig. 3 and derated above T<sub>A</sub> = 25°C

Note \*2: Device mounted on p.c.b. with 10 mm x 20 mm x 0.1 mm copper pad area

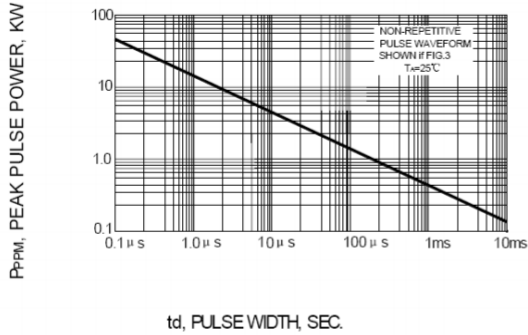
**Electrical Characteristics** (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)

Type	Marking Code	Breakdown Voltage $V_{BR}$ @ $I_T$		Test Current	Reverse Standoff Voltage	Max. Reverse Leakage @ $V_{RWM}$	Max. Peak Pulse Current	Max. Clamping Voltage @ $I_{PP}$
		(V)		$I_T$	$V_{RWM}$	$I_{R\_MAX}$	$I_{PP\_MAX}$	$V_{C\_MAX}$
		Min.	Max.	(mA)	V	( $\mu\text{A}$ )	(A)	(V)
SMAJ5.0CA	AWE	6.4	7.08	10	5	800	43.5	9.2
SMAJ6.0CA	AWG	6.67	7.37	10	6	800	38.8	10.3
SMAJ6.5CA	AWK	7.22	7.98	10	6.5	500	35.7	11.2
SMAJ6.8CA	AFE	7.56	8.35	10	6.8	200	36.4	11
SMAJ7.0CA	AWM	7.78	8.6	10	7	200	33.3	12
SMAJ7.5CA	AWP	8.33	9.21	1	7.5	100	31	12.9
SMAJ8.0CA	AWR	8.89	9.83	1	8	50	29.4	13.6
SMAJ8.5CA	AWT	9.44	10.4	1	8.5	10	27.8	14.4
SMAJ9.0CA	AWV	10	11.1	1	9	5	26	15.4
SMAJ10CA	AWX	11.1	12.3	1	10	5	23.5	17
SMAJ11CA	AWZ	12.2	13.5	1	11	1	22	18.2
SMAJ12CA	AXE	13.3	14.7	1	12	1	20.1	19.9
SMAJ13CA	AXG	14.4	15.9	1	13	1	18.6	21.5
SMAJ14CA	AXK	15.6	17.2	1	14	1	17.2	23.2
SMAJ15CA	AXM	16.7	18.5	1	15	1	16.4	24.4
SMAJ16CA	AXP	17.8	19.7	1	16	1	15.4	26
SMAJ17CA	AXR	18.9	20.9	1	17	1	14.5	27.6
SMAJ18CA	AXT	20	22.4	1	18	1	13.7	29.2
SMAJ20CA	AXV	22.2	24.5	1	20	1	12.3	32.4
SMAJ22CA	AXX	24.4	26.9	1	22	1	11.3	35.5
SMAJ24CA	AXZ	26.7	29.5	1	24	1	10.3	38.9
SMAJ26CA	AYE	28.9	31.9	1	26	1	9.5	42.1
SMAJ28CA	AYG	31.3	34.4	1	28	1	8.8	45.4
SMAJ30CA	AYK	33.3	36.8	1	30	1	8.3	48.4
SMAJ33CA	AYM	36.7	40.6	1	33	1	7.5	53.3
SMAJ36CA	AYP	40	44.2	1	36	1	6.9	58.1
SMAJ40CA	AYR	44.4	49.1	1	40	1	6.2	64.5
SMAJ43CA	AYT	47.8	52.8	1	43	1	5.8	69.4
SMAJ45CA	AYV	50	55.3	1	45	1	5.5	72.7
SMAJ48CA	AYX	53.3	58.9	1	48	1	5.2	77.4
SMAJ50CA	AFG	55.5	61.3	1	50	1	4.9	81

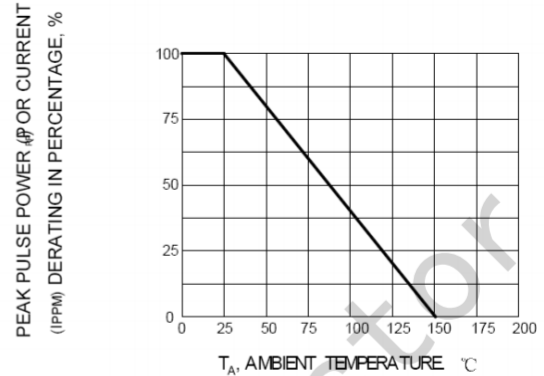
Type	Marking Code	Breakdown Voltage $V_{BR}$ @ $I_T$		Test Current	Reverse Standoff Voltage	Max. Reverse Leakage @ $V_{RWM}$	Max. Peak Pulse Current $I_{PP\_MAX}$	Max. Clamping Voltage
		(V)		$I_T$	$V_{RWM}$	$I_{R\_MAX}$	$I_{PP\_MAX}$	$V_C$
		Min.	Max.	(mA)	(V)	( $\mu$ A)	(A)	(V)
SMAJ51CA	AYZ	56.7	62.7	1	51	1	4.9	82.4
SMAJ54CA	AZE	60	66.3	1	54	1	4.6	87.1
SMAJ56CA	AUZ	62.2	68.8	1	56	1	4.4	90.3
SMAJ58CA	AZG	64.4	71.2	1	58	1	4.3	93.6
SMAJ60CA	AZK	66.7	73.7	1	60	1	4.1	96.8
SMAJ63CA	AZM	69.9	77.2	1	63	1	3.9	102.1
SMAJ64CA	AZP	71.1	78.6	1	64	1	3.9	103
SMAJ70CA	AFK	77.8	86	1	70	1	3.5	113
SMAJ75CA	AZR	83.3	92.1	1	75	1	3.3	121
SMAJ78CA	AZT	86.7	95.8	1	78	1	3.2	126
SMAJ85CA	AZV	94.4	104	1	85	1	2.9	137
SMAJ90CA	AZX	100	111	1	90	1	2.7	146
SMAJ100CA	AZZ	111	123	1	100	1	2.5	162
SMAJ110CA	AVE	122	135	1	110	1	2.3	177
SMAJ120CA	AVG	133	147	1	120	1	2.1	193
SMAJ130CA	AVK	144	159	1	130	1	1.9	209
SMAJ150CA	AVM	167	185	1	150	1	1.6	243
SMAJ160CA	AVP	178	197	1	160	1	1.5	259
SMAJ170CA	AVR	189	209	1	170	1	1.5	275
SMAJ175CA	AFM	194.6	215.2	1	175	1	1.4	280.3
SMAJ180CA	AUX	200	221	1	180	1	1.4	291
SMAJ188CA	AVS	209	231	1	188	1	1.2	328
SMAJ190CA	AFP	211	233	1	190	1	1.3	307
SMAJ200CA	AVV	222	246	1	200	1	1.2	323
SMAJ220CA	AVX	245	270	1	220	1	1.1	355
SMAJ240CA	AVZ	267	295	1	240	1	1	388
SMAJ250CA	AUT	278	307	1	250	1	1	404
SMAJ300CA	AUG	333	368	1	300	1	0.8	485
SMAJ350CA	AUR	389	430	1	350	1	0.7	565
SMAJ360CA	AUK	400	442	1	360	1	0.7	582
SMAJ400CA	AUM	445	491	1	400	1	0.6	646
SMAJ440CA	AUP	489	540	1	440	1	0.6	711

**Ratings and Characteristics Curves** (@  $T_A = 25^\circ\text{C}$  unless otherwise noted)

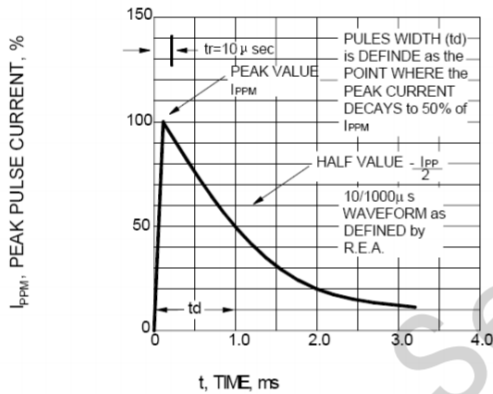
**FIG.1 – PEAK PULSE POWER RATING CURVE**



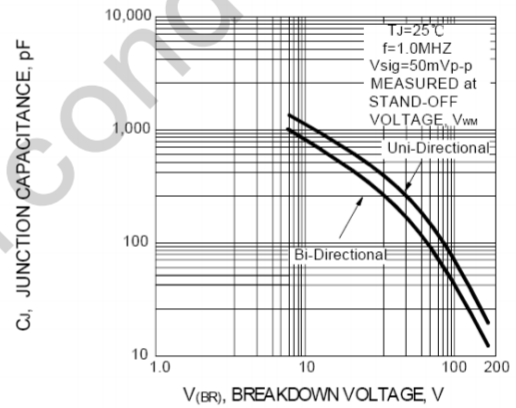
**FIG.2 – PULSE DERATING CURVE**



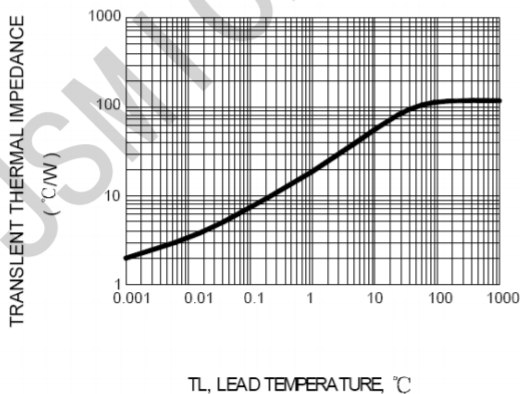
**FIG.3 -- PULSE WAVEFORM**



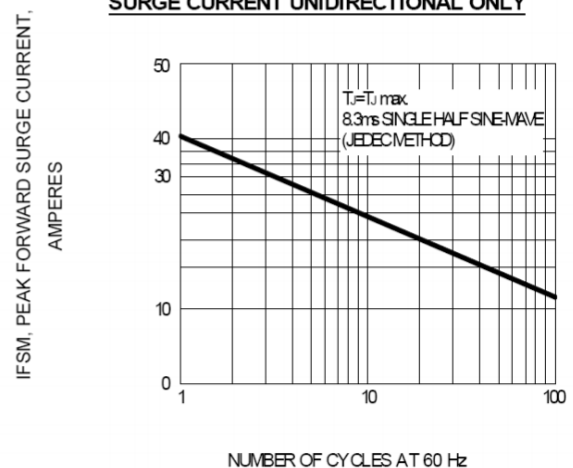
**FIG.4 – TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL**



**FIG.5 -- TYPICAL TRANSIENT THERMAL IMPEDANCE**



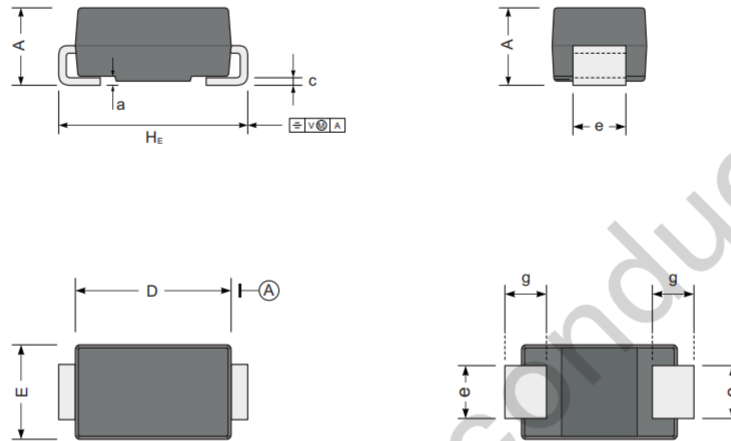
**FIG.6 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL ONLY**



## Package Information

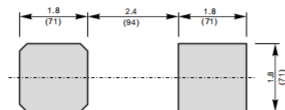
SMA

Plastic surface mounted package; 2 leads



UNIT		A	D	E	H <sub>E</sub>	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	205	12	63	59	12
	min	75	157	91	185	6	51	35	

The recommended mounting pad size



Unit :  $\frac{\text{mm}}{\text{mil}}$

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[P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#) [SA90CA](#)