

Features

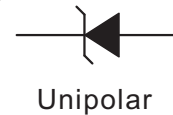
- Optimized for LAN protection applications
- Low profile package with built-in strain relief for SMT applications
- Low incremental surge resistance, excellent clamping capability
- 400W peak pulse power capability with very fast response time
- High temperature soldering guaranteed: 260°C / 10s at terminals
- Uni-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_A = 25°C unless otherwise specified)

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

Note *1: Non-repetitive current pulses, per Fig. 3 and derated above T_A = 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°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	(μA)	(A)	(V)
SMAJ5.0A	AE	6.4	7.08	10	5	800	43.5	9.2
SMAJ6.0A	AG	6.67	7.37	10	6	800	38.8	10.3
SMAJ6.5A	AK	7.22	7.98	10	6.5	500	35.7	11.2
SMAJ6.8A	EE	7.56	8.35	10	6.8	200	36.4	11
SMAJ7.0A	AM	7.78	8.6	10	7	200	33.3	12
SMAJ7.5A	AP	8.33	9.21	1	7.5	100	31	12.9
SMAJ8.0A	AR	8.89	9.83	1	8	50	29.4	13.6
SMAJ8.5A	AT	9.44	10.4	1	8.5	10	27.8	14.4
SMAJ9.0A	AV	10	11.1	1	9	5	26	15.4
SMAJ10A	AX	11.1	12.3	1	10	5	23.5	17
SMAJ11A	AZ	12.2	13.5	1	11	1	22	18.2
SMAJ12A	BE	13.3	14.7	1	12	1	20.1	19.9
SMAJ13A	BG	14.4	15.9	1	13	1	18.6	21.5
SMAJ14A	BK	15.6	17.2	1	14	1	17.2	23.2
SMAJ15A	BM	16.7	18.5	1	15	1	16.4	24.4
SMAJ16A	BP	17.8	19.7	1	16	1	15.4	26
SMAJ17A	BR	18.9	20.9	1	17	1	14.5	27.6
SMAJ18A	BT	20	22.4	1	18	1	13.7	29.2
SMAJ19A	ER	21.1	23.4	1	19	1	13	30.8
SMAJ20A	BV	22.2	24.5	1	20	1	12.3	32.4
SMAJ22A	BX	24.4	26.9	1	22	1	11.3	35.5
SMAJ24A	BZ	26.7	29.5	1	24	1	10.3	38.9
SMAJ26A	CE	28.9	31.9	1	26	1	9.5	42.1
SMAJ28A	CG	31.3	34.4	1	28	1	8.8	45.4
SMAJ30A	CK	33.3	36.8	1	30	1	8.3	48.4
SMAJ33A	CM	36.7	40.6	1	33	1	7.5	53.3
SMAJ36A	CP	40	44.2	1	36	1	6.9	58.1
SMAJ40A	CR	44.4	49.1	1	40	1	6.2	64.5
SMAJ43A	CT	47.8	52.8	1	43	1	5.8	69.4
SMAJ45A	CV	50	55.3	1	45	1	5.5	72.7
SMAJ48A	CX	53.3	58.9	1	48	1	5.2	77.4

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)	(μ A)	(A)	(V)
SMAJ50A	EG	55.5	61.3	1	50	1	4.9	81
SMAJ51A	CZ	56.7	62.7	1	51	1	4.9	82.4
SMAJ54A	RE	60	66.3	1	54	1	4.6	87.1
SMAJ56A	TZ	62.2	68.8	1	56	1	4.4	90.3
SMAJ58A	RG	64.4	71.2	1	58	1	4.3	93.6
SMAJ60A	RK	66.7	73.7	1	60	1	4.1	96.8
SMAJ63A	RM	69.9	77.2	1	63	1	3.9	102.1
SMAJ64A	RP	71.1	78.6	1	64	1	3.9	103
SMAJ70A	EK	77.8	86	1	70	1	3.5	113
SMAJ75A	RR	83.3	92.1	1	75	1	3.3	121
SMAJ78A	RT	86.7	95.8	1	78	1	3.2	126
SMAJ85A	RV	94.4	104	1	85	1	2.9	137
SMAJ90A	RX	100	111	1	90	1	2.7	146
SMAJ100A	RZ	111	123	1	100	1	2.5	162
SMAJ110A	SE	122	135	1	110	1	2.3	177
SMAJ120A	SG	133	147	1	120	1	2.1	193
SMAJ130A	SK	144	159	1	130	1	1.9	209
SMAJ150A	SM	167	185	1	150	1	1.6	243
SMAJ160A	SP	178	197	1	160	1	1.5	259
SMAJ170A	SR	189	209	1	170	1	1.5	275
SMAJ175A	EM	195	215	1	175	1	1.4	280
SMAJ180A	TX	200	221	1	180	1	1.4	291
SMAJ188A	SS	209	231	1	188	1	1.2	328
SMAJ190A	EP	211	233	1	190	1	1.3	307
SMAJ200A	SV	222	246	1	200	1	1.2	323
SMAJ220A	SX	245	270	1	220	1	1.1	355
SMAJ240A	SZ	267	295	1	240	1	1	388
SMAJ250A	TT	278	307	1	250	1	1	404
SMAJ300A	TG	333	368	1	300	1	0.8	485
SMAJ350A	TR	389	430	1	350	1	0.7	565
SMAJ360A	TK	400	442	1	360	1	0.7	582
SMAJ400A	TM	445	491	1	400	1	0.6	646
SMAJ440A	TP	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

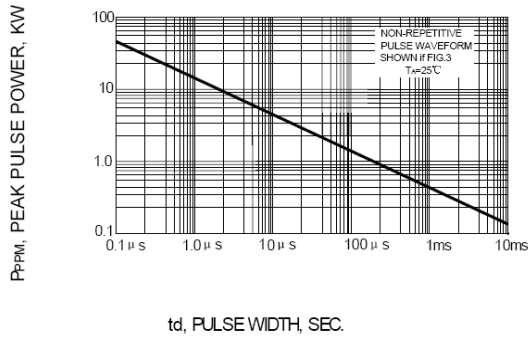


FIG.2 – PULSE DERATING CURVE

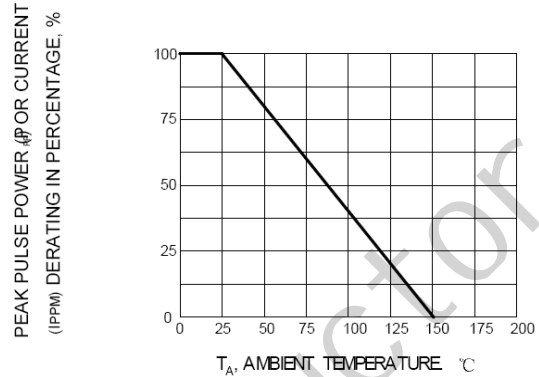


FIG.3 – PULSE WAVEFORM

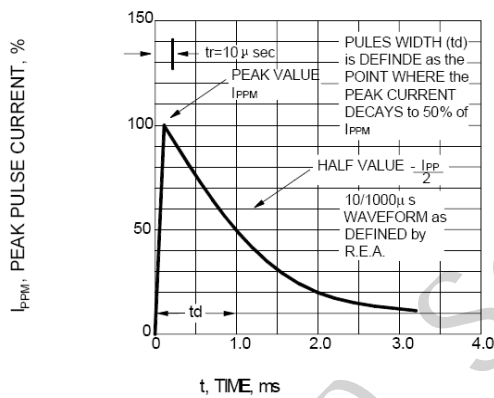


FIG.4 – TYPICAL JUNCTION CAPACITANCE UNIDIRECTIONAL

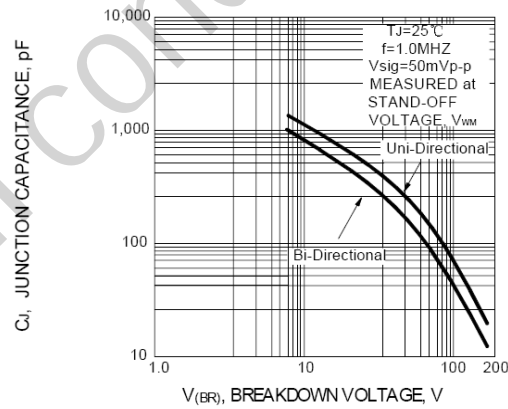


FIG.5 – TYPICAL TRANSIENT THERMAL IMPEDANCE

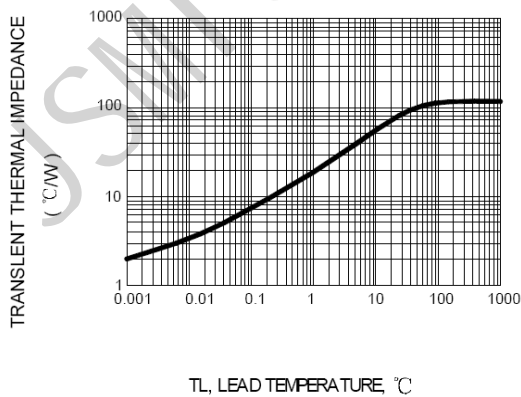
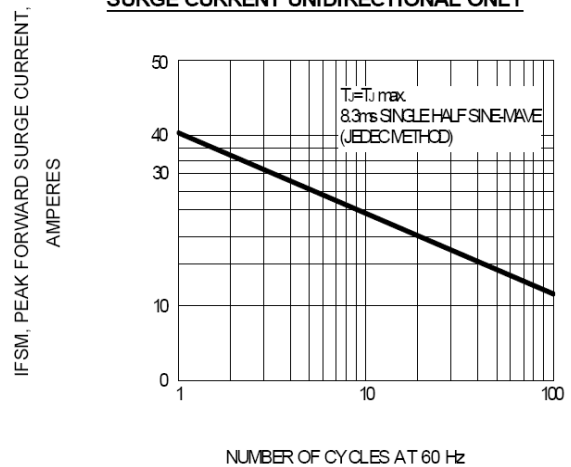
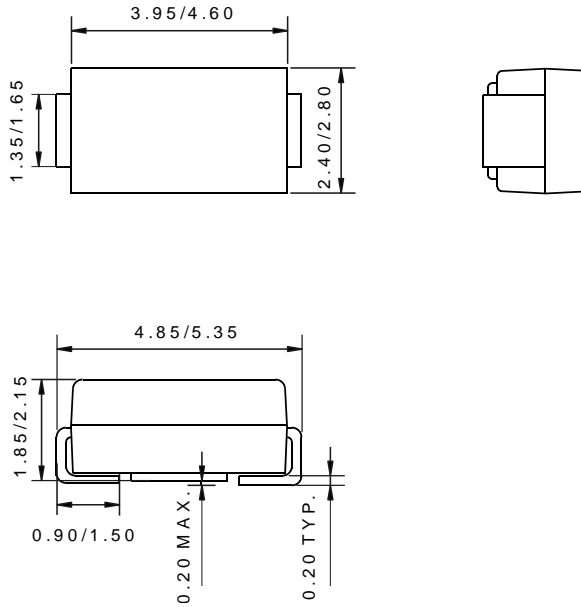


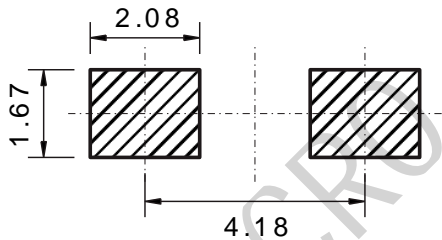
FIG.6 – MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT UNIDIRECTIONAL ONLY



Package Outline Dimensions (Unit: mm)



Mounting Pad Layout (Unit: mm)



Ordering Information

Part Number	Package	Shipping Quantity
SMAJ5.0A - SMAJ440A	SMA	5000 / Tape & Reel