

Surface mount transient voltage suppressor power 5000 watts
Stand-Off Voltage: 12 V~440 V

FEATURES

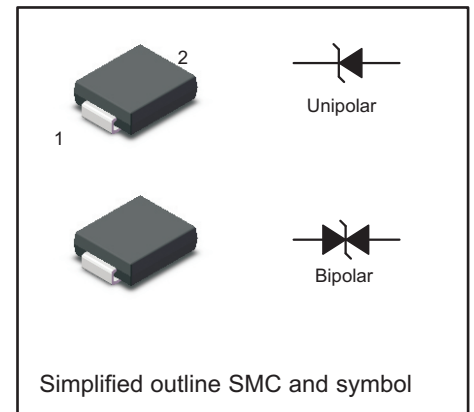
- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Fast response time: typically less than 1.0 ps from 0 volts to BV for unidirectional types
- Typical IR less than 1μA above 10V
- High temperature soldering: 250°C/10 seconds at terminals

MECHANICAL DATA

- Case: SMC
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.22g / 0.0077oz

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 10/1000 us waveform (Note1, Note2, Fig.1).	P_{PPM}	5000	W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 3, Fig4).	I_{FSM} (UNI)	400	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 3)	I_{PPM}	see Table 1	A
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	37	°C/W
	$R_{\theta JC}$	10	
	$R_{\theta JL}$	13	
Operating Junction Temperature and Storage Temperature Range	T_J, T_{stg}	-55 ~ +150	°C

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above $T_A = 25^\circ\text{C}$ per Fig. 2.
2. P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.
3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.

Characteristics at Ta = 25°C

Table 1

Type		Marking		V _{RMW}	Breakdown Voltage		Test Current	Max. Reverse Leakage	Max.Clamp Voltage	Max. Peak Pulse Current
					V _{BR} @ I _T		I _T	IR@VR	V _C @ I _{PP}	I _{PP}
					Min	Max				
UNI	BI	UNI	BI	V	V	V	mA	uA	V	A
5.0SMDJ12A	5.0SMDJ12CA	5PEP	5BEP	12	13.3	14.7	10	800	19.9	252
5.0SMDJ13A	5.0SMDJ13CA	5PEQ	5BEQ	13	14.4	15.9	10	500	21.5	233
5.0SMDJ14A	5.0SMDJ14CA	5PER	5BER	14	15.6	17.2	10	200	23.2	216
5.0SMDJ15A	5.0SMDJ15CA	5PES	5BES	15	16.7	18.5	1	100	24.4	205
5.0SMDJ16A	5.0SMDJ16CA	5PET	5BET	16	17.8	19.7	1	50	26	193
5.0SMDJ17A	5.0SMDJ17CA	5PEU	5BEU	17	18.9	20.9	1	20	27.6	181
5.0SMDJ18A	5.0SMDJ18CA	5PEV	5BEV	18	20	22.1	1	10	29.2	172
5.0SMDJ20A	5.0SMDJ20CA	5PEW	5BEW	20	22.2	24.5	1	5	32.4	155
5.0SMDJ22A	5.0SMDJ22CA	5PEX	5BEX	22	24.4	26.9	1	5	35.5	141
5.0SMDJ24A	5.0SMDJ24CA	5PEZ	5BEZ	24	26.7	29.5	1	5	38.9	129
5.0SMDJ26A	5.0SMDJ26CA	5PFE	5BFE	26	28.9	31.9	1	5	42.1	119
5.0SMDJ28A	5.0SMDJ28CA	5PFG	5BFG	28	31.1	34.4	1	5	45.4	110
5.0SMDJ30A	5.0SMDJ30CA	5PFK	5BFK	30	33.3	36.8	1	5	48.4	103
5.0SMDJ33A	5.0SMDJ33CA	5PFM	5BFM	33	36.7	40.6	1	5	53.3	93.9
5.0SMDJ36A	5.0SMDJ36CA	5PFP	5BFP	36	40	44.2	1	5	58.1	86.1
5.0SMDJ40A	5.0SMDJ40CA	5PFR	5BFR	40	44.4	49.1	1	5	64.5	77.6
5.0SMDJ43A	5.0SMDJ43CA	5PFT	5BFT	43	47.8	52.8	1	5	69.4	72.1
5.0SMDJ45A	5.0SMDJ45CA	5PFV	5BFV	45	50	55.3	1	5	72.7	68.8
5.0SMDJ48A	5.0SMDJ48CA	5PFX	5BFX	48	53.3	58.9	1	5	77.4	64.7
5.0SMDJ51A	5.0SMDJ51CA	5PFZ	5BFZ	51	56.7	62.7	1	5	82.4	60.7
5.0SMDJ54A	5.0SMDJ54CA	5PGE	5BGE	54	60	66.3	1	5	87.1	57.5
5.0SMDJ58A	5.0SMDJ58CA	5PGG	5BGG	58	64.4	71.2	1	5	93.6	53.5
5.0SMDJ60A	5.0SMDJ60CA	5PGK	5BGK	60	66.7	73.7	1	5	96.8	51.7
5.0SMDJ64A	5.0SMDJ64CA	5PGM	5BGM	64	71.1	78.6	1	5	103	48.6
5.0SMDJ70A	5.0SMDJ70CA	5PGP	5BGP	70	77.8	86	1	5	113	44.3
5.0SMDJ75A	5.0SMDJ75CA	5PGR	5BGR	75	83.3	92.1	1	5	121	41.4
5.0SMDJ78A	5.0SMDJ78CA	5PGT	5BGT	78	86.7	95.8	1	5	126	39.7
5.0SMDJ80A	5.0SMDJ80CA	5PGU	5BGU	80	89.0	97.6	1	5	130	38.5
5.0SMDJ85A	5.0SMDJ85CA	5PGV	5BGV	85	94.4	104	1	5	137	36.5
5.0SMDJ90A	5.0SMDJ90CA	5PGX	5BGX	90	100	111	1	5	146	34.3
5.0SMDJ100A	5.0SMDJ100CA	5PGZ	5BGZ	100	111	123	1	5	162	30.9
5.0SMDJ110A	5.0SMDJ110CA	5PHE	5BHE	110	122	135	1	5	177	28.3
5.0SMDJ120A	5.0SMDJ120CA	5PHG	5BHG	120	133	147	1	5	193	26
5.0SMDJ130A	5.0SMDJ130CA	5PHK	5BHK	130	144	159	1	5	209	24
5.0SMDJ140A	5.0SMDJ140CA	5PHL	5BHL	140	155	171	1	5	224	22.3
5.0SMDJ150A	5.0SMDJ150CA	5PHM	5BHM	150	167	185	1	5	243	20.6
5.0SMDJ160A	5.0SMDJ160CA	5PHP	5BHP	160	178	197	1	5	259	19.3
5.0SMDJ170A	5.0SMDJ170CA	5PHR	5BHR	170	189	209	1	5	275	18.2
5.0SMDJ180A	5.0SMDJ180CA	5PHT	5BHT	180	201	222	1	5	292	17.1
5.0SMDJ190A	5.0SMDJ190CA	5PHV	5BHV	190	211	232	1	5	308	16.2
5.0SMDJ200A	5.0SMDJ200CA	5PHX	5BHX	200	224	247	1	5	324	15.4
5.0SMDJ220A	/	5PHZ	/	220	246	272	1	5	356	14.0
5.0SMDJ250A	/	5PKE	/	250	279	309	1	5	405	12.3
5.0SMDJ300A	/	5PKG	/	300	335	371	1	5	486	10.3
5.0SMDJ350A	/	5PKM	/	350	391	432	1	5	567	8.8
5.0SMDJ400A	/	5PKR	/	400	447	494	1	5	648	7.7
5.0SMDJ440A	/	5PKT	/	440	492	543	1	5	713	7.0

Fig.1 Peak Pulse Power Rating Curve

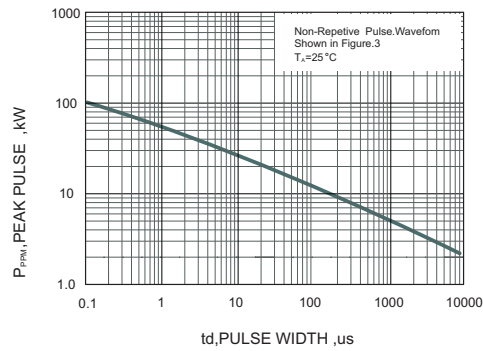


Fig.2 Forward Current Derating Curve

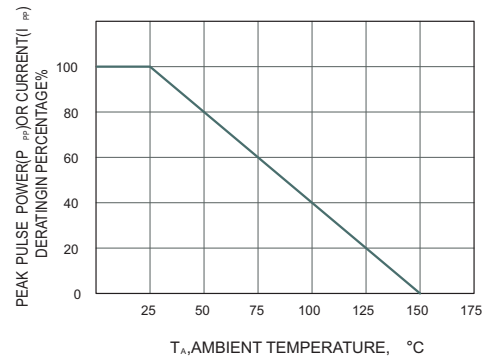


Fig.3 Pulse Waveform

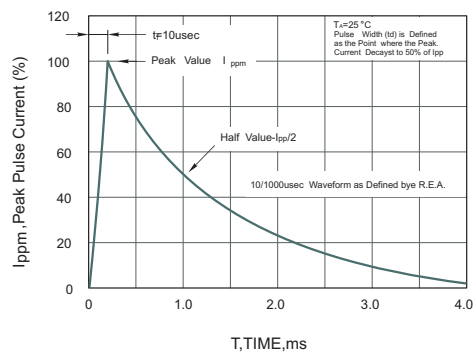
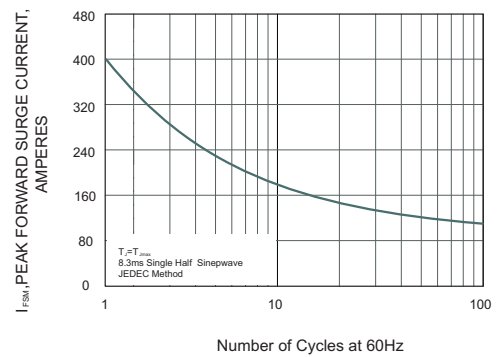


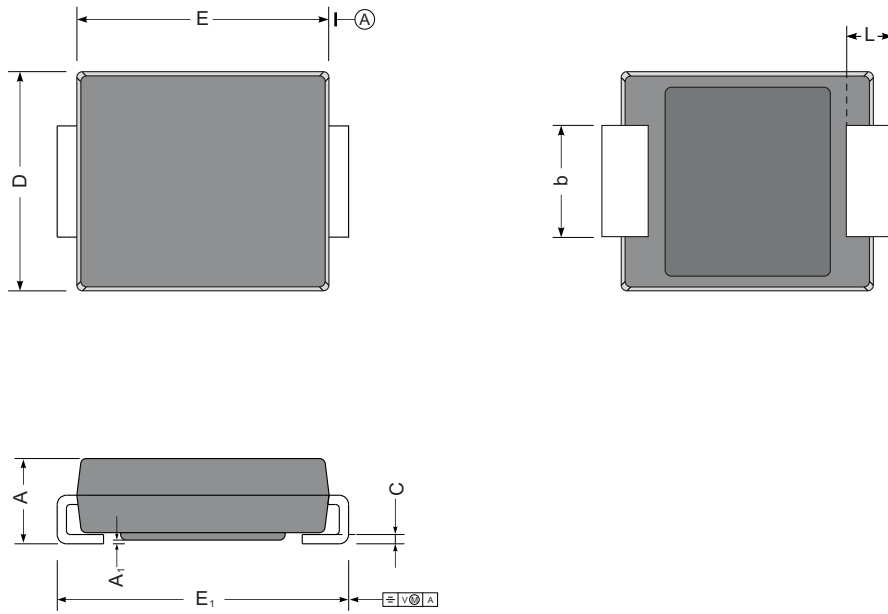
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMC



SMC mechanical data

UNIT		A	E	D	E ₁	A ₁	C	L	b
mm	max	2.62	7.0	6.2	8.0	0.21	0.31	1.6	3.25
	min	2.00	6.5	5.6	7.6	0.05	0.15	0.9	2.75
mil	max	103	276	244	315	8.3	12	63	128
	min	79	256	220	299	2.0	5.9	35	108