

Surface mount transient voltage suppressor power 1000 watts
Stand-Off Voltage : 5.0V~440V

FEATURES

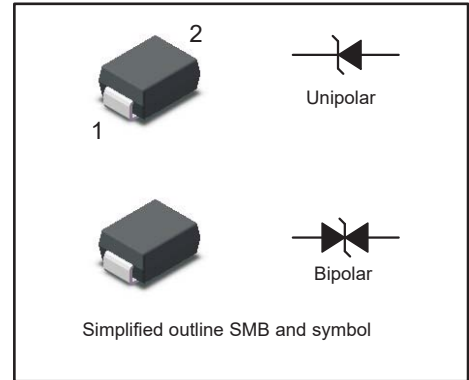
- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability

MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.1g / 0.0034oz

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}	1000	W
Peak Forward Surge Current,8.3ms Single Half Sine-Wave Superimposed on Rated Load, (JEDEC Method) (Note 3,Fig4).	I_{FSM} (UNI)	100	A
Peak Pulse Current on 10/1000 us waveform (Note 1, Fig 3)	I_{PPM}	see Table 1	A
Typical Thermal Resistance Junction to Ambient(Note 2)	$R_{\theta JA}$	100	°C/W
Operating Junction Temperature and Storage Temperature Range	T_j, T_{stg}	-65 ~ +150	°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 5 mm (0.13mm thick) land areas.
3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.
4. Peak pulse power waveform is 10/1000 μs .



1.0SMBJ5.0 ~ 1.0SMBJ440

Characteristics at Ta = 25°C

Table 1

Type		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Maximum Reverse Leakage	Max. Clamp Voltage V _C @ I _{PP}	Peak Pulse Current I _{PP}	Package	
			V _{BR} @ I _T						SMB	
			V _{RMW}	Min	Max				I _r	Device Marking Ccode
UNI	BI	V	V	V	mA	µA	V	A	UNI	BI
1000W Transient Voltage Suppresso										
1.0SMBJ5.0A	1.0SMBJ5 0CA	5	6.4	7	10	200	9.2	108.7	A5	C5
1.0SMBJ6.0A	1.0SMBJ6 0CA	6	6.67	7.37	10	200	10.3	97.1	A6	C6
1.0SMBJ6.5A	1.0SMBJ6 5CA	6.5	7.22	7.98	10	100	11.2	89.3	A6V	C6V
1.0SMBJ7.0A	1.0SMBJ7 0CA	7	7.78	8.6	10	80	12	83.4	A7	C7
1.0SMBJ7.5A	1.0SMBJ7 5CA	7.5	8.33	9.21	1	50	12.9	77.6	A7V	C7C
1.0SMBJ8.0A	1.0SMBJ8 0CA	8	8.89	9.83	1	20	13.6	73.6	A8	C8
1.0SMBJ8.5A	1.0SMBJ8 5CA	8.5	9.44	10.4	1	10	14.4	69.5	A8V	C8V
1.0SMBJ9.0A	1.0SMBJ9 0CA	9	10	11.1	1	5	15.4	65	A9	C9
1.0SMBJ10A	1.0SMBJ10CA	10	11.1	12.3	1	2	17	58.9	A10	C10
1.0SMBJ11A	1.0SMBJ11CA	11	12.2	13.5	1	1	18.2	55	A11	C11
1.0SMBJ12A	1.0SMBJ12CA	12	13.3	14.7	1	1	19.9	50.3	A12	C12
1.0SMBJ13A	1.0SMBJ13CA	13	14.4	15.9	1	1	21.5	46.6	A13	C13
1.0SMBJ14A	1.0SMBJ14CA	14	15.6	17.2	1	1	23.2	43.1	A14	C14
1.0SMBJ15A	1.0SMBJ15CA	15	16.7	18.5	1	1	24.4	41	A15	C15
1.0SMBJ16A	1.0SMBJ16CA	16	17.8	19.7	1	1	26	38.5	A16	C16
1.0SMBJ17A	1.0SMBJ17CA	17	18.9	20.9	1	1	27.6	36.3	A17	C17
1.0SMBJ18A	1.0SMBJ18CA	18	20	22.1	1	1	29.2	34.3	A18	C18
1.0SMBJ20A	1.0SMBJ20CA	20	22.2	24.5	1	1	32.4	30.9	A20	C20
1.0SMBJ22A	1.0SMBJ22CA	22	24.4	26.9	1	1	35.5	28.2	A22	C22
1.0SMBJ24A	1.0SMBJ24CA	24	26.7	29.5	1	1	38.9	25.7	A24	C24
1.0SMBJ26A	1.0SMBJ26CA	26	28.9	31.9	1	1	42.1	23.8	A26	C26
1.0SMBJ28A	1.0SMBJ28CA	28	31.1	34.4	1	1	45.4	22.1	A28	C28
1.0SMBJ30A	1.0SMBJ30CA	30	33.3	36.8	1	1	48.4	20.7	A30	C30
1.0SMBJ33A	1.0SMBJ33CA	33	36.7	40.6	1	1	53.3	18.8	A33	C33
1.0SMBJ36A	1.0SMBJ36CA	36	40	44.2	1	1	58.1	17.3	A36	C36
1.0SMBJ40A	1.0SMBJ40CA	40	44.4	49.1	1	1	64.5	15.5	A40	C40
1.0SMBJ43A	1.0SMBJ43CA	43	47.8	52.8	1	1	69.4	14.4	A43	C43
1.0SMBJ45A	1.0SMBJ45CA	45	50	55.3	1	1	72.7	13.8	A45	C45
1.0SMBJ48A	1.0SMBJ48CA	48	53.3	58.9	1	1	77.4	13	A48	C48
1.0SMBJ51A	1.0SMBJ51CA	51	56.7	62.7	1	1	82.4	12.2	A51	C51
1.0SMBJ54A	1.0SMBJ54CA	54	60	66.3	1	1	87.1	11.5	A54	C54
1.0SMBJ58A	1.0SMBJ58CA	58	64.4	71.2	1	1	93.6	10.7	A58	C58
1.0SMBJ60A	1.0SMBJ60CA	60	66.7	73.7	1	1	96.8	10.4	A60	C60
1.0SMBJ64A	1.0SMBJ64CA	64	71.1	78.6	1	1	103	9.7	A64	C64
1.0SMBJ70A	1.0SMBJ70CA	70	77.8	86	1	1	113	8.9	A70	C70
1.0SMBJ75A	1.0SMBJ75CA	75	83.3	92.1	1	1	121	8.3	A75	C75
1.0SMBJ78A	1.0SMBJ78CA	78	86.7	95.8	1	1	126	8	A78	C78
1.0SMBJ85A	1.0SMBJ85CA	85	94.4	104	1	1	137	7.3	A85	C85
1.0SMBJ90A	1.0SMBJ90CA	90	100	111	1	1	146	6.9	A90	C90
1.0SMBJ100A	1.0SMBJ100CA	100	111	123	1	1	162	6.2	A100	C100
1.0SMBJ110A	1.0SMBJ110CA	110	122	135	1	1	177	5.7	A110	C110
1.0SMBJ120A	1.0SMBJ120CA	120	133	147	1	1	193	5.2	A120	C120
1.0SMBJ130A	1.0SMBJ130CA	130	144	159	1	1	209	4.8	A130	C130
1.0SMBJ140A	1.0SMBJ140CA	140	155	171	1	1	224	4.5	A140	C140
1.0SMBJ150A	1.0SMBJ150CA	150	167	185	1	1	243	4.2	A150	C150



1.0SMBJ5.0 ~ 1.0SMBJ440

Characteristics at Ta = 25°C

Table 1

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			V _{BR} @ I _T						SMB	
UNI	BI	V _{RMW}	Min	Max	I _T	μA	V _C @ I _{PP}	I _{PP}	Device Marking Code	
		V	V	V	mA		V	A	UNI	BI
1000W Transient Voltage Suppresso										
1.0SMBJ160A	1.0SMBJ160CA	160	178	197	1	1	259	3.9	A160	C160
1.0SMBJ170A	1.0SMBJ170CA	170	189	209	1	1	275	3.7	A170	C170
1.0SMBJ180A	1.0SMBJ180CA	180	201	220	1	1	292	3.5	A180	C180
1.0SMBJ190A	1.0SMBJ190CA	190	211	234	1	1	307	3.3	A190	C190
1.0SMBJ200A	1.0SMBJ200CA	200	224	247	1	1	324	3.1	A200	C200
1.0SMBJ220A	1.0SMBJ220CA	220	246	272	1	1	356	2.8	A220	C220
1.0SMBJ250A	1.0SMBJ250CA	250	279	309	1	1	405	2.5	A250	C250
1.0SMBJ300A	1.0SMBJ300CA	300	335	371	1	1	486	2.1	A300	C300
1.0SMBJ350A	1.0SMBJ350CA	350	391	432	1	1	567	1.8	A350	C350
1.0SMBJ400A	1.0SMBJ400CA	400	447	494	1	1	648	1.6	A400	C400
1.0SMBJ440A	1.0SMBJ440CA	440	492	543	1	1	713	1.4	A440	C440



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Fig.1 Peak Pulse Power Rating Curve

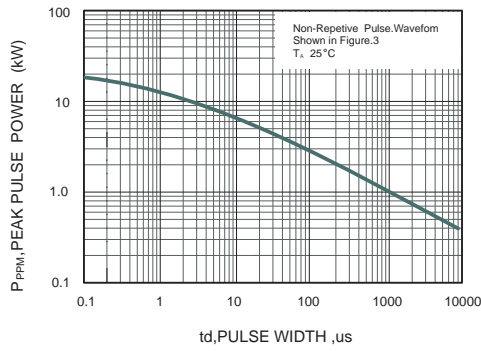


Fig.2 Forward Current Derating Curve

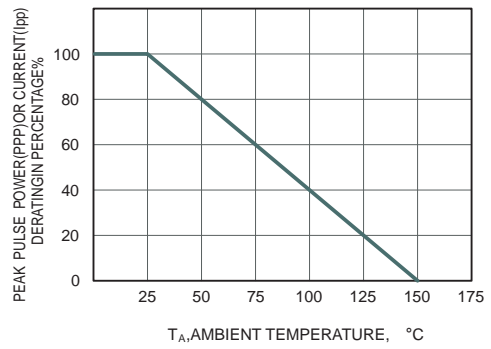


Fig.3 Pulse Waveform

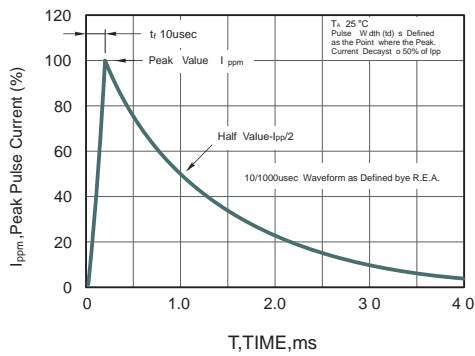
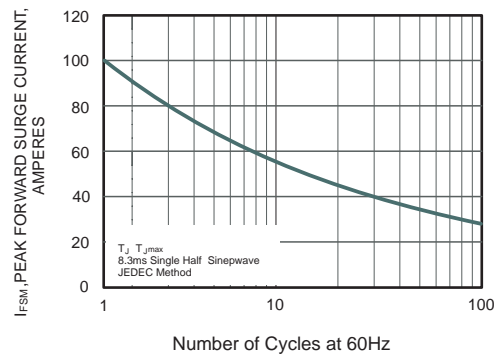


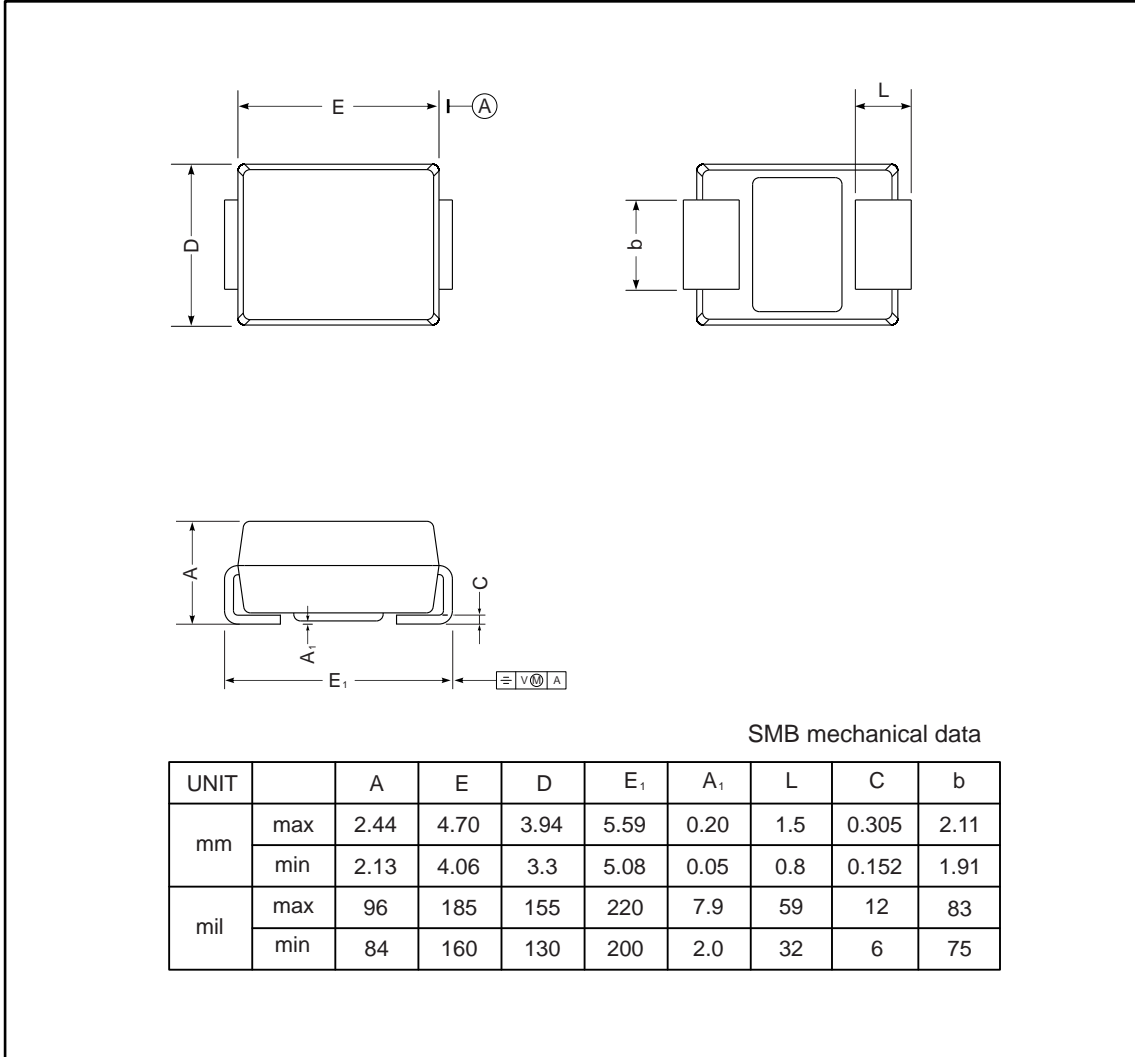
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMB



The recommended mounting pad size

