

Surface mount transient voltage suppressor power 600 watts
Stand-Off Voltage : 6.8V~550V
FEATURES

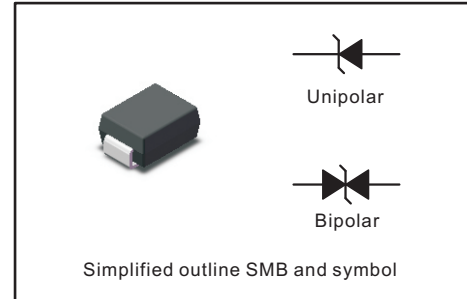
- For surface mounted applications in order to optimize board space.
- Low profile package
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability

MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 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 on 10/1000 s waveform (Note1,Note2, Fig.1).	P_{PPM}	600	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 Junction capacitance at VR=4V, f=1MHz	C_J	390	pF
ESD Voltage per IEC6100-4-2 Contact Air	V_{ESD1} V_{ESD2}	± 30 ± 30	kV
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 mm² (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 10/1000μS.

Characteristics at Ta = 25°C

Type		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Maximum Reverse Leakage	Max. Clamp Voltage	Peak Pulse Current	Package	
			$V_{BR} @ I_T$						SMB	
		V_{RMW}	Min	Max	I_T	$V_C @ I_{PP}$	I_{PP}	Device Marking Ccode		
UNI	BI	V	V	V	mA	μA	V	A	UNI	BI
600W Transient Voltage Suppressor										
SMBJ6.8A	SMBJ6.8CA	5.8	6.45	7.14	10	1000	10.5	58.1	6V8A	6V8C
SMBJ7.5A	SMBJ7.5CA	6.4	7.13	7.88	10	500	11.3	54	7V5A	7V5C
SMBJ8.2A	SMBJ8.2CA	7.02	7.79	8.61	10	200	12.1	50.4	8V2A	8V2C
SMBJ9.1A	SMBJ9.1CA	7.78	8.65	9.55	1	50	13.4	45.5	9V1A	9V1C
SMBJ10A	SMBJ10CA	8.55	9.5	10.5	1	10	14.5	42.1	10A	10C
SMBJ11A	SMBJ11CA	9.4	10.5	11.6	1	5	15.6	39.1	11A	11C
SMBJ12A	SMBJ12CA	10.2	11.4	12.6	1	5	16.7	36.5	12A	12C
SMBJ13A	SMBJ13CA	11.1	12.4	13.7	1	1	18.2	33.5	13A	13C
SMBJ15A	SMBJ15CA	12.8	14.3	15.8	1	1	21.2	28.8	15A	15C
SMBJ16A	SMBJ16CA	13.6	15.2	16.8	1	1	22.5	27.1	16A	16C
SMBJ18A	SMBJ18CA	15.3	17.1	18.9	1	1	25.5	24.2	18A	18C
SMBJ20A	SMBJ20CA	17.1	19	21	1	1	27.7	22	20A	20C
SMBJ22A	SMBJ22CA	18.8	20.9	23.1	1	1	30.6	19.9	22A	22C
SMBJ24A	SMBJ24CA	20.5	22.8	25.2	1	1	33.2	18.4	24A	24C
SMBJ27A	SMBJ27CA	23.1	25.7	28.4	1	1	37.5	16.3	27A	27C
SMBJ30A	SMBJ30CA	25.6	28.5	31.5	1	1	41.4	14.7	30A	30C
SMBJ33A	SMBJ33CA	28.2	31.4	34.7	1	1	45.7	13.3	33A	33C
SMBJ36A	SMBJ36CA	30.8	34.2	37.8	1	1	49.9	12.2	36A	36C
SMBJ39A	SMBJ39CA	33.3	37.1	41	1	1	53.9	11.3	39A	39C
SMBJ43A	SMBJ43CA	36.8	40.9	45.2	1	1	59.3	10.3	43A	43C
SMBJ47A	SMBJ47CA	40.2	44.7	49.4	1	1	64.8	9.4	47A	47C
SMBJ51A	SMBJ51CA	43.6	48.5	53.6	1	1	70.1	8.7	51A	51C
SMBJ56A	SMBJ56CA	47.8	53.2	58.8	1	1	77	7.9	56A	56C
SMBJ58A	SMBJ58CA	52.78	55.1	60.9	1	1	79.8	7.7	58A	58C
SMBJ62A	SMBJ62CA	53	58.9	65.1	1	1	85	7.2	62A	62C
SMBJ68A	SMBJ68CA	58.1	64.6	71.4	1	1	92	6.6	68A	68C
SMBJ75A	SMBJ75CA	64.1	71.3	78.8	1	1	103	5.9	75A	75C
SMBJ82A	SMBJ82CA	70.1	77.9	86.1	1	1	113	5.4	82A	82C
SMBJ91A	SMBJ91CA	77.8	86.5	95.5	1	1	125	4.9	91A	91C
SMBJ100A	SMBJ100CA	85.5	95	105	1	1	137	4.5	100A	100C
SMBJ110A	SMBJ110CA	94	105	116	1	1	152	4	110A	110C
SMBJ120A	SMBJ120CA	102	114	126	1	1	165	3.7	120A	120C
SMBJ130A	SMBJ130CA	111	124	137	1	1	179	3.4	130A	130C
SMBJ150A	SMBJ150CA	128	143	158	1	1	207	2.9	150A	150C
SMBJ160A	SMBJ160CA	136	152	168	1	1	219	2.8	160A	160C
SMBJ170A	SMBJ170CA	145	162	179	1	1	234	2.6	170A	170C
SMBJ180A	SMBJ180CA	154	171	189	1	1	246	2.5	180A	180C
SMBJ200A	SMBJ200CA	171	190	210	1	1	274	2.2	200A	200C
SMBJ220A	SMBJ220CA	185	209	231	1	1	328	1.9	220A	220C
SMBJ250A	SMBJ250CA	214	237	263	1	1	344	1.8	250A	250C
SMBJ300A	SMBJ300CA	256	285	315	1	1	414	1.5	300A	300C
SMBJ350A	SMBJ350CA	300	332	368	1	1	482	1.3	350A	350C
SMBJ400A	SMBJ400CA	342	380	420	1	1	548	1.1	400A	400C
SMBJ440A	SMBJ440CA	376	418	462	1	1	602	1	440A	440C
SMBJ480A	SMBJ480CA	408	456	504	1	1	658	0.9	480A	480C
SMBJ510A	SMBJ510CA	434	485	535	1	1	698	0.9	510A	510C
SMBJ530A	SMBJ530CA	451	503.5	556.5	1	1	725	0.8	530A	530C
SMBJ540A	SMBJ540CA	460	513	567	1	1	740	0.8	540A	540C
SMBJ550A	SMBJ550CA	468	522.5	577.5	1	1	760	0.8	550A	550C

Fig.1 Peak Pulse Power Rating Curve

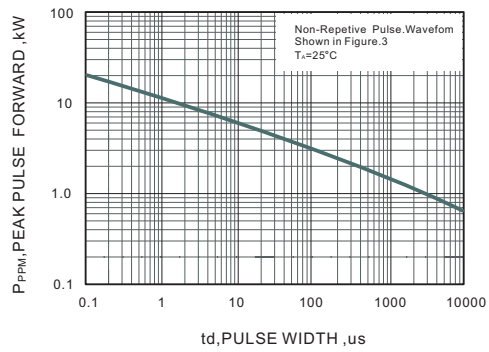


Fig.2 Forward Current Derating Curve

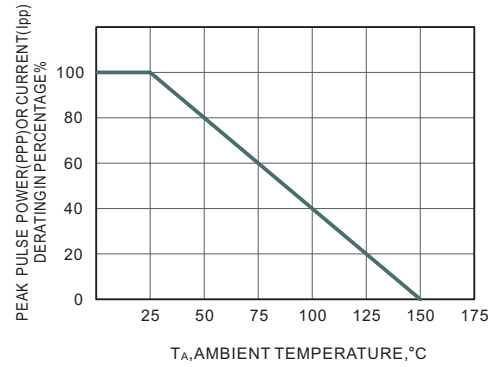


Fig.3 Pulse Waveform

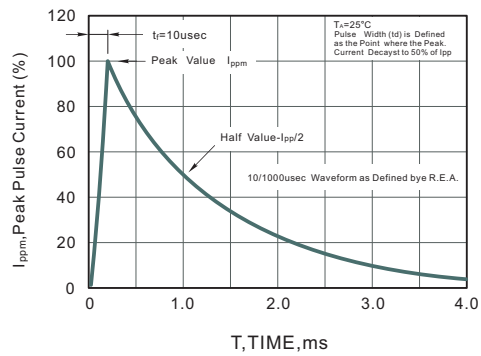
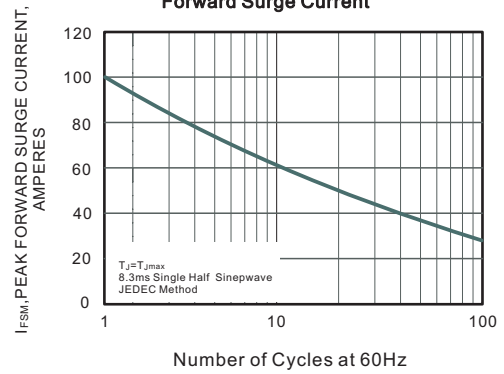


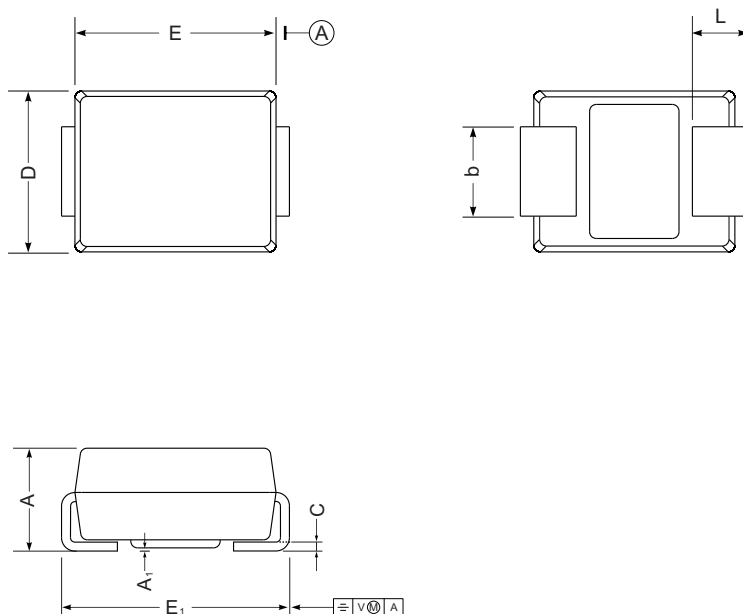
Fig.4 Maximum Non-Repetitive Peak Forward Surge Current



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMB



SMB mechanical data

UNIT		A	E	D	E ₁	A ₁	L	C	b
mm	max	2.44	4.70	3.94	5.59	0.20	1.5	0.305	2.11
	min	2.13	4.06	3.3	5.08	0.05	0.8	0.152	1.91
mil	max	96	185	155	220	7.9	59	12	83
	min	84	160	130	200	2.0	32	6	75

The recommended mounting pad size

