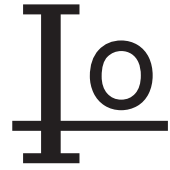


SMBJ SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSORS



FEATURES

- * For surface mount application
- * Built-in strain relief
- * Excellent clamping capability
- * Low profile package
- * Fast response time: Typically less than 1.0ps from 0 volt to BV min.
- * Typical I_R less than $1\mu A$ above 10V
- * High temperature soldering guaranteed: $260^\circ C$ / 10 seconds at terminals
- * Lead Free Finish/RoHS Compliant

MECHANICAL DATA

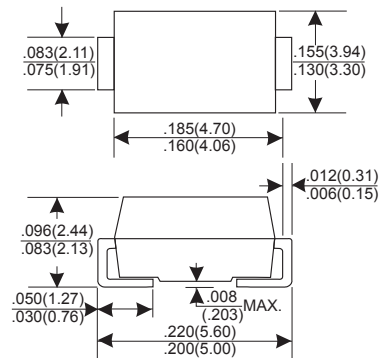
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: Solderable per MIL-STD-202, method 208 guaranteed
- * Polarity: Color band denotes cathode end except Bidirectional
- * Mounting position: Any
- * Weight: 0.1066 grams

VOLTAGE RANGE

5.0 to 440 Volts

600 Watts Peak Power

DO-214AA(SMB)



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating $25^\circ C$ ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

RATINGS	SYMBOL	VALUE	UNITS
Peak Power Dissipation at $T_A=25^\circ C$, $T_P=1ms$ (NOTE 1)	P_{PK}	Minimum 600	Watts
Peak Forward Surge Current at 8.3ms Single Half Sine-Wave superimposed on rated load (JEDEC method) (NOTE 3)	I_{FSM}	100	Amps
Maximum Instantaneous Forward Voltage at 0.5A for Unidirectional only	V_F	1.2	Volts
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	$^\circ C$

NOTES:

1. Non-repetitive current pulse per Fig. 3 and derated above $T_A=25^\circ C$ per Fig. 2.
2. Mounted on Copper Pad area of $5.0mm^2$ (.013mm Thick) to each terminal.
3. 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.

DEVICES FOR BIPOLAR APPLICATIONS

1. For Bidirectional use C or CA Suffix for types SMBJ5.0 thru SMBJ440.
2. Electrical characteristics apply in both directions.

RATING AND CHARACTERISTIC CURVES (SMBJ SERIES)

FIG.1-PEAK PULSE POWER DERATING CURVE

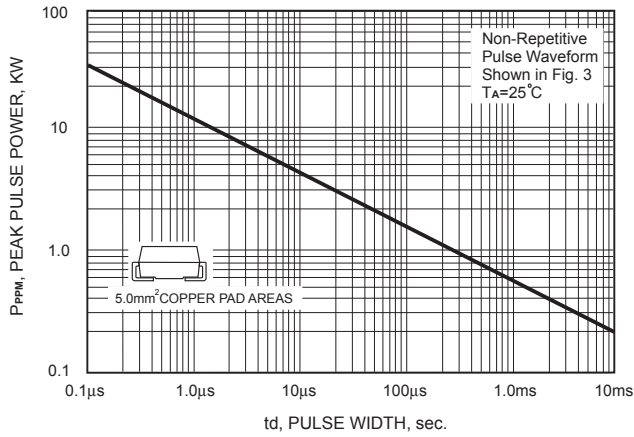


FIG.2-PULSE DERATING CURVE

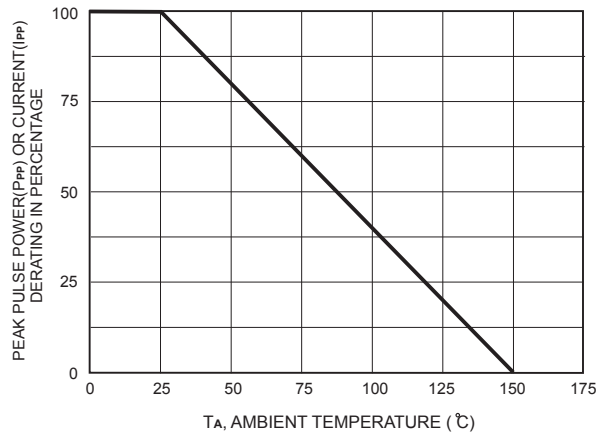


FIG.3-PULSE WAVE FORM

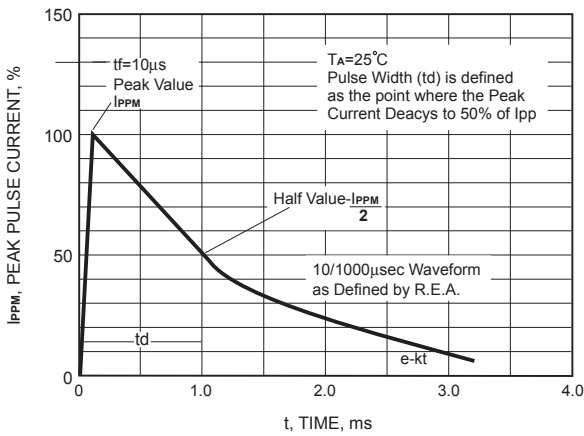


FIG.4-TYPICAL JUNCTION CAPACITANCE

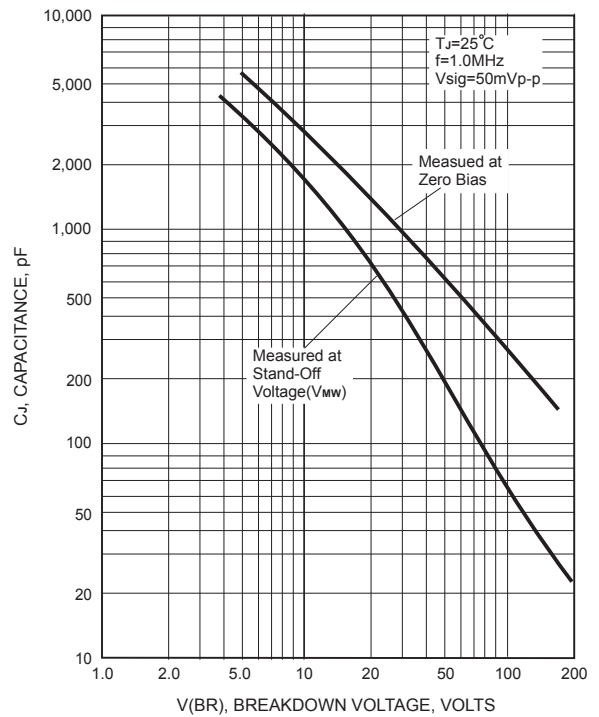
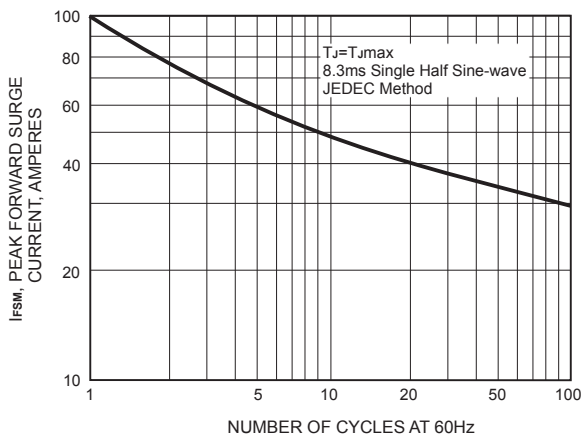


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



600 Watt Surface Mount TVS

PART NUMBER ADD C FOR BI-DIRECTIONAL	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V) MIN. @IT	BREAKDOWN VOLTAGE VBR (V) MAX. @IT	TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ VRWM IR(μA)	MARKING CODE	
								UNI	BI
SMBJ5.0(C)	5.0	6.40	7.30	10	9.6	62.5	800	KD	AD
SMBJ5.0(C)A	5.0	6.40	7.00	10	9.2	65.2	800	KE	AE
SMBJ6.0(C)	6.0	6.67	8.15	10	11.4	52.6	800	KF	AF
SMBJ6.0(C)A	6.0	6.67	7.37	10	10.3	58.3	800	KG	AD
SMBJ6.5(C)	6.5	7.22	8.82	10	12.3	48.7	500	KH	AH
SMBJ6.5(C)A	6.5	7.22	7.98	10	11.2	53.6	500	KK	AK
SMBJ7.0(C)	7.0	7.78	9.51	10	13.3	45.1	200	KL	AL
SMBJ7.0(C)A	7.0	7.78	8.60	10	12.0	50.0	200	KM	AM
SMBJ7.5(C)	7.5	8.33	10.20	1	14.3	42.0	100	KN	AN
SMBJ5.0(C)A	7.5	8.33	9.21	1	12.9	46.5	100	KP	AP
SMBJ8.0(C)	8.0	8.89	10.90	1	15.0	40.0	50	KQ	AQ
SMBJ8.0(C)A	8.0	8.89	9.83	1	13.6	44.1	50	KR	AR
SMBJ8.5(C)	8.5	9.44	11.5	1	15.9	37.7	10	KS	AS
SMBJ8.5(C)A	8.5	9.44	10.4	1	14.4	41.7	10	KT	AT
SMBJ9.0(C)	9.0	10.0	12.20	1	16.9	35.5	5	KU	AU
SMBJ9.0(C)A	9.0	10.0	11.10	1	15.4	39.0	5	KV	AV
SMBJ10(C)	10	11.1	13.60	1	18.8	31.9	5	KW	AW
SMBJ10(C)A	10	11.1	12.30	1	17.0	35.3	5	KX	AX
SMBJ11(C)	11	12.2	14.90	1	20.1	29.9	5	KY	AY
SMBJ11(C)A	11	12.2	13.50	1	18.2	33.0	5	KZ	AZ
SMBJ12(C)	12	13.3	16.30	1	22.0	27.3	5	LD	BD
SMBJ12(C)A	12	13.3	14.70	1	19.9	30.2	5	LE	BE
SMBJ13(C)	13	14.4	17.60	1	23.8	25.2	5	LF	BF
SMBJ13(C)A	13	14.4	15.90	1	21.5	27.9	5	LG	BG
SMBJ14(C)	14	15.6	19.10	1	25.8	23.3	5	LH	BH
SMBJ14(C)A	14	15.6	17.20	1	23.2	25.8	5	LK	BK
SMBJ15(C)	15	16.7	20.40	1	26.9	22.3	5	LL	BL
SMBJ15(C)A	15	16.7	18.50	1	24.4	24.0	5	LM	BM
SMBJ16(C)	16	17.8	21.80	1	28.8	20.8	5	LN	BN
SMBJ16(C)A	16	17.8	19.70	1	26.0	23.1	5	LP	BP
SMBJ17(C)	17	18.9	23.10	1	30.5	19.7	5	LQ	BQ
SMBJ17(C)A	17	18.9	20.90	1	27.6	21.7	5	LR	BR
SMBJ18(C)	18	20.0	24.40	1	32.2	18.6	5	LS	BS
SMBJ18(C)A	18	20.0	22.10	1	29.2	20.5	5	LT	BT
SMBJ20(C)	20	22.2	27.10	1	35.8	16.7	5	LU	BU
SMBJ20(C)A	20	22.2	24.50	1	32.4	18.5	5	LV	BV
SMBJ22(C)	22	24.4	39.80	1	39.4	15.2	5	LW	BW
SMBJ22(C)A	22	24.4	26.90	1	35.5	16.9	5	LX	BX
SMBJ24(C)	24	26.7	32.60	1	43.0	14.0	5	LY	BY
SMBJ24(C)A	24	26.7	39.50	1	38.9	15.4	5	LZ	BZ
SMBJ26(C)	26	28.9	35.30	1	46.6	12.4	5	MD	CD
SMBJ26(C)A	26	28.9	31.90	1	42.1	14.2	5	ME	CE
SMBJ28(C)	28	31.1	38.00	1	50.0	12.0	5	MF	CF
SMBJ28(C)A	28	31.1	34.40	1	45.4	13.2	5	MG	CG
SMBJ30(C)	30	33.3	40.70	1	53.5	11.2	5	MH	CH
SMBJ30(C)A	30	33.3	36.80	1	48.4	12.4	5	MK	CK
SMBJ33(C)	33	36.7	44.90	1	59.0	10.2	5	ML	CL
SMBJ33(C)A	33	36.7	40.60	1	53.3	11.3	5	MM	CM
SMBJ36(C)	36	40.0	48.90	1	64.3	9.3	5	MN	CN
SMBJ36(C)A	36	40.0	44.20	1	58.1	10.3	5	MP	CP
SMBJ40(C)	40	44.4	54.30	1	71.4	8.4	5	MQ	CQ
SMBJ40(C)A	40	44.4	49.10	1	64.5	9.3	5	MR	CR
SMBJ43(C)	43	47.8	58.40	1	76.7	7.8	5	MS	CS
SMBJ43(C)A	43	47.8	52.80	1	69.4	8.6	5	MT	CT
SMBJ45(C)	45	50.0	61.10	1	80.3	7.5	5	MU	CU
SMBJ45(C)A	45	50.0	55.50	1	72.7	8.3	5	MV	CV
SMBJ48(C)	48	53.3	65.10	1	85.5	7.0	5	MW	CW
SMBJ48(C)A	48	53.3	58.90	1	77.4	7.7	5	MX	CX
SMBJ51(C)	51	56.7	69.30	1	91.1	6.6	5	MY	CY
SMBJ51(C)A	51	56.7	62.20	1	82.4	7.3	5	MZ	CZ
SMBJ54(C)	54	60.0	73.30	1	96.3	6.2	5	ND	DD
SMBJ54(C)A	54	60.0	66.30	1	87.1	6.9	5	NE	DE
SMBJ58(C)	58	64.4	78.70	1	103	5.8	5	NF	DF
SMBJ58(C)A	58	64.4	71.20	1	93.6	6.4	5	NG	DG

600 Watt Surface Mount TVS

PART NUMBER ADD C FOR BI- DIRECTIONAL	REVERSE STAND-OFF VOLTAGE VRWM (V)	BREAKDOWN VOLTAGE VBR (V)		TEST CURRENT IT (mA)	MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V)	PEAK PULSE CURRENT Ipp (A)	REVERSE LEAKAGE @ VRWM IR(μA)	MARKING CODE	
		MIN. @IT	MAX. @IT					UNI	BI
See Note 1									
SMBJ60(C)	60	66.7	81.5	1	107	5.6	5	NH	DH
SMBJ60(C)A	60	66.7	73.7	1	96.8	6.2	5	NK	DK
SMBJ64(C)	64	71.1	86.9	1	114	5.3	5	NL	DL
SMBJ64(C)A	64	71.1	78.6	1	103	5.8	5	NM	DM
SMBJ70(C)	70	77.8	95.1	1	125	4.8	5	NN	DN
SMBJ70(C)A	70	77.8	86.0	1	113	5.3	5	NP	DP
SMBJ75(C)	75	83.3	102	1	134	4.5	5	NQ	DQ
SMBJ75(C)A	75	83.3	92.1	1	121	4.9	5	NR	DR
SMBJ78(C)	78	86.7	106	1	139	4.3	5	NS	DS
SMBJ78(C)A	78	86.7	95.8	1	126	4.7	5	NT	DT
SMBJ85(C)	85	94.4	115	1	151	3.9	5	NU	DU
SMBJ85(C)A	85	94.4	104	1	137	4.4	5	NV	DV
SMBJ90(C)	90	100	122.0	1	160	3.8	5	NW	DW
SMBJ90(C)A	90	100	111	1	146	4.1	5	NX	DX
SMBJ100(C)	100	111	136.0	1	179	3.4	5	NY	DY
SMBJ100(C)A	100	111	123.0	1	162	3.7	5	NZ	DZ
SMBJ110(C)	110	122	149	1	196	3.0	5	PD	ED
SMBJ110(C)A	110	122	135	1	177	3.4	5	PE	EE
SMBJ120(C)	120	133	163.0	1	214	2.8	5	PF	EF
SMBJ120(C)A	120	133	147.0	1	193	3.1	5	PG	EG
SMBJ130(C)	130	144	176.0	1	231	2.6	5	PH	EH
SMBJ130(C)A	130	144	159.0	1	209	2.9	5	PK	EK
SMBJ160(C)	160	178	218.0	1	287	2.1	5	PN	EN
SMBJ160(C)A	160	178	197.0	1	259	2.3	5	PP	EP
SMBJ180(C)A	180	201	222.0	1	292	2.1	1	PT	ET
SMBJ200(C)A	200	224	247.0	1	274	1.9	1	PV	EV
SMBJ220(C)A	220	246	272.0	1	356	1.7	1	PX	EX
SMBJ250(C)A	250	279	309.0	1	405	1.5	1	PZ	EZ
SMBJ300(C)A	300	335	371.0	1	486	1.3	1	QE	FE
SMBJ350(C)A	350	391	432.0	1	567	1.1	1	QG	FG
SMBJ400(C)A	400	447	494.0	1	648	0.9	1	QK	FK
SMBJ440(C)A	440	492	543.0	1	713	0.9	1	QM	FM