



YENYO

SMBJ SERIES

Surface Mount Transient Voltage Suppressor

Features

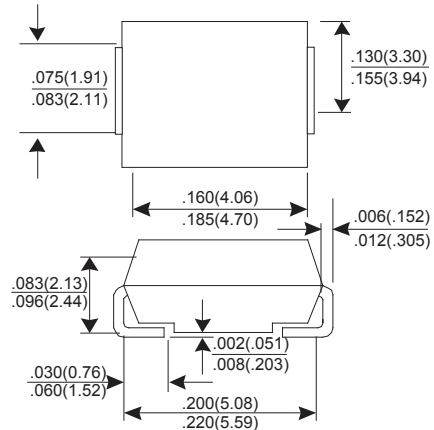
- ★ For surface mounted applications
- ★ Reliable low cost construction utilizing molded plastic technique
- ★ Plastic material has UL flammability classification 94V-0
- ★ Typical IR less than 1uA above 10V
- ★ Fast response time: typically less than 1.0 ns for Uni-direction, less than 5.0ns for Bi-direction, from 0Volts to BV min

Mechanical Data

- ★ Case: Molded plastic SMB/DO-214AA
- ★ Polarity: by cathode band denotes uni-directional device none cathode band denotes bi-directional device
- ★ Weight: 0.093 gram

**Stand-off Voltage 5.0 to 170 V
Power Dissipation 600 Watts**

SMB/DO-214AA



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

CHARACTERISTIC	SYMBOL	VALUE	UNIT
Peak Power Dissipation at TA=25°C TP=1ms (Note 1,2)	PPK	Minimum 600	Watts
Peak Forward Surge Current, 8.3ms single Half sine-wave super imposed on rated load (Note 3) (JEDEC method)	IFSM	100	A
Steady State Power Dissipation at TA=75°C	PM(AV)	5.0	Watts
Maximum Instantaneous forward voltage at 35A for unidirectional devices only (Note 3)	VF	3.5	V
Operating Junction and Storage Temperature Range	TJ, TSTG	-55 to +150	°C

NOTES : (1) Non-repetitive current pulse, per fig. 3 and derated above TA=25 °C per fig. 1.
(2) Thermal Resistance junction to ambient.
(3) 8.3ms single half-sine wave duty cycle= 4pulses maximum per minute(unidirectional units only).

SMBJ SERIES

Part No.	Absolute Maximum Rating (Ta=25°C)					Electrical Characteristics (Ta=25°C)				
	VRWM (V)	VBR Min (V)	VBR Max (V)	IT (mA)	IFSM (A) @8.3ms	Max Vc		IR @VRWM (uA)	Marking Code	
						(V)	Ipp(A)		UNI	BI
SMBJ5.0(c)	5.00	6.40	7.82	10	100	9.6	62.5	800	KD	AD
SMBJ5.0(c)A	5.00	6.40	7.07	10	100	9.2	65.2	800	KE	AE
SMBJ6.0(c)	6.00	6.67	8.15	10	100	11.4	52.6	800	KF	AF
SMBJ6.0(c)A	6.00	6.67	7.37	10	100	10.3	58.3	800	KG	AG
SMBJ6.5(c)	6.50	7.22	8.82	10	100	12.3	48.7	500	KH	AH
SMBJ6.5(c)A	6.50	7.22	7.98	10	100	11.2	53.6	500	KK	AK
SMBJ7.0(c)	7.00	7.78	9.51	1	100	13.3	45.1	200	KL	AL
SMBJ7.0(c)A	7.00	7.78	8.60	1	100	12.0	50.0	200	KM	AM
SMBJ7.5(c)	7.50	8.33	10.20	1	100	14.3	42.0	100	KN	AN
SMBJ7.5(c)A	7.50	8.33	9.21	1	100	12.9	46.5	100	KP	AP
SMBJ8.0(c)	8.00	8.89	10.9	1	100	15.0	40.0	50	KQ	AQ
SMBJ8.0(c)A	8.00	8.89	9.83	1	100	13.6	44.1	50	KR	AR
SMBJ8.5(c)	8.50	9.44	11.5	1	100	15.9	37.7	10	KS	AS
SMBJ8.5(c)A	8.50	9.44	10.4	1	100	14.4	41.7	10	KT	AT
SMBJ9.0(c)	9.00	10.0	12.2	1	100	16.9	35.5	5	KU	AU
SMBJ9.0(c)A	9.00	10.0	11.1	1	100	15.4	39.0	5	KV	AV
SMBJ10(c)	10.00	11.1	13.6	1	100	18.8	31.9	5	KW	AW
SMBJ10(c)A	10.00	11.1	12.3	1	100	17.0	35.3	5	KX	AX
SMBJ11(c)	11.00	12.2	14.9	1	100	20.1	29.9	5	KY	AY
SMBJ11(c)A	11.00	12.2	13.5	1	100	18.2	33.0	5	KZ	AZ
SMBJ12(c)	12.00	13.3	16.3	1	100	22.0	27.3	5	LD	BD
SMBJ12(c)A	12.00	13.3	14.7	1	100	19.9	30.2	5	LE	BE
SMBJ13(c)	13.00	14.4	17.6	1	100	23.8	25.2	5	LF	BF
SMBJ13(c)A	13.00	14.4	15.9	1	100	21.5	27.9	5	LG	BG
SMBJ14(c)	14.00	15.6	19.1	1	100	25.8	23.3	5	LH	BH
SMBJ14(c)A	14.00	15.6	17.2	1	100	23.2	25.8	5	LK	BK
SMBJ15(c)	15.00	16.7	20.4	1	100	26.9	22.3	5	LL	BL
SMBJ15(c)A	15.00	16.7	18.5	1	100	24.4	24.0	5	LM	BM
SMBJ16(c)	16.00	17.8	21.8	1	100	28.8	20.8	5	LN	BN
SMBJ16(c)A	16.00	17.8	19.7	1	100	26.0	23.1	5	LP	BP
SMBJ17(c)	17.00	18.9	23.1	1	100	30.5	19.7	5	LQ	BQ
SMBJ17(c)A	17.00	18.9	20.9	1	100	27.6	21.7	5	LR	BR
SMBJ18(c)	18.00	20.0	24.4	1	100	32.2	18.6	5	LS	BS
SMBJ18(c)A	18.00	20.0	22.1	1	100	29.2	20.5	5	LT	BT
SMBJ20(c)	20.00	22.2	27.1	1	100	35.8	16.4	5	LU	BU
SMBJ20(c)A	20.00	22.2	24.5	1	100	32.4	18.5	5	LV	BV
SMBJ22(c)	22.00	24.4	29.8	1	100	39.4	15.2	5	LW	BW
SMBJ22(c)A	22.00	24.4	26.9	1	100	35.5	16.9	5	LX	BX
SMBJ24(c)	24.00	26.7	32.6	1	100	43.0	14.0	5	LY	BY
SMBJ24(c)A	24.00	26.7	29.5	1	100	38.9	15.4	5	LZ	BZ
SMBJ26(c)	26.00	28.9	35.3	1	100	46.6	12.4	5	MD	CD
SMBJ26(c)A	26.00	28.9	31.9	1	100	42.1	14.2	5	ME	CE
SMBJ28(c)	28.00	31.1	38.0	1	100	50.0	12.0	5	MF	CF
SMBJ28(c)A	28.00	31.1	34.4	1	100	45.4	13.2	5	MG	CG
SMBJ30(c)	30.00	33.3	40.7	1	100	53.5	11.2	5	MH	CH
SMBJ30(c)A	30.00	33.3	36.8	1	100	48.4	12.4	5	MK	CK
SMBJ33(c)	33.00	36.7	44.9	1	100	59.0	10.2	5	ML	CL
SMBJ33(c)A	33.00	36.7	40.6	1	100	53.3	11.3	5	MM	CM
SMBJ36(c)	36.00	40.0	48.9	1	100	64.3	9.3	5	MN	CN
SMBJ36(c)A	36.00	40.0	44.2	1	100	58.1	10.3	5	MP	CP
SMBJ40(c)	40.00	44.4	54.3	1	100	71.4	8.4	5	MQ	CQ
SMBJ40(c)A	40.00	44.4	49.1	1	100	64.5	9.3	5	MR	CR
SMBJ43(c)	43.00	47.8	58.4	1	100	76.7	7.8	5	MS	CS
SMBJ43(c)A	43.00	47.8	52.8	1	100	69.4	8.6	5	MT	CT
SMBJ45(c)	45.00	50.0	61.1	1	100	80.3	7.5	5	MU	CU
SMBJ45(c)A	45.00	50.0	55.3	1	100	72.7	8.3	5	MV	CV

SMBJ SERIES

Part No.	Absolute Maximum Rating (Ta=25°C)					Electrical Characteristics (Ta=25°C)				
	VRWM (V)	VBR Min (V)	VBR Max (V)	IT (mA)	IFSM (A) @8.3ms	Max Vc		IR @VRWM (uA)	Marking Code	
						(V)	Ipp(A)		UNI	BI
SMBJ48(c)	48.00	53.3	65.1	1	100	85.5	7.0	5	MW	CW
SMBJ48(c)A	48.00	53.3	58.9	1	100	77.4	7.7	5	MX	CX
SMBJ51(c)	51.00	56.7	69.3	1	100	91.1	6.6	5	MY	CY
SMBJ51(c)A	51.00	56.7	62.7	1	100	82.4	7.3	5	MZ	CZ
SMBJ54(c)	54.00	60.0	73.3	1	100	96.3	6.2	5	ND	DD
SMBJ54(c)A	54.00	60.0	66.3	1	100	87.1	6.9	5	NE	DE
SMBJ58(c)	58.00	64.4	78.7	1	100	103.0	5.8	5	NF	DF
SMBJ58(c)A	58.00	64.4	71.2	1	100	93.6	6.4	5	NG	DG
SMBJ60(c)	60.00	66.7	81.5	1	100	107.0	5.6	5	NH	DH
SMBJ60(c)A	60.00	66.7	73.7	1	100	96.8	6.2	5	NK	DK
SMBJ64(c)	64.00	71.1	86.9	1	100	114.0	5.3	5	NL	DL
SMBJ64(c)A	64.00	71.1	78.6	1	100	103.0	5.8	5	NM	DM
SMBJ70(c)	70.00	77.8	95.1	1	100	125.0	4.8	5	NN	DN
SMBJ70(c)A	70.00	77.8	86.0	1	100	113.0	5.3	5	NP	DP
SMBJ75(c)	75.00	83.3	102.0	1	100	134.0	4.5	5	NQ	DQ
SMBJ75(c)A	75.00	83.3	92.1	1	100	121.0	4.9	5	NR	DR
SMBJ78(c)	78.00	86.7	106.0	1	100	139.0	4.3	5	NS	DS
SMBJ78(c)A	78.00	86.7	95.8	1	100	126.0	4.7	5	NT	DT
SMBJ85(c)	85.00	94.4	115.0	1	100	151.0	3.9	5	NU	DU
SMBJ85(c)A	85.00	94.4	104.0	1	100	137.0	4.4	5	NV	DV
SMBJ90(c)	90.00	100.0	122.0	1	100	160.0	3.8	5	NW	DW
SMBJ90(c)A	90.00	100.0	111.0	1	100	146.0	4.1	5	NX	DX
SMBJ100(c)	100.00	111.0	136.0	1	100	179.0	3.4	5	NY	DY
SMBJ100(c)A	100.00	111.0	123.0	1	100	162.0	3.7	5	NZ	DZ
SMBJ110(c)	110.00	122.0	149.0	1	100	196.0	3.0	5	PD	ED
SMBJ110(c)A	110.00	122.0	135.0	1	100	177.0	3.4	5	PE	EE
SMBJ120(c)	120.00	133.0	163.0	1	100	214.0	2.8	5	PF	EF
SMBJ120(c)A	120.00	133.0	147.0	1	100	193.0	3.1	5	PG	EG
SMBJ130(c)	130.00	144.0	176.0	1	100	231.0	2.6	5	PH	EH
SMBJ130(c)A	130.00	144.0	159.0	1	100	209.0	2.9	5	PK	EK
SMBJ150(c)	150.00	167.0	204.0	1	100	268.0	2.2	5	PL	EL
SMBJ150(c)A	150.00	167.0	185.0	1	100	243.0	2.5	5	PM	EM
SMBJ160(c)	160.00	178.0	218.0	1	100	287.0	2.1	5	PN	EN
SMBJ160(c)A	160.00	178.0	197.0	1	100	259.0	2.3	5	PP	EP
SMBJ170(c)	170.00	189.0	231.0	1	100	304.0	2.0	5	PQ	EQ
SMBJ170(c)A	170.00	189.0	209.0	1	100	275.0	2.2	5	PR	ER

Suffix A: 5%

Suffix C: Bi-Directional

For the bidirection SMBJ5.0CA, the maximum VBR is 7.25V.

For the bidirection typ having Vrwm of 10 volts and less, the Ir limit is doubled.

RATINGS AND CHARACTERISTIC CURVES SMBJ SERIES

FIG.1 - PULSE DERATING CURVE

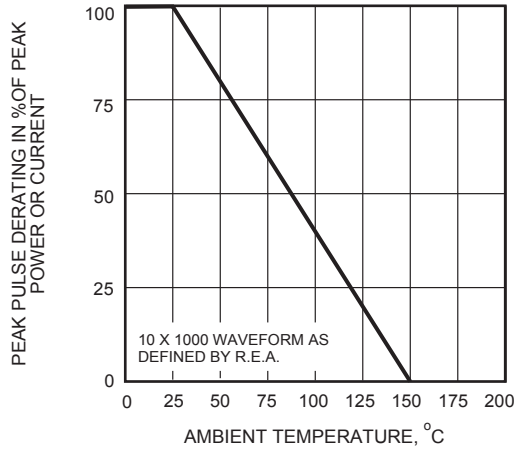


FIG.2 - TYPICAL REVERSE CHARACTERISTICS

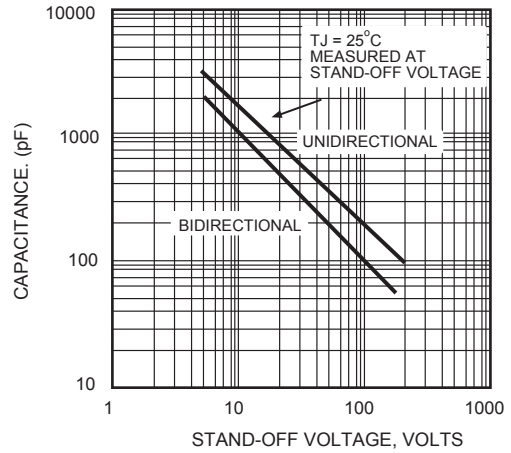


FIG.3 - PULSE RATING CURVE

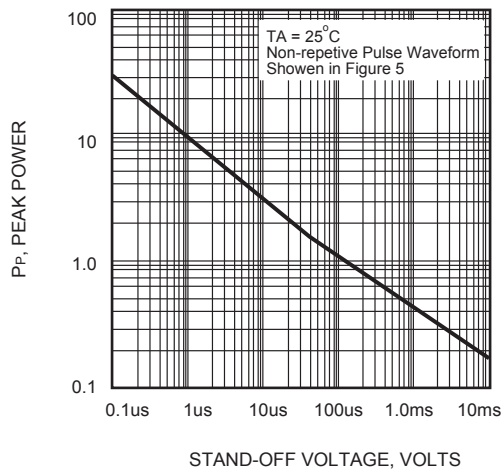


FIG.4 - STEADY STATE POWER DERATING CURVE

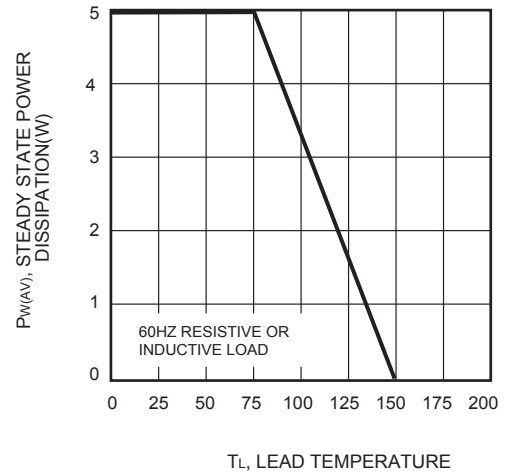


FIG.5 - PULSE WAVEFORM

