GOODWORK

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 A above 10V
* High temperature soldering guaranteed: 260°C / 10 seconds at terminals

MECHANICAL DATA

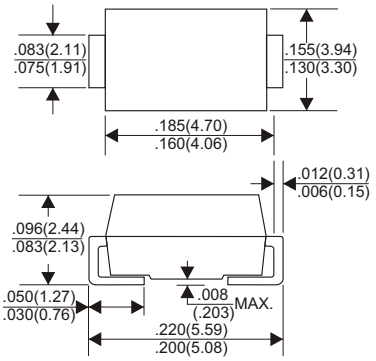
* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Solderable per MIL-STD-202, method 208 guranteed
* Polarity: Color band denotes cathode end except Bidirectional
* Mounting position: Any
* Weight: 0.093 grams

VOLTAGE RANGE

5.0 to 440 Volts

600 Watts Peak Power

DO-214AA(SMB)



Dimensions in inches and (millimeters)

- "GK" represents the brand name
- "XXX" represents the periodic code
- "YY" represents the product type marking

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature uniess otherwies 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°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
Typical Thermal Resistance Between junction and case Typical Thermal Resistance Between junction and Air	RθJ-C RθJ-A	20 95	°C/W °C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

NOTES:
1. Non-repetitive current pulse per Fig. 3 and derated above T_A=25°C per Fig. 2.
2. Mounted on Copper Pad area of 5.0mm²(.013mm Thick) to each terminal.
3. 8.3ms single half sine-wave, duty cycle = 4 pulses per minute maximum.

RATING AND CHARACTERISTIC CURVES (SMBJ SERIES)

FIG.1-PEAK PULSE POWER DERATING CURVE

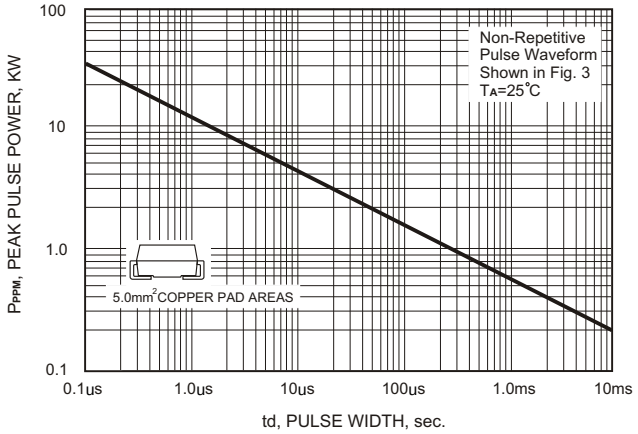


FIG.2-PULSE DERATING CURVE

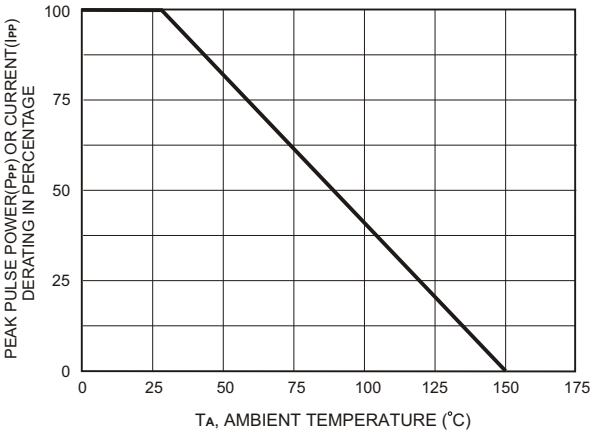


FIG.3-PULSE WAVE FORM

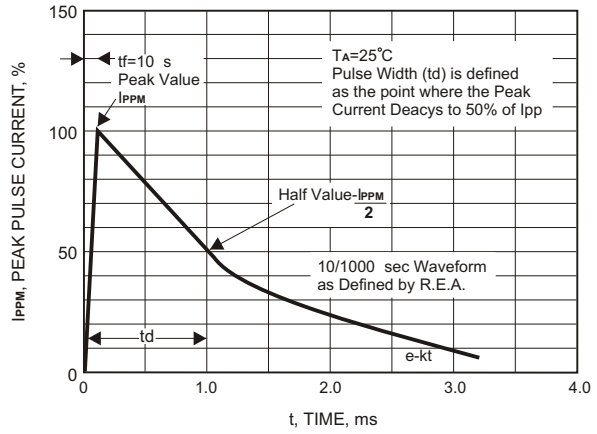


FIG.4-TYPICAL JUNCTION CAPACITANCE

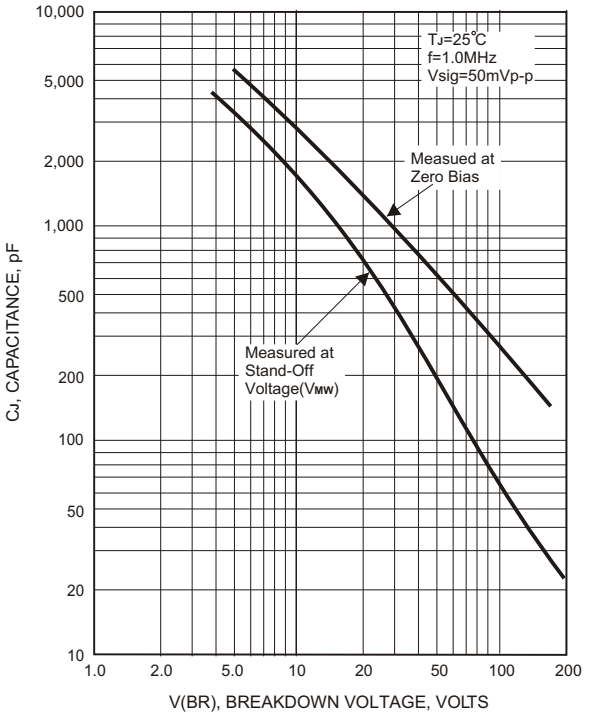
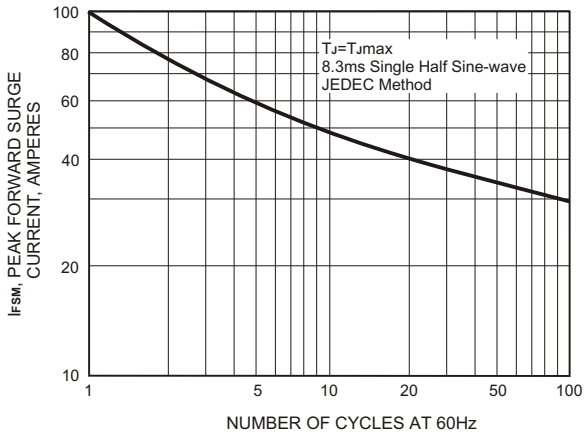


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



600 Watt Surface Mount TVS

PART NUMBER ADD C FOR BI-DIRECTIONAL	REVERSE STAND-OFF VOLTAGE	BREAKDOWN VOLTAGE VBR (V)	BREAKDOWN VOLTAGE VBR (V)	TEST CURRENT IT	MAXIMUM CLAMPING VOLTAGE	PEAK PULSE CURRENT	REVERSE LEAKAGE @ VRWM	MARKING CODE	
See Note 1	VRWM (V)	MIN. @IT	MAX. @IT	(mA)	@Ipp Vc (V)	Ipp (A)	IR(uA)	UNI	BI
SMBJ5.0(C)A	5.0	6.40	7.25	10	9.2	65.2	800	KE	KE
SMBJ6.0(C)A	6.0	6.67	7.67	10	10.3	58.3	800	KG	KG
SMBJ6.5(C)A	6.5	7.22	8.30	10	11.2	53.6	500	KK	AK
SMBJ7.0(C)A	7.0	7.78	8.95	10	12.0	50.0	200	KM	KM
SMBJ7.5(C)A	7.5	8.33	9.58	1	12.9	46.5	100	KP	AP
SMBJ8.0(C)A	8.0	8.89	10.23	1	13.6	44.1	50	KR	AR
SMBJ8.5(C)A	8.5	9.44	10.82	1	14.4	41.7	10	KT	AT
SMBJ9.0(C)A	9.0	10.0	11.50	1	15.4	39.0	5	KV	AV
SMBJ10(C)A	10	11.1	12.80	1	17.0	35.3	5	KX	AX
SMBJ11(C)A	11	12.2	14.00	1	18.2	33.0	5	KZ	KZ
SMBJ12(C)A	12	13.3	15.30	1	19.9	30.2	5	LE	BE
SMBJ13(C)A	13	14.4	16.50	1	21.5	27.9	5	LG	LG
SMBJ14(C)A	14	15.6	17.90	1	23.2	25.8	5	LK	BK
SMBJ15(C)A	15	16.7	19.20	1	24.4	24.0	5	LM	BM
SMBJ16(C)A	16	17.8	20.50	1	26.0	23.1	5	LP	LM
SMBJ17(C)A	17	18.9	21.70	1	27.6	21.7	5	LR	LR
SMBJ18(C)A	18	20.0	23.30	1	29.2	20.5	5	LT	BT
SMBJ20(C)A	20	22.2	25.50	1	32.4	18.5	5	LV	LV
SMBJ22(C)A	22	24.4	28.00	1	35.5	16.9	5	LX	BX
SMBJ24(C)A	24	26.7	30.70	1	38.9	15.4	5	LZ	BZ
SMBJ26(C)A	26	28.9	33.20	1	42.1	14.2	5	ME	CE
SMBJ28(C)A	28	31.1	35.80	1	45.4	13.2	5	MG	MG
SMBJ30(C)A	30	33.3	38.30	1	48.4	12.4	5	MK	CK
SMBJ33(C)A	33	36.7	42.20	1	53.3	11.3	5	MM	CM
SMBJ36(C)A	36	40.0	46.00	1	58.1	10.3	5	MP	CP
SMBJ40(C)A	40	44.4	51.10	1	64.5	9.3	5	MR	CR
SMBJ43(C)A	43	47.8	54.90	1	69.4	8.6	5	MT	CT
SMBJ45(C)A	45	50.0	57.50	1	72.7	8.3	5	MV	MV
SMBJ48(C)A	48	53.3	61.30	1	77.4	7.7	5	MX	MX
SMBJ51(C)A	51	56.7	65.20	1	82.4	7.3	5	MZ	MZ
SMBJ54(C)A	54	60.0	69.00	1	87.1	6.9	5	NE	NE
SMBJ58(C)A	58	64.4	74.10	1	93.6	6.4	5	NG	NG

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See Note 1	VRWM (V)	MIN. @IT	MAX. @IT	(mA)	@Ipp Vc (V)	Ipp (A)	IR(uA)	UNI	BI
SMBJ60(C)A	60	66.7	76.7	1	96.8	6.2	5	NK	NK
SMBJ64(C)A	64	71.1	81.8	1	103	5.8	5	NM	NM
SMBJ70(C)A	70	77.8	89.5	1	113	5.3	5	NP	NP
SMBJ75(C)A	75	83.3	95.8	1	121	4.9	5	NR	NR
SMBJ78(C)A	78	86.7	99.7	1	126	4.7	5	NT	NT
SMBJ85(C)A	85	94.4	108.2	1	137	4.4	5	NV	NV
SMBJ90(C)A	90	100	115.5	1	146	4.1	5	NX	NX
SMBJ100(C)A	100	111	128.0	1	162	3.7	5	NZ	NZ
SMBJ110(C)A	110	122	140.5	1	177	3.4	5	PE	PE
SMBJ120(C)A	120	133	153.0	1	193	3.1	5	PG	PG
SMBJ130(C)A	130	144	165.5	1	209	2.9	5	PK	PK
SMBJ150(C)A	150	167	192.5	1	243	2.5	5	PM	PM
SMBJ160(C)A	160	178	205.0	1	259	2.3	5	PP	PP
SMBJ170(C)A	170	189	217.5	1	275	2.2	5	PR	PR
SMBJ188(C)A	188	209	231.0	1	308	2.0	5	PS	PS
SMBJ200(C)A	200	224	247	1	324	1.9	5	PV	EV
SMBJ220(C)A	220	246	272	1	356	1.7	5	PX	EX
SMBJ250(C)A	250	279	309	1	405	1.5	5	PZ	EZ
SMBJ300(C)A	300	335	371	1	486	1.3	5	PE	FE
SMBJ350(C)A	350	391	432	1	567	1.1	5	PG	FG
SMBJ400(C)A	400	447	494	1	648	0.9	5	PK	FK
SMBJ440(C)A	440	492	543	1	713	0.9	5	PM	FM