SMCJ 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 1μA above 10V
* High temperature soldering guaranteed: 260°C / 10 seconds at terminals

MECHANICAL DATA

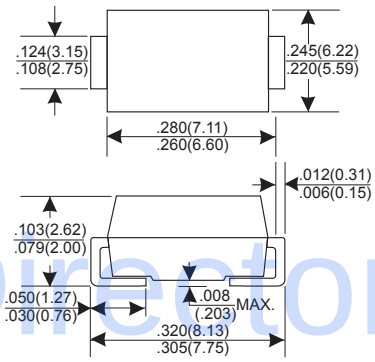
* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
* Lead: Solderable per MIL-STD-202, method 208 guranteed
* Polarity: Color band denotes cathode end except Bidirectional
* Mounting position: Any
* Weight: 0.21 grams

VOLTAGE RANGE

5.0 to 170 Volts

1500 Watts Peak Power

DO-214AB



Dimensions in inches and (millimeters)

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 1500	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 Instantenous Forward Voltage at 35.0A for Unidirectional only	V_F	3.5	Volts
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 8.0mm^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 SMCJ5.0 thru SMCJ170.
2. Electrical characteristics apply in both directions.

RATING AND CHARACTERISTIC CURVES (SMCJ SERIES)

FIG.1-PEAK PULSE POWER DERATING CURVE

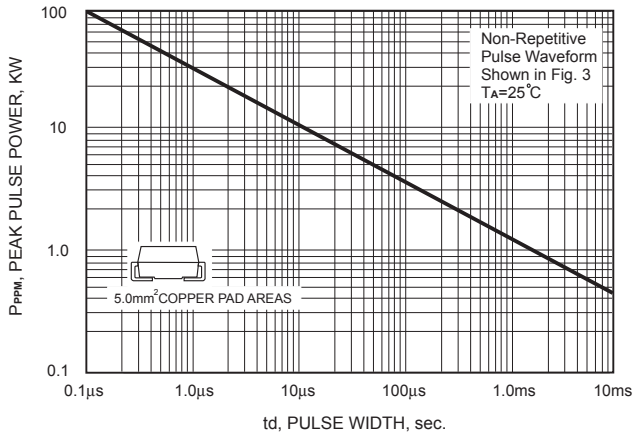


FIG.2-PULSE DERATING CURVE

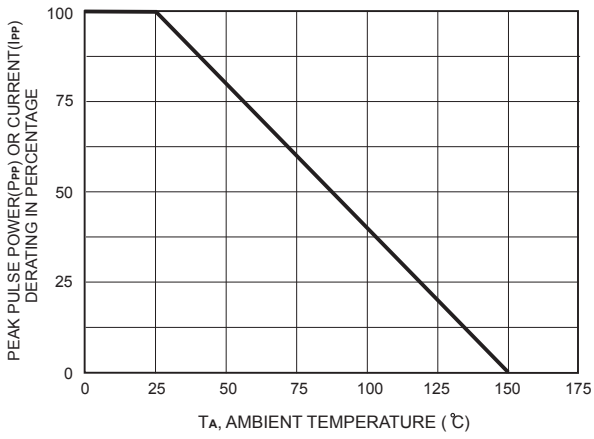


FIG.3-PULSE WAVE FORM

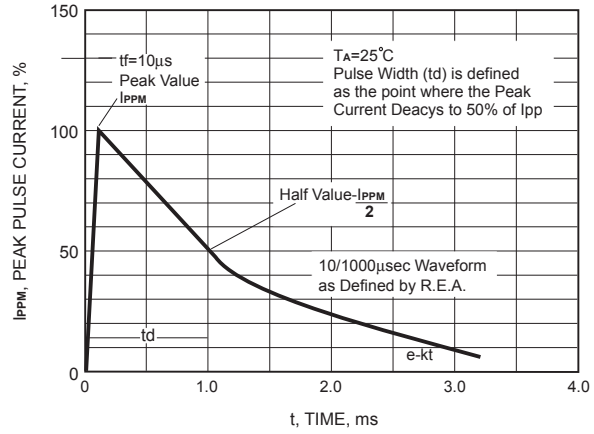


FIG.4-TYPICAL JUNCTION CAPACITANCE

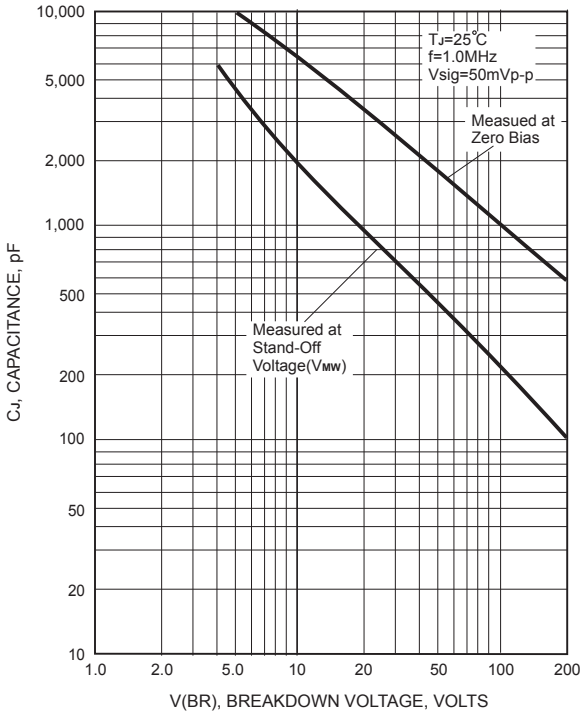
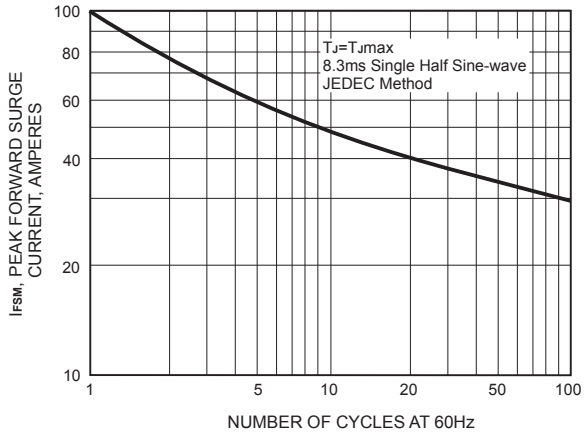


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



1500 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(μA)	UNI	BI
SMCJ5.0(C)	5.0	6.40	7.55	10	9.6	156.2	1000	BDD	GDD
SMCJ5.0(C)A	5.0	6.40	7.25	10	9.2	163.0	1000	BDE	GDE
SMCJ6.0(C)	6.0	6.67	8.45	10	11.4	131.6	1000	BDF	GDF
SMCJ6.0(C)A	6.0	6.67	7.67	10	10.3	145.6	1000	BDG	GDG
SMCJ6.5(C)	6.5	7.22	9.14	10	12.3	122.0	500	BDH	GDH
SMCJ6.5(C)A	6.5	7.22	8.30	10	11.2	133.9	500	BDK	GDK
SMCJ7.0(C)	7.0	7.78	9.86	10	13.3	112.8	200	BDL	GDL
SMCJ7.0(C)A	7.0	7.78	8.95	10	12.0	125.0	200	BDM	GDM
SMCJ7.5(C)	7.5	8.33	10.67	1	14.3	104.9	100	BDN	GDN
SMCJ5.0(C)A	7.5	8.33	9.58	1	12.9	116.3	100	BDP	GDP
SMCJ8.0(C)	8.0	8.89	11.30	1	15.0	100.0	50	BDQ	GDQ
SMCJ8.0(C)A	8.0	8.89	10.23	1	13.6	110.3	50	BDR	GDR
SMCJ8.5(C)	8.5	9.44	11.92	1	15.9	94.3	25	BDS	GDS
SMCJ8.5(C)A	8.5	9.44	10.82	1	14.4	104.2	20	BDT	GDT
SMCJ9.0(C)	9.0	10.0	12.60	1	16.9	88.7	10	BDU	GDU
SMCJ9.0(C)A	9.0	10.0	11.50	1	15.4	97.4	10	BDV	GDV
SMCJ10(C)	10	11.1	14.10	1	18.8	79.8	5	BDW	GDW
SMCJ10(C)A	10	11.1	12.80	1	17.0	88.2	5	BDX	GDX
SMCJ11(C)	11	12.2	15.40	1	20.1	74.6	5	BDY	GDY
SMCJ11(C)A	11	12.2	14.00	1	18.2	82.4	5	BDZ	GDZ
SMCJ12(C)	12	13.3	16.90	1	22.0	68.2	5	BED	GED
SMCJ12(C)A	12	13.3	15.30	1	19.9	75.3	5	BEE	GEE
SMCJ13(C)	13	14.4	18.20	1	23.8	63.0	5	BEF	GEF
SMCJ13(C)A	13	14.4	16.50	1	21.5	69.7	5	BEG	GEG
SMCJ14(C)	14	15.6	19.80	1	25.8	58.1	5	BEH	GEH
SMCJ14(C)A	14	15.6	17.90	1	23.2	64.7	5	BEK	GEK
SMCJ15(C)	15	16.7	21.10	1	26.9	55.8	5	BEL	GEL
SMCJ15(C)A	15	16.7	19.20	1	24.4	61.5	5	BEM	GEM
SMCJ16(C)	16	17.8	22.60	1	28.8	52.1	5	BEN	GEN
SMCJ16(C)A	16	17.8	20.50	1	26.0	57.7	5	BEP	GEP
SMCJ17(C)	17	18.9	23.90	1	30.5	49.2	5	BEQ	GEQ
SMCJ17(C)A	17	18.9	21.70	1	27.6	53.3	5	BER	GER
SMCJ18(C)	18	20.0	25.30	1	32.2	46.6	5	BES	GES
SMCJ18(C)A	18	20.0	23.30	1	29.2	51.4	5	BET	GET
SMCJ20(C)	20	22.2	28.10	1	35.8	41.9	5	BEU	GEU
SMCJ20(C)A	20	22.2	25.50	1	32.4	46.3	5	BEV	GEV
SMCJ22(C)	22	24.4	30.90	1	39.4	38.1	5	BEW	GEW
SMCJ22(C)A	22	24.4	28.00	1	35.5	42.2	5	BEX	GEX
SMCJ24(C)	24	26.7	33.80	1	43.0	34.9	5	BEY	GEY
SMCJ24(C)A	24	26.7	30.70	1	38.9	38.6	5	BEZ	GEZ
SMCJ26(C)	26	28.9	36.60	1	46.6	32.2	5	BFD	GFD
SMCJ26(C)A	26	28.9	33.20	1	42.1	35.6	5	BFE	GFE
SMCJ28(C)	28	31.1	39.40	1	50.0	30.0	5	BFF	GFF
SMCJ28(C)A	28	31.1	35.80	1	45.4	33.0	5	BFG	GFG
SMCJ30(C)	30	33.3	42.20	1	53.5	28.0	5	BFH	GFH
SMCJ30(C)A	30	33.3	38.30	1	48.4	31.0	5	BFK	GFK
SMCJ33(C)	33	36.7	46.50	1	59.0	25.2	5	BFL	GFL
SMBJ33(C)A	33	36.7	42.20	1	53.3	28.1	5	BFM	GFM
SMCJ36(C)	36	40.0	50.70	1	64.3	23.3	5	BFN	GFN
SMCJ36(C)A	36	40.0	46.00	1	58.1	25.8	5	BFP	GFP
SMCJ40(C)	40	44.4	56.30	1	71.4	21.0	5	BFQ	GFQ
SMCJ40(C)A	40	44.4	51.10	1	64.5	23.2	5	BFR	GFR
SMCJ43(C)	43	47.8	60.50	1	76.7	19.6	5	BFS	GFS
SMCJ43(C)A	43	47.8	54.90	1	69.4	21.6	5	BFT	GFT
SMCJ45(C)	45	50.0	63.30	1	80.3	18.7	5	BFU	GFU
SMCJ45(C)A	45	50.0	57.50	1	72.7	20.6	5	BFV	GFV
SMCJ48(C)	48	53.3	67.50	1	85.5	17.5	5	BFW	GFW
SMCJ48(C)A	48	53.3	61.30	1	77.4	19.4	5	BFX	GFX
SMCJ51(C)	51	56.7	71.80	1	91.1	16.5	5	BFY	GFY
SMCJ51(C)A	51	56.7	65.20	1	82.4	18.2	5	BFZ	GFZ
SMCJ54(C)	54	60.0	76.00	1	96.3	15.6	5	BGD	GGD
SMCJ54(C)A	54	60.0	69.00	1	87.1	17.2	5	BGE	GGE
SMCJ58(C)	58	64.4	81.60	1	103	14.6	5	BGF	GGF
SMCJ58(C)A	58	64.4	74.10	1	93.6	16.0	5	BGG	GGG

1500 Watt Surface Mount TVS

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See Note 1	VRWM (V)	MIN. @IT	MAX. @IT	(mA)	@Ipp Vc (V)	Ipp (A)	IR(μA)	UNI	BI
SMCJ60(C)	60	66.7	84.5	1	107	14.0	5	BGH	GGH
SMCJ60(C)A	60	66.7	76.7	1	96.8	15.5	5	BGK	GGK
SMCJ64(C)	64	71.1	90.1	1	114	13.2	5	BGL	GGL
SMCJ64(C)A	64	71.1	81.8	1	103	14.6	5	BGM	GGM
SMCJ70(C)	70	77.8	98.6	1	125	12.0	5	BGN	GGN
SMCJ70(C)A	70	77.8	89.5	1	113	13.3	5	BGP	GGP
SMCJ75(C)	75	83.3	105.7	1	134	11.2	5	BGQ	GGQ
SMCJ75(C)A	75	83.3	95.8	1	121	12.4	5	BGR	GGR
SMCJ78(C)	78	86.7	109.8	1	139	10.8	5	BGS	GGS
SMCJ78(C)A	78	86.7	99.7	1	126	11.4	5	BGT	GGT
SMCJ85(C)	85	94.4	119.2	1	151	9.9	5	BGU	GGU
SMCJ85(C)A	85	94.4	108.2	1	137	10.4	5	BGV	GGV
SMCJ90(C)	90	100	126.5	1	160	9.4	5	BGW	GGW
SMCJ90(C)A	90	100	115.5	1	146	10.3	5	BGX	GGX
SMCJ100(C)	100	111	141.0	1	179	8.4	5	BGY	GGY
SMCJ100(C)A	100	111	128.0	1	162	9.3	5	BGZ	GGZ
SMCJ110(C)	110	122	154.5	1	196	7.7	5	BHD	GHD
SMCJ110(C)A	110	122	140.5	1	177	8.4	5	BHE	GHE
SMCJ120(C)	120	133	169.0	1	214	7.0	5	BHF	GHF
SMCJ120(C)A	120	133	153.0	1	193	7.9	5	BHG	GHG
SMCJ130(C)	130	144	182.5	1	231	6.5	5	BHH	GHH
SMCJ130(C)A	130	144	165.5	1	209	7.2	5	BHK	GHK
SMCJ150(C)	150	167	211.5	1	268	5.6	5	BHL	GHL
SMCJ150(C)A	150	167	192.5	1	243	6.2	5	BHM	GHM
SMCJ160(C)	160	178	226.0	1	287	5.2	5	BHN	GHN
SMCJ160(C)A	160	178	205.0	1	259	5.8	5	BHP	GHP
SMCJ170(C)	160	189	239.5	1	304	4.9	5	BHQ	GHQ
SMCJ170(C)A	170	189	217.5	1	275	5.5	5	BHR	GHR