Elektronische Bauelemente

SMCJ SERIES

VOLTAGE 5.0V ~ 170V

1500W Peak Power Surface Mount TVS

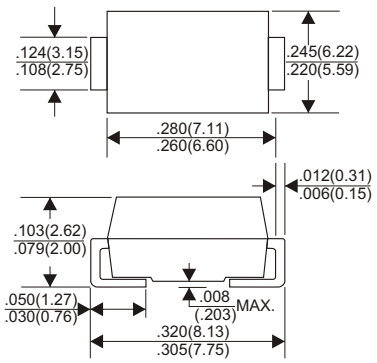
RoHS Compliant Product

A suffix of "-C" specifies halogen & lead-free

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

DO-214AB



Dimensions in inches

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: 0.21 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°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°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 8.0mm²(.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.

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RATING AND CHARACTERISTIC CURVES (SMCJ SERIES)

FIG.1-PEAK PULSE POWER DERATING CURVE

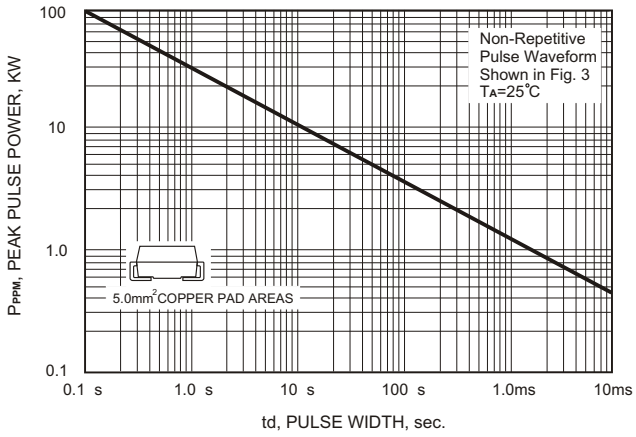


FIG.2-PULSE DERATING CURVE

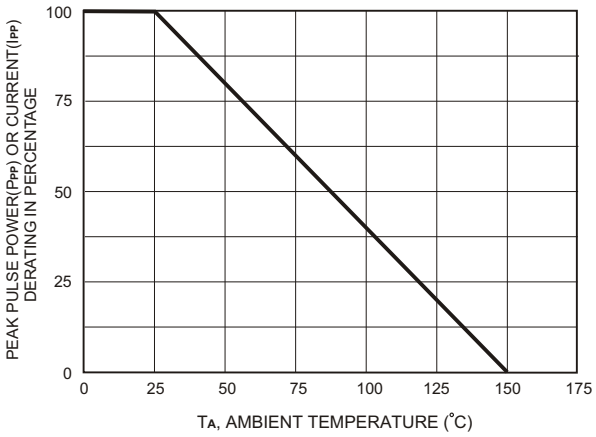


FIG.3-PULSE WAVE FORM

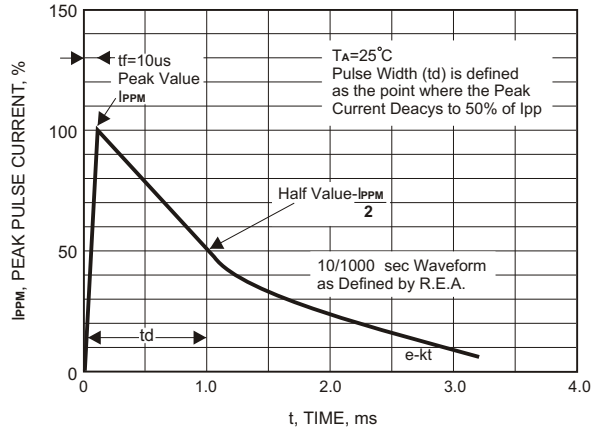


FIG.4-TYPICAL JUNCTION CAPACITANCE

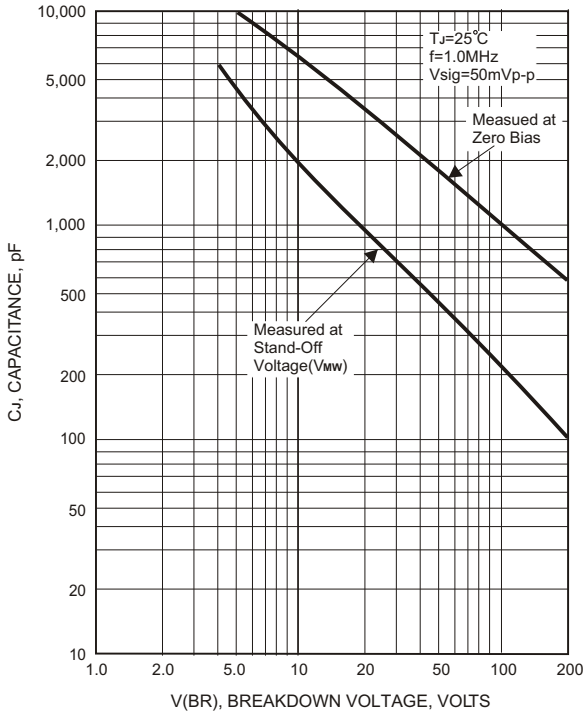
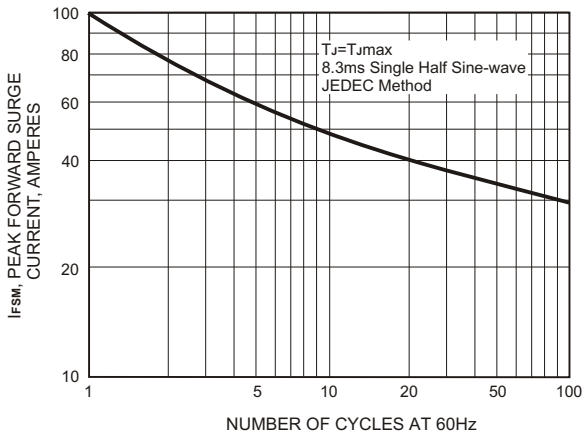


FIG.5-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



Elektronische Bauelemente

SMCJ SERIES

VOLTAGE 5.0V ~ 170V

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PART NUMBER ADD C FOR BI-DIRECTIONAL See Note 1	REVERSE STAND-OFF VOLTAGE V_{RWM} (V)	BREAKDOWN VOLTAGE V_{BR} (V) MIN. @ I_T	BREAKDOWN VOLTAGE V_{BR} (V) MAX. @ I_T	TEST CURRENT I_T (mA)	MAXIMUM CLAMPING VOLTAGE @I_{PP} V_C (V)	PEAK PULSE CURRENT I_{PP} (A)	REVERSE LEAKAGE @V_{RWM} I_R (μA)	MARKING CODE
SMCJ5.0(C)	5.0	6.40	7.55	10	9.6	156.2	1000	CJ05
SMCJ5.0(C)A	5.0	6.40	7.25	10	9.2	163.0	1000	CJ05A
SMCJ6.0(C)	6.0	6.67	8.45	10	11.4	131.6	1000	CJ06
SMCJ6.0(C)A	6.0	6.67	7.67	10	10.3	145.6	1000	CJ06A
SMCJ6.5(C)	6.5	7.22	9.14	10	12.3	122.0	500	CJ6.5
SMCJ6.5(C)A	6.5	7.22	8.30	10	11.2	133.9	500	CJ6.5A
SMCJ7.0(C)	7.0	7.78	9.86	10	13.3	112.8	200	CJ07
SMCJ7.0(C)A	7.0	7.78	8.95	10	12.0	125.0	200	CJ07A
SMCJ7.5(C)	7.5	8.33	10.67	1	14.3	104.9	100	CJ7.5
SMCJ7.5(C)A	7.5	8.33	9.58	1	12.9	116.3	100	CJ7.5A
SMCJ8.0(C)	8.0	8.89	11.30	1	15.0	100.0	50	CJ08
SMCJ8.0(C)A	8.0	8.89	10.23	1	13.6	110.3	50	CJ08A
SMCJ8.5(C)	8.5	9.44	11.92	1	15.9	94.3	25	CJ8.5
SMCJ8.5(C)A	8.5	9.44	10.82	1	14.4	104.2	20	CJ8.5A
SMCJ9.0(C)	9.0	10.0	12.60	1	16.9	88.7	10	CJ09
SMCJ9.0(C)A	9.0	10.0	11.50	1	15.4	97.4	10	CJ09A
SMCJ10(C)	10	11.1	14.10	1	18.8	79.8	5	CJ10
SMCJ10(C)A	10	11.1	12.80	1	17.0	88.2	5	CJ10A
SMCJ11(C)	11	12.2	15.40	1	20.1	74.6	5	CJ11
SMCJ11(C)A	11	12.2	14.00	1	18.2	82.4	5	CJ11A
SMCJ12(C)	12	13.3	16.90	1	22.0	68.2	5	CJ12
SMCJ12(C)A	12	13.3	15.30	1	19.9	75.3	5	CJ12A
SMCJ13(C)	13	14.4	18.20	1	23.8	63.0	5	CJ13
SMCJ13(C)A	13	14.4	16.50	1	21.5	69.7	5	CJ13A
SMCJ14(C)	14	15.6	19.80	1	25.8	58.1	5	CJ14
SMCJ14(C)A	14	15.6	17.90	1	23.2	64.7	5	CJ14A
SMCJ15(C)	15	16.7	21.10	1	26.9	55.8	5	CJ15
SMCJ15(C)A	15	16.7	19.20	1	24.4	61.5	5	CJ15A
SMCJ16(C)	16	17.8	22.60	1	28.8	52.1	5	CJ16
SMCJ16(C)A	16	17.8	20.50	1	26.0	57.7	5	CJ16A
SMCJ17(C)	17	18.9	23.90	1	30.5	49.2	5	CJ17
SMCJ17(C)A	17	18.9	21.70	1	27.6	53.3	5	CJ17A
SMCJ18(C)	18	20.0	25.30	1	32.2	46.6	5	CJ18
SMCJ18(C)A	18	20.0	23.30	1	29.2	51.4	5	CJ18A
SMCJ20(C)	20	22.2	28.10	1	35.8	41.9	5	CJ20
SMCJ20(C)A	20	22.2	25.50	1	32.4	46.3	5	CJ20A
SMCJ22(C)	22	24.4	30.90	1	39.4	38.1	5	CJ22
SMCJ22(C)A	22	24.4	28.00	1	35.5	42.2	5	CJ22A
SMCJ24(C)	24	26.7	33.80	1	43.0	34.9	5	CJ24
SMCJ24(C)A	24	26.7	30.70	1	38.9	38.6	5	CJ24A
SMCJ26(C)	26	28.9	36.60	1	46.6	32.2	5	CJ26
SMCJ26(C)A	26	28.9	33.20	1	42.1	35.6	5	CJ26A
SMCJ28(C)	28	31.1	39.40	1	50.0	30.0	5	CJ28
SMCJ28(C)A	28	31.1	35.80	1	45.4	33.0	5	CJ28A
SMCJ30(C)	30	33.3	42.20	1	53.5	28.0	5	CJ30
SMCJ30(C)A	30	33.3	38.30	1	48.4	31.0	5	CJ30A
SMCJ33(C)	33	36.7	46.50	1	59.0	25.2	5	CJ33
SMBJ33(C)A	33	36.7	42.20	1	53.3	28.1	5	CJ33A
SMCJ36(C)	36	40.0	50.70	1	64.3	23.3	5	CJ36
SMCJ36(C)A	36	40.0	46.00	1	58.1	25.8	5	CJ36A
SMCJ40(C)	40	44.4	56.30	1	71.4	21.0	5	CJ40
SMCJ40(C)A	40	44.4	51.10	1	64.5	23.2	5	CJ40A
SMCJ43(C)	43	47.8	60.50	1	76.7	19.6	5	CJ43
SMCJ43(C)A	43	47.8	54.90	1	69.4	21.6	5	CJ43A
SMCJ45(C)	45	50.0	63.30	1	80.3	18.7	5	CJ45
SMCJ45(C)A	45	50.0	57.50	1	72.7	20.6	5	CJ45A
SMCJ48(C)	48	53.3	67.50	1	85.5	17.5	5	CJ48
SMCJ48(C)A	48	53.3	61.30	1	77.4	19.4	5	CJ48A
SMCJ51(C)	51	56.7	71.80	1	91.1	16.5	5	CJ51
SMCJ51(C)A	51	56.7	65.20	1	82.4	18.2	5	CJ51A
SMCJ54(C)	54	60.0	76.00	1	96.3	15.6	5	CJ54
SMCJ54(C)A	54	60.0	69.00	1	87.1	17.2	5	CJ54A
SMCJ58(C)	58	64.4	81.60	1	103	14.6	5	CJ58
SMCJ58(C)A	58	64.4	74.10	1	93.6	16.0	5	CJ58A

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SMCJ60(C)	60	66.7	84.5	1	107	14.0	5	CJ60
SMCJ60(C)A	60	66.7	76.7	1	96.8	15.5	5	CJ60A
SMCJ64(C)	64	71.1	90.1	1	114	13.2	5	CJ64
SMCJ64(C)A	64	71.1	81.8	1	103	14.6	5	CJ64A
SMCJ70(C)	70	77.8	98.6	1	125	12.0	5	CJ70
SMCJ70(C)A	70	77.8	89.5	1	113	13.3	5	CJ70A
SMCJ75(C)	75	83.3	105.7	1	134	11.2	5	CJ75
SMCJ75(C)A	75	83.3	95.8	1	121	12.4	5	CJ75A
SMCJ78(C)	78	86.7	109.8	1	139	10.8	5	CJ78
SMCJ78(C)A	78	86.7	99.7	1	126	11.4	5	CJ78A
SMCJ85(C)	85	94.4	119.2	1	151	9.9	5	CJ85
SMCJ85(C)A	85	94.4	108.2	1	137	10.4	5	CJ85A
SMCJ90(C)	90	100	126.5	1	160	9.4	5	CJ90
SMCJ90(C)A	90	100	115.5	1	146	10.3	5	CJ90A
SMCJ100(C)	100	111	141.0	1	179	8.4	5	CJ100
SMCJ100(C)A	100	111	128.0	1	162	9.3	5	CJ100A
SMCJ110(C)	110	122	154.5	1	196	7.7	5	CJ110
SMCJ110(C)A	110	122	140.5	1	177	8.4	5	CJ110A
SMCJ120(C)	120	133	169.0	1	214	7.0	5	CJ120
SMCJ120(C)A	120	133	153.0	1	193	7.9	5	CJ120A
SMCJ130(C)	130	144	182.5	1	231	6.5	5	CJ130
SMCJ130(C)A	130	144	165.5	1	209	7.2	5	CJ130A
SMCJ150(C)	150	167	211.5	1	268	5.6	5	CJ150
SMCJ150(C)A	150	167	192.5	1	243	6.2	5	CJ150A
SMCJ160(C)	160	178	226.0	1	287	5.2	5	CJ160
SMCJ160(C)A	160	178	205.0	1	259	5.8	5	CJ160A
SMCJ170(C)	160	189	239.5	1	304	4.9	5	CJ170
SMCJ170(C)A	170	189	217.5	1	275	5.5	5	CJ170A