Elektronische Bauelemente

SMDJ SERIES

5V ~ 190V

3000W Peak Power Surface Mount TVS

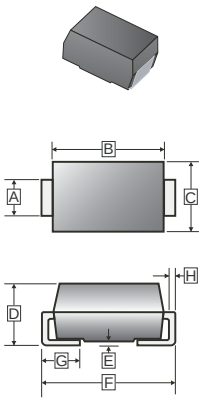
RoHS Compliant Product

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

FEATURES

- Constructed with Glass Passivated Die
- 3000W peak pulse power dissipation
- Excellent clamping capability
- Uni and Bidirectional unit
- Very fast response time.
- Component in accordance to RoHS 2002/95/EC

SMC



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.75	3.15	E	-	.203
B	6.6	7.11	F	7.75	8.13
C	5.59	6.22	G	0.76	1.27
D	2.00	2.62	H	0.15	0.31

MECHANICAL DATA

- Case: DO-214AB(SMC)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free plating (Tin Finish) Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.231 grams (approximate)

PACKAGE INFORMATION

Package	MPQ	LeaderSize
SMC	3K	13' inch

ABSOLUTE MAXIMUM RATINGS

(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 with a 10 / 1000 us waveform	P_{PP}	3000 (Min.)	W
Power dissipation on infinite heatsink @ T_L = 75°C	P_D	6	W
Peak Forward Surge Current, @ 8.3ms single Half Sine-Wave unidirectional only [1]	I_{FSM}	300	A
Maximum Instantaneous Forward voltage at 100A for unidirectional only [2]	V_F	3.5	V
Operating and Storage Temperature Range	T_J, T_{STG}	-55 ~ 150	°C

Notes:

1. Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.
2. V_F < 3.5V for devices of V_{BR} < 200V and V_F < 5.0V for devices of V_{BR} > 201V.

Elektronische Bauelemente

SMDJ SERIES

5V ~ 190V

3000W Peak Power Surface Mount TVS

Part Number (see note)		Reverse Standoff Voltage V_{RRM}	Breakdown Voltage		Test Current	Max Clamping Voltage V_C @I_{PP}	Peak Pulse Current I_{PP}	Reverse Leakage @V_{RRM} I_R
			Min V_{BR} @I_T	Max V_{BR} @ I_T				
Uni -direction	Bi -direction	V	V	V	mA	V	A	μA
SMDJ5.0A	SMDJ5.0CA	5.0	6.40	7.00	10	9.2	326.1	1000
SMDJ6.0A	SMDJ6.0CA	6.0	6.67	7.37	10	10.3	291.3	1000
SMDJ6.5A	SMDJ6.5CA	6.5	7.22	7.98	10	11.2	267.9	500
SMDJ7.0A	SMDJ7.0CA	7.0	7.78	8.60	10	12.0	250.0	200
SMDJ7.5A	SMDJ7.5CA	7.5	8.33	9.21	1	12.9	232.6	100
SMDJ8.0A	SMDJ8.0CA	8.0	8.89	9.83	1	13.6	220.6	50
SMDJ8.5A	SMDJ8.5CA	8.5	9.44	10.4	1	14.4	208.3	25
SMDJ9.0A	SMDJ9.0CA	9.0	10.0	11.1	1	15.4	194.8	10
SMDJ10A	SMDJ10CA	10	11.1	12.3	1	17.0	176.5	5
SMDJ11A	SMDJ11CA	11	12.2	13.5	1	18.2	164.8	5
SMDJ12A	SMDJ12CA	12	13.3	14.7	1	19.9	150.8	5
SMDJ13A	SMDJ13CA	13	14.4	15.9	1	21.5	139.5	5
SMDJ14A	SMDJ14CA	14	15.6	17.2	1	23.2	129.3	5
SMDJ15A	SMDJ15CA	15	16.7	18.5	1	24.4	123.0	5
SMDJ16A	SMDJ16CA	16	17.8	19.7	1	26.0	115.4	5
SMDJ17A	SMDJ17CA	17	18.9	20.9	1	27.6	108.7	5
SMDJ18A	SMDJ18CA	18	20.0	22.1	1	29.2	102.7	5
SMDJ19A	SMDJ19CA	19	21.1	23.3	1	30.8	97.5	5
SMDJ20A	SMDJ20CA	20	22.2	24.5	1	32.4	92.6	5
SMDJ22A	SMDJ22CA	22	24.4	26.9	1	35.5	84.5	5
SMDJ24A	SMDJ24CA	24	26.7	29.5	1	38.9	77.1	5
SMDJ26A	SMDJ26CA	26	28.9	31.9	1	42.1	71.3	5
SMDJ28A	SMDJ28CA	28	31.1	34.4	1	45.4	66.1	5
SMDJ30A	SMDJ30CA	30	33.3	36.8	1	48.4	62	5
SMDJ33A	SMDJ33CA	33	36.7	40.6	1	53.3	56.3	5
SMDJ36A	SMDJ36CA	36	40.0	44.2	1	58.1	51.6	5
SMDJ40A	SMDJ40CA	40	44.4	49.1	1	64.5	46.5	5
SMDJ43A	SMDJ43CA	43	47.8	52.8	1	69.4	43.2	5
SMDJ45A	SMDJ45CA	45	50.0	55.3	1	72.7	41.3	5
SMDJ48A	SMDJ48CA	48	53.3	58.9	1	77.4	38.8	5

Notes：

1. Suffix 'A' denotes 5% tolerance device. Without 'A' denotes 10% tolerance device.
2. Add suffix 'CA' after part number to specify Bi-directional devices.
3. For Bi-Directional devices having V_R of 10 volts and under, the I_R limit is double.

Part Number (see note 1)		Reverse Standoff Voltage V_{RRM}	Breakdown Voltage		Test Current	Max Clamping Voltage V_C @I_{PP}	Peak Pulse Current I_{PP}	Reverse Leakage @V_{RRM} I_R
			Min V_{BR} @I_T	Max V_{BR} @ I_T				
Uni -direction	**Bi -direction**	**V**	**V**	**V**	**mA**	**V**	**A**	**μA**
SMDJ51A	SMDJ51CA	51	56.7	62.7	1	82.4	36.4	5
SMDJ54A	SMDJ54CA	54	60.0	66.3	1	87.1	34.4	5
SMDJ58A	SMDJ58CA	58	64.4	71.2	1	93.6	32.1	5
SMDJ60A	SMDJ60CA	60	66.7	73.7	1	96.8	31.0	5
SMDJ64A	SMDJ64CA	64	71.1	78.6	1	103	29.1	5
SMDJ70A	SMDJ70CA	70	77.8	86.0	1	113	26.5	5
SMDJ75A	SMDJ75CA	75	83.3	92.1	1	121	24.8	5
SMDJ78A	SMDJ78CA	78	86.7	95.8	1	126	23.8	5
SMDJ80A	SMDJ80CA	80	88.8	97.6	1	130	23.1	5
SMDJ85A	SMDJ85CA	85	94.4	104	1	137	21.9	5
SMDJ90A	SMDJ90CA	90	100	111	1	146	20.5	5
SMDJ100A	SMDJ100CA	100	111	123	1	162	18.5	5
SMDJ110A	SMDJ110CA	110	122	135	1	177	16.9	5
SMDJ120A	SMDJ120CA	120	133	147	1	193	15.5	5
SMDJ130A	SMDJ130CA	130	144	159	1	209	14.4	5
SMDJ140A	SMDJ140CA	140	155	171	1	227	13.2	5
SMDJ150A	SMDJ150CA	150	167	185	1	243	12.3	5
SMDJ160A	SMDJ160CA	160	178	197	1	259	11.6	5
SMDJ170A	SMDJ170CA	170	189	209	1	275	10.9	5
SMDJ180A	SMDJ180CA	180	200	220	1	292	10.3	5
SMDJ190A	SMDJ190CA	190	211	232	1	308	9.75	5

Notes：
1. Suffix 'A' denotes 5% tolerance device. Without 'A' denotes 10% tolerance device.
2. Add suffix 'CA' after part number to specify Bi-directional devices.
3. For Bi-Directional devices having V_R of 10 volts and under, the I_R limit is double.

CHARACTERISTIC CURVE

Fig. 1 - Pulse Derating Curve

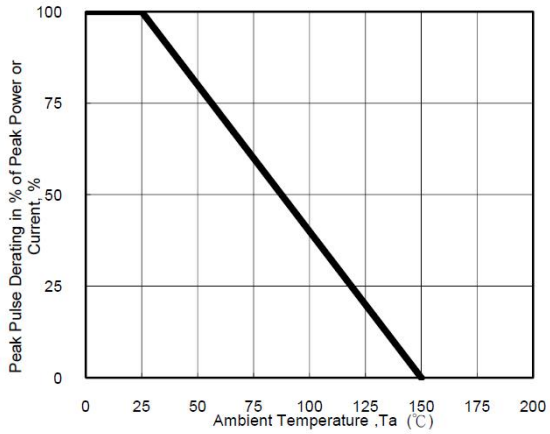


Fig. 2 - Maximum Non-RepetitiveSurge Current

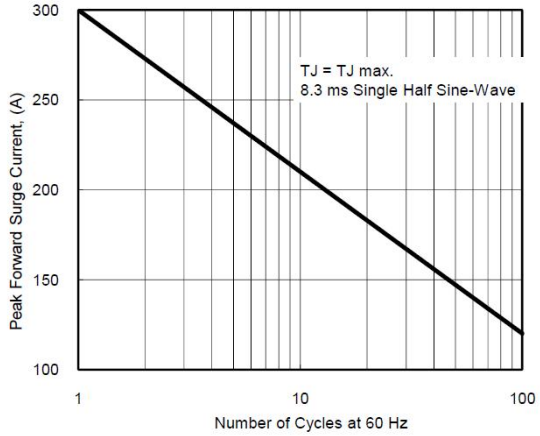


Fig. 3 - Steady State Power Derating Curve

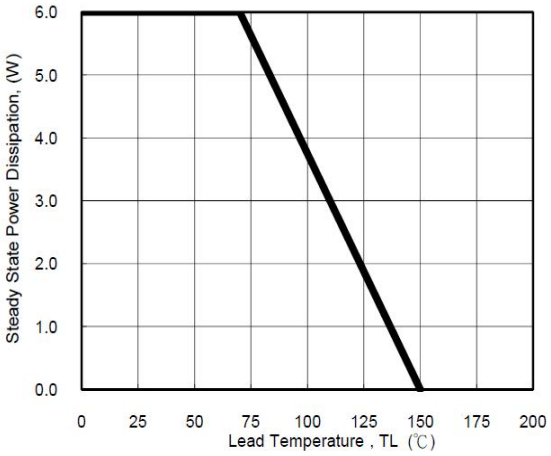


Fig. 4 - Peak Pulse Power Rating Curve

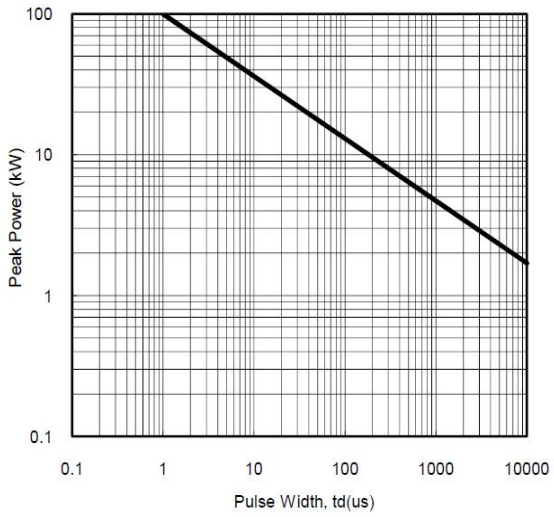


Fig. 5 - Pulse Waveform

