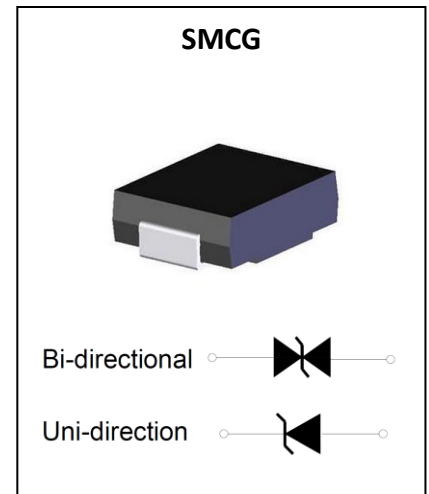


### Feature

- Glass passivated chip
- 3000W peak pulse power capability with a 10/1000us waveform
- Repetitive rate (duty cycle): 0.01%
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with Rohs standard
- Complies with following standards:
  - IEC 61000-4-2(ESD) immunity test level 4
  - Air discharge :  $\pm 15\text{kV}$
  - Contact discharge:  $\pm 8\text{kV}$



### Marking

- SMDJ  
XXCA/XXA  
XX: From 5.0 To 440

### Absolute Maximum Ratings ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak power dissipation with a 10/1000 us waveform <sup>1)</sup>	$P_{PP}$	3000	W
Peak pulse current with a 10/1000 us waveform <sup>1)</sup>	$I_{PP}$	See Next Table	A
Power dissipation on infinite heatsink at $T_L = 75^\circ\text{C}$	$P_D$	6.5	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only <sup>2)</sup>	$I_{FSM}$	300	A
Maximum Instantaneous Forward Voltage at 30A for Unidirectional	$V_F$	5.0	V
Junction Temperature	$T_J$	-55 ~ +150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 ~ +150	$^\circ\text{C}$

- 1) Non-repetitive current pulse per Fig.5 and derated above  $T_A = 25^\circ\text{C}$  per Fig.1
- 2) Measured on 8.3 ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum;

## Electrical Characteristics (T<sub>a</sub>=25°C unless otherwise specified)

Part Number	Part Number	Reverse Stand-off Voltage VR (V)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ IPP (Volts)	Maximum Peak Pulse Current IPP (A) <sup>1)</sup>	Maximum Reverse Leakage IR @ VR (μA)
			MIN	MAX				
SMDJ5.0A	SMDJ5.0CA	5	6.4	7	10	9.2	326.1	800
SMDJ6.0A	SMDJ6.0CA	6	6.67	7.37	10	10.3	291	800
SMDJ6.5A	SMDJ6.5CA	6.5	7.22	7.98	10	11.2	267.9	500
SMDJ7.0A	SMDJ7.0CA	7	7.78	8.6	10	12	250	200
SMDJ7.5A	SMDJ7.5CA	7.5	8.33	9.21	1	12.9	232.6	100
SMDJ8.0A	SMDJ8.0CA	8	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	20
SMDJ9.0A	SMDJ9.0CA	9	10	11.1	1	15.4	194.8	10
SMDJ10A	SMDJ10CA	10	11.1	12.3	1	17	176.5	5
SMDJ11A	SMDJ11CA	11	12.2	13.5	1	18.2	164.8	1
SMDJ12A	SMDJ12CA	12	13.3	14.7	1	19.9	150.8	1
SMDJ13A	SMDJ13CA	13	14.4	15.9	1	21.5	139.5	1
SMDJ14A	SMDJ14CA	14	15.6	17.2	1	23.2	129.3	1
SMDJ15A	SMDJ15CA	15	16.7	18.5	1	24.4	123	1
SMDJ16A	SMDJ16CA	16	17.8	19.7	1	26	115.4	1
SMDJ17A	SMDJ17CA	17	18.9	20.9	1	27.6	108.7	1
SMDJ18A	SMDJ18CA	18	20	22.1	1	29.2	102.7	1
SMDJ20A	SMDJ20CA	20	22.2	24.5	1	32.4	92.6	1
SMDJ22A	SMDJ22CA	22	24.4	26.9	1	35.5	84.5	1
SMDJ24A	SMDJ24CA	24	26.7	29.5	1	38.9	77.1	1
SMDJ26A	SMDJ26CA	26	28.9	31.9	1	42.1	71.3	1
SMDJ28A	SMDJ28CA	28	31.1	34.4	1	45.4	66.1	1
SMDJ30A	SMDJ30CA	30	33.3	36.8	1	48.4	62	1
SMDJ33A	SMDJ33CA	33	36.7	40.6	1	53.3	56.3	1
SMDJ36A	SMDJ36CA	36	40	44.2	1	58.1	51.6	1
SMDJ40A	SMDJ40CA	39	44.4	49.1	1	64.5	46.5	1
SMDJ43A	SMDJ43CA	42	47.8	52.8	1	69.4	43.2	1
SMDJ45A	SMDJ45CA	45	50	55.3	1	72.7	41.3	1
SMDJ48A	SMDJ48CA	48	53.3	58.9	1	77.4	38.8	1
SMDJ51A	SMDJ51CA	51	56.7	62.7	1	82.4	36.4	1
SMDJ54A	SMDJ54CA	54	60	66.3	1	87.1	34.4	1
SMDJ58A	SMDJ58CA	58	64.4	71.2	1	93.6	32.1	1
SMDJ60A	SMDJ60CA	62	66.7	73.7	1	96.8	31	1
SMDJ64A	SMDJ64CA	66	71.1	78.6	1	103	29.1	1
SMDJ70A	SMDJ70CA	70	77.8	86	1	113	26.5	1
SMDJ75A	SMDJ75CA	75	83.3	92.1	1	121	24.8	1
SMDJ78A	SMDJ78CA	78	86.7	95.8	1	126	23.8	1
SMDJ85A	SMDJ85CA	85	94.4	104	1	137	21.9	1

## Electrical Characteristics (T<sub>a</sub>=25°C unless otherwise specified)

Part Number	Part Number	Reverse Stand-off Voltage VR (V)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ IPP (Volts)	Maximum Peak Pulse Current IPP (A)	Maximum Reverse Leakage IR @ VR (μA)
			MIN	MAX				
SMDJ90A	SMDJ90CA	90	100	111	1	146	20.5	1
SMDJ100A	SMDJ100CA	100	111	123	1	162	18.5	1
SMDJ110A	SMDJ110CA	110	122	135	1	177	16.9	1
SMDJ120A	SMDJ120CA	120	133	147	1	193	15.5	1
SMDJ130A	SMDJ130CA	130	144	159	1	209	14.4	1
SMDJ150A	SMDJ150CA	150	167	185	1	243	12.3	1
SMDJ160A	SMDJ160CA	160	178	197	1	259	11.6	1
SMDJ170A	SMDJ170CA	170	189	209	1	275	10.9	1
SMDJ180A	SMDJ180CA	180	201	222	1	292	10.3	1
SMDJ190A	SMDJ190CA	190	211	233	1	306	9.7	1
SMDJ200A	SMDJ200CA	200	224	247	1	324	9.3	1
SMDJ210A	SMDJ210CA	210	233	258	1	324	8.8	1
SMDJ220A	SMDJ220CA	220	246	272	1	356	8.4	1
SMDJ250A	SMDJ250CA	250	279	309	1	405	7.8	1
SMDJ300A	SMDJ300CA	300	335	371	1	486	6.5	1
SMDJ350A	SMDJ350CA	350	391	432	1	567	5.5	1
SMDJ400A	SMDJ400CA	400	447	494	1	648	4.8	1
SMDJ440A	SMDJ440CA	440	492	543	1	713	4.4	1

1) Surge waveform: 10/1000μs

**Typical Characteristics**

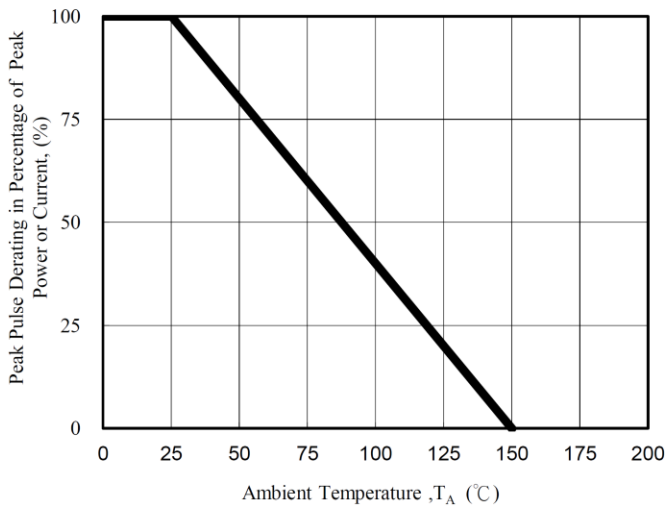


Fig. 1 - Pulse Derating Curve

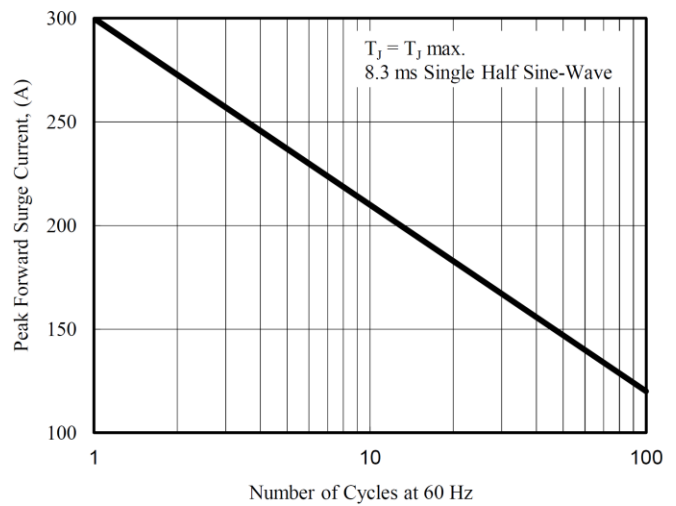


Fig. 2 - Maximum Non-Repetitive Surge Current

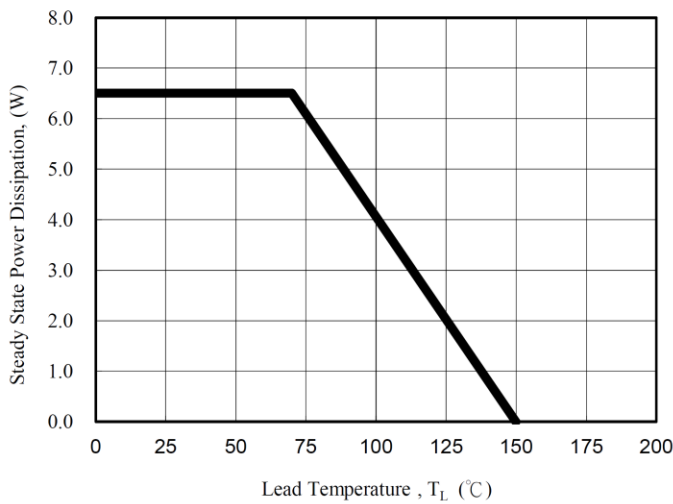


Fig. 3 - Steady State Power Derating Curve

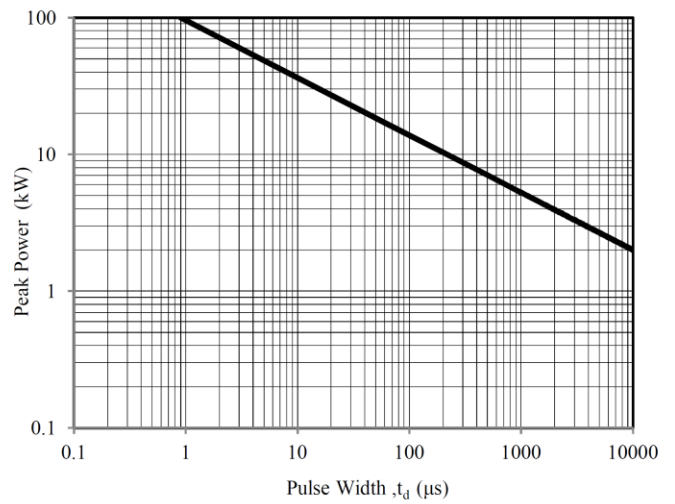


Fig. 4 - Peak Pulse Power Rating Curve

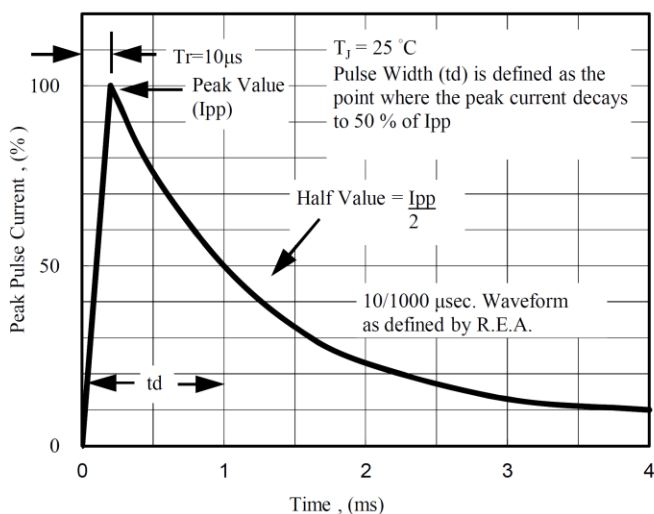


Fig. 5 - Pulse Waveform

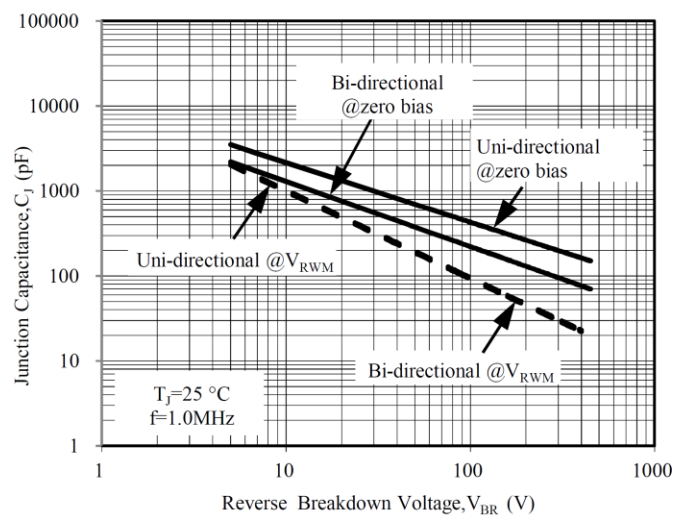
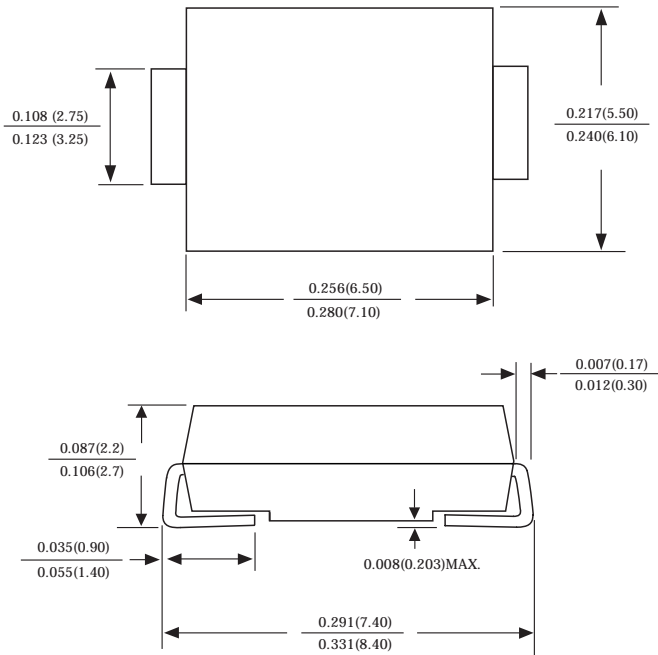


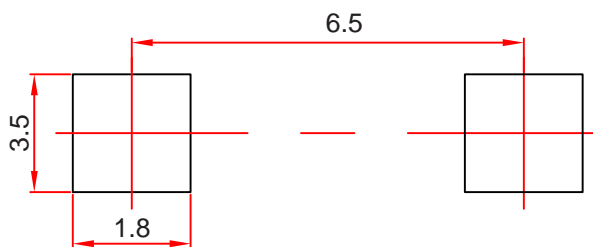
Fig. 6 - Typical Junction Capacitance

**SMCG Package Outline Dimensions**



*Dimensions in inches and (millimeters)*

**SMCG Suggested Pad Layout**



**Note:**

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)