

## Description

The SMCJ series are transient voltage suppressor designed to protect telecommunication equipment against lightning and transients.

## Features

- 1500W Peak Pulse Power (10/1000 $\mu$ s)
- Fast Response Time: <1ns
- Unidirectional or Bidirectional Configuration
- Low Profile Package
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 30$ kV
    - Contact discharge:  $\pm 30$ kV
- RoHS Compliant

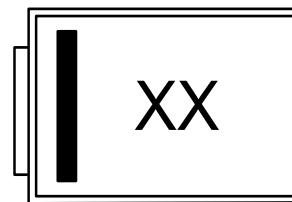
## Mechanical Characteristics

- Package: DO-214AB
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- Terminal Connections: See Diagram Below
- Marking Information: See Below

## Applications

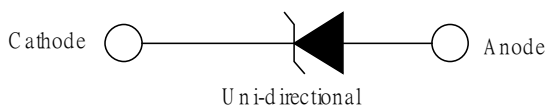
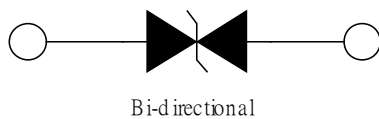
- Telecom
- Computer
- Industrial
- Consumer Electronics

## Marking Information



XX = Device Marking Code  
 Bar Denotes Cathode  
 (for unidirectional only)

## Device Schematic



Device Schematic

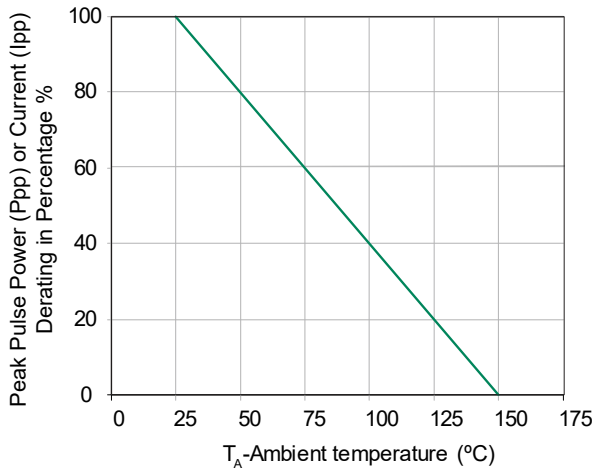
## Ordering Information

Part Number	Packaging	Reel Size
SMCJxx(C)A	3000/Tape & Reel	13 inch

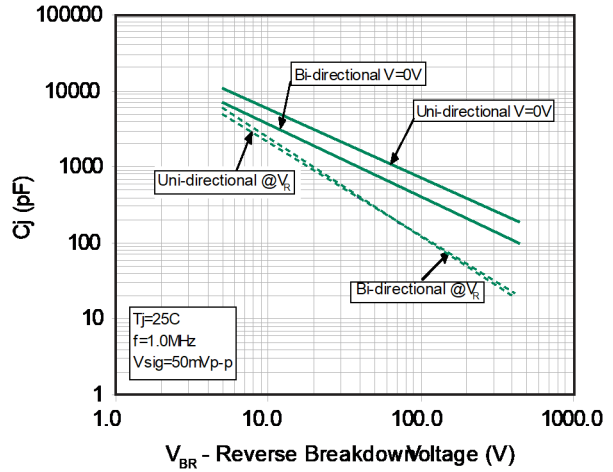
**Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)**

Part Number (Uni)	Part Number (Bi)	Marking				Reverse Stand off Voltage VR (Volts)	Breakdown Voltage VBR (Volts) @ IT		Test Current IT (mA)	Maximum Clamping Voltage VC @ Ipp (V)	Maximum Peak Pulse Current Ipp (A)	Maximum Reverse Leakage IR @ VR (µA)
		UNI		BI			MIN	MAX				
SMCJ5.0A	SMCJ5.0CA	SMCJ5.0A	GDE	SMCJ5.0CA	BDE	5	6.4	7	10	9.2	163	800
SMCJ6.0A	SMCJ6.0CA	SMCJ6.0A	GDG	SMCJ6.0CA	BDG	6	6.67	7.37	10	10.3	145.7	800
SMCJ6.5A	SMCJ6.5CA	SMCJ6.5A	GDK	SMCJ6.5CA	BDK	6.5	7.22	7.98	10	11.2	134	500
SMCJ7.0A	SMCJ7.0CA	SMCJ7.0A	GDM	SMCJ7.0CA	BDM	7	7.78	8.6	10	12	125	200
SMCJ7.5A	SMCJ7.5CA	SMCJ7.5A	GDP	SMCJ7.5CA	BDP	7.5	8.33	9.21	1	12.9	116.3	100
SMCJ8.0A	SMCJ8.0CA	SMCJ8.0A	GDR	SMCJ8.0CA	BDR	8	8.89	9.83	1	13.6	110.3	50
SMCJ8.5A	SMCJ8.5CA	SMCJ8.5A	GDT	SMCJ8.5CA	BDT	8.5	9.44	10.4	1	14.4	104.2	20
SMCJ9.0A	SMCJ9.0CA	SMCJ9.0A	GDV	SMCJ9.0CA	BDV	9	10	11.1	1	15.4	97.4	10
SMCJ10A	SMCJ10CA	SMCJ10A	GDX	SMCJ10CA	BDX	10	11.1	12.3	1	17	88.3	5
SMCJ11A	SMCJ11CA	SMCJ11A	GDZ	SMCJ11CA	BDZ	11	12.2	13.5	1	18.2	82.5	1
SMCJ12A	SMCJ12CA	SMCJ12A	GEE	SMCJ12CA	BEE	12	13.3	14.7	1	19.9	75.4	1
SMCJ13A	SMCJ13CA	SMCJ13A	GEG	SMCJ13CA	BEG	13	14.4	15.9	1	21.5	69.8	1
SMCJ14A	SMCJ14CA	SMCJ14A	GEK	SMCJ14CA	BEK	14	15.6	17.2	1	23.2	64.7	1
SMCJ15A	SMCJ15CA	SMCJ15A	GEM	SMCJ15CA	BEM	15	16.7	18.5	1	24.4	61.5	1
SMCJ16A	SMCJ16CA	SMCJ16A	GEP	SMCJ16CA	BEP	16	17.8	19.7	1	26	57.7	1
SMCJ17A	SMCJ17CA	SMCJ17A	GER	SMCJ17CA	BER	17	18.9	20.9	1	27.6	54.4	1
SMCJ18A	SMCJ18CA	SMCJ18A	GET	SMCJ18CA	BET	18	20	22.1	1	29.2	51.4	1
SMCJ20A	SMCJ20CA	SMCJ20A	GEV	SMCJ20CA	BEV	20	22.2	24.5	1	32.4	46.3	1
SMCJ22A	SMCJ22CA	SMCJ22A	GEX	SMCJ22CA	BEX	22	24.4	26.9	1	35.5	42.3	1
SMCJ24A	SMCJ24CA	SMCJ24A	GEZ	SMCJ24CA	BEZ	24	26.7	29.5	1	38.9	38.6	1
SMCJ26A	SMCJ26CA	SMCJ26A	GFE	SMCJ26CA	BFE	26	28.9	31.9	1	42.1	35.7	1
SMCJ28A	SMCJ28CA	SMCJ28A	GFG	SMCJ28CA	BFG	28	31.1	34.4	1	45.4	33.1	1
SMCJ30A	SMCJ30CA	SMCJ30A	GFK	SMCJ30CA	BFK	30	33.3	36.8	1	48.4	31	1
SMCJ33A	SMCJ33CA	SMCJ33A	GFM	SMCJ33CA	BFM	33	36.7	40.6	1	53.3	28.2	1
SMCJ36A	SMCJ36CA	SMCJ36A	GFP	SMCJ36CA	BFP	36	40	44.2	1	58.1	25.9	1
SMCJ40A	SMCJ40CA	SMCJ40A	GFR	SMCJ40CA	BFR	40	44.4	49.1	1	64.5	23.3	1
SMCJ43A	SMCJ43CA	SMCJ43A	GFT	SMCJ43CA	BFT	43	47.8	52.8	1	69.4	21.7	1
SMCJ45A	SMCJ45CA	SMCJ45A	GFV	SMCJ45CA	BFV	45	50	55.3	1	72.7	20.6	1
SMCJ48A	SMCJ48CA	SMCJ48A	GFX	SMCJ48CA	BFX	48	53.3	58.9	1	77.4	19.4	1
SMCJ51A	SMCJ51CA	SMCJ51A	GFZ	SMCJ51CA	BFZ	51	56.7	62.7	1	82.4	18.2	1
SMCJ54A	SMCJ54CA	SMCJ54A	GGE	SMCJ54CA	BGE	54	60	66.3	1	87.1	17.3	1
SMCJ58A	SMCJ58CA	SMCJ58A	GGG	SMCJ58CA	BGG	58	64.4	71.2	1	93.6	16.1	1
SMCJ60A	SMCJ60CA	SMCJ60A	GGK	SMCJ60CA	BGK	60	66.7	73.7	1	96.8	15.5	1
SMCJ64A	SMCJ64CA	SMCJ64A	GGM	SMCJ64CA	BGM	64	71.1	78.6	1	103	14.6	1
SMCJ70A	SMCJ70CA	SMCJ70A	GGP	SMCJ70CA	BGP	70	77.8	86	1	113	13.3	1
SMCJ75A	SMCJ75CA	SMCJ75A	GGR	SMCJ75CA	BGR	75	83.3	92.1	1	121	12.4	1
SMCJ78A	SMCJ78CA	SMCJ78A	GGT	SMCJ78CA	BGT	78	86.7	95.8	1	126	11.9	1
SMCJ85A	SMCJ85CA	SMCJ85A	GGV	SMCJ85CA	BGV	85	94.4	104	1	137	11	1
SMCJ90A	SMCJ90CA	SMCJ90A	GGX	SMCJ90CA	BGX	90	100	111	1	146	10.3	1
SMCJ100A	SMCJ100CA	SMCJ100A	GGZ	SMCJ100CA	BGZ	100	111	123	1	162	9.3	1
SMCJ110A	SMCJ110CA	SMCJ110A	GHE	SMCJ110CA	BHE	110	122	135	1	177	8.5	1
SMCJ120A	SMCJ120CA	SMCJ120A	GHG	SMCJ120CA	BHG	120	133	147	1	193	7.8	1
SMCJ130A	SMCJ130CA	SMCJ130A	GHK	SMCJ130CA	BHK	130	144	159	1	209	7.2	1
SMCJ150A	SMCJ150CA	SMCJ150A	GHM	SMCJ150CA	BHM	150	167	185	1	243	6.2	1
SMCJ160A	SMCJ160CA	SMCJ160A	GHP	SMCJ160CA	BHP	160	178	197	1	259	5.8	1
SMCJ170A	SMCJ170CA	SMCJ170A	GHR	SMCJ170CA	BHR	170	189	209	1	275	5.5	1
SMCJ180A	SMCJ180CA	SMCJ180A	GHT	SMCJ180CA	BHT	180	201	222	1	292	5.1	1
SMCJ200A	SMCJ200CA	SMCJ200A	GHV	SMCJ200CA	BHV	200	224	247	1	324	4.6	1
SMCJ220A	SMCJ220CA	SMCJ220A	GHX	SMCJ220CA	BHX	220	246	272	1	356	4.2	1
SMCJ250A	SMCJ250CA	SMCJ250A	GHZ	SMCJ250CA	BHZ	250	279	309	1	405	3.7	1
SMCJ300A	SMCJ300CA	SMCJ300A	GJE	SMCJ300CA	BJE	300	335	371	1	486	3.1	1
SMCJ350A	SMCJ350CA	SMCJ350A	GJG	SMCJ350CA	BJG	350	391	432	1	567	2.6	1
SMCJ400A	SMCJ400CA	SMCJ400A	GJK	SMCJ400CA	BJK	400	447	494	1	648	2.3	1
SMCJ440A	SMCJ440CA	SMCJ440A	GJM	SMCJ440CA	BJM	440	492	543	1	713	2.1	1

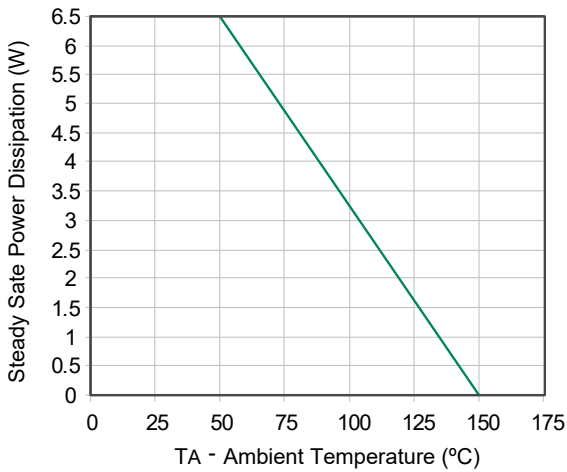
**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**



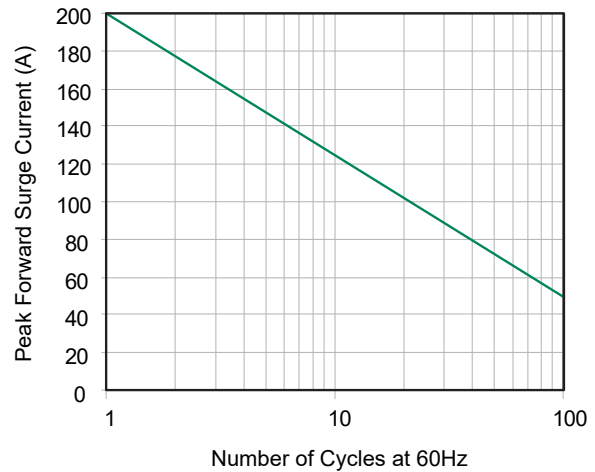
**Pulse Derating Curve**



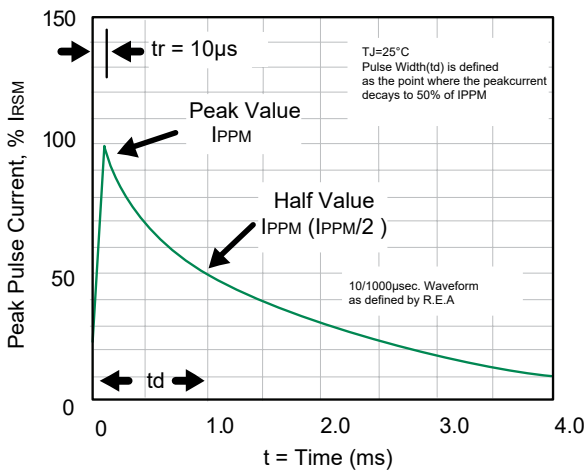
**Typical Junction Capacitance**



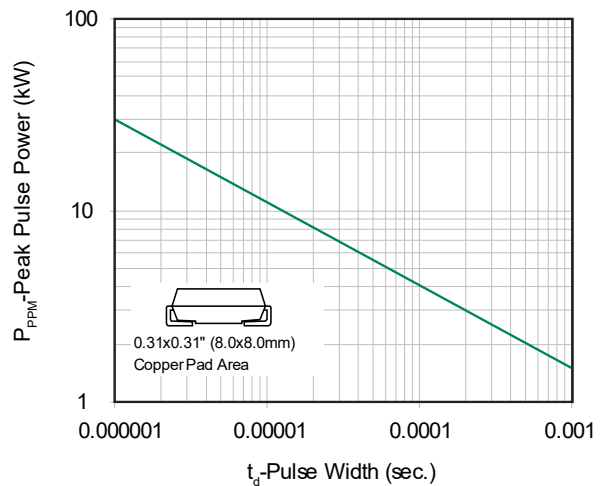
**Steady State Power Dissipation Derating Curve**



**Peak Forward Surge Current**

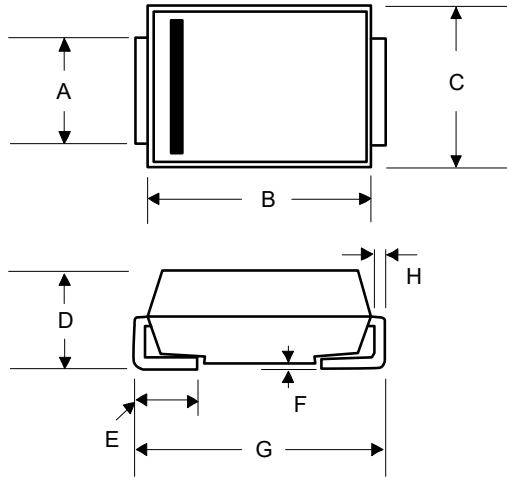


**Pulse Waveform**



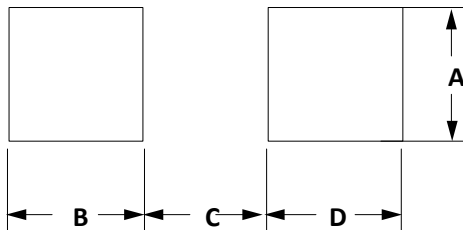
**Peak Pulse Power Rating**

### DO-214AB Package Outline Drawing



SYM	DIMENSIONS			
	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	2.900	3.200	0.114	0.126
B	6.600	7.110	0.260	0.280
C	5.590	6.220	0.220	0.245
D	2.060	2.620	0.079	0.103
E	0.760	1.520	0.030	0.060
F	-	0.203	-	0.008
G	7.750	8.130	0.305	0.320
H	0.152	0.305	0.006	0.012

### Suggested Land Pattern



SYM	DIMENSIONS	
	MILLIMETERS	INCHES
A	3.30	0.129
B	2.40	0.094
C	4.20	0.165
D	2.40	0.094

### Contact Information

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