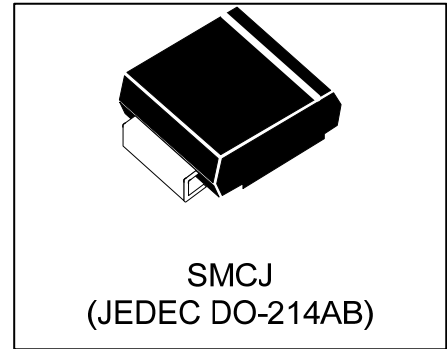


## Features

- 1500 watts Peak Pulse Power (10/1000  $\mu$ s)
- Unidirectional and Bidirectional Protection
- Fast Response Time: Typically < 1ps
- Excellent Clamping Capability
- Glass Passivated Junction
- Built-in Strain relief
- Low inductance
- Low profile package
- High temperature solder:260°C/20 seconds at terminal
- RoHS/WEEE Compliant



## Mechanical Characteristics

- JEDEC DO-214AB(SMCJ) package
- Molding compound flammability rating:  
UL 94V-0
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481

## Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computers & Consumer Electronics
- Industrial Electronics

<b>Absolute Maximum Rating</b>			
<b>Rating</b>	<b>Symbol</b>	<b>Value</b>	<b>Units</b>
Peak Pulse Power (tp =10/1000 $\mu$ s) (see Note1 & 2)	<b>P<sub>PPM</sub></b>	1500	Watts
Peak pulse current (10/1000 $\mu$ s) (see Note1 &2)	<b>I<sub>PPM</sub></b>	See next table	A
Peak forward surge current (see Note3)	<b>I<sub>FSM</sub></b>	200	A
Power dissipation on infinite heat sink TA = 50 °C	<b>P<sub>D</sub></b>	6.5	W
Operating junction temperature range	<b>T<sub>J</sub></b>	-65 to + 150	°C
storage temperature range	<b>T<sub>STG</sub></b>	-65 to + 150	°C

**Electrical Characteristics**

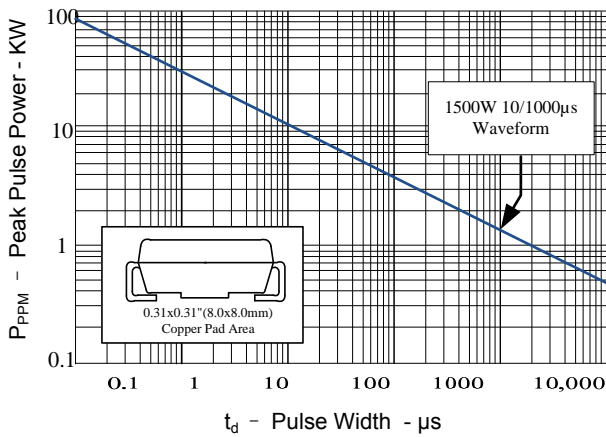
Part Number		Reverse Stand off Voltage $V_{RWM}$ (Volts)	Breakdown Voltage $V_{BR}(Volts)@I_T$		Test Current $I_T$ (mA)	Maximum Clamping Voltage $V_C@I_{PP}$ (Volts)	Maximum Peak Pulse Current $I_{PP}$ (Amps)	Maximum Reverse Leakage $I_R@V_{RWM}$ ( $\mu A$ )
			MIN	MAX				
UNI-POLAR	BI-POLAR							
SMCJ5.0A	SMCJ5.0CA	5.0	6.40	7.00	10	9.2	163	800
SMCJ6.0A	SMCJ6.0CA	6.0	6.67	7.37	10	10.3	145.7	800
SMCJ6.5A	SMCJ6.5CA	6.5	7.22	7.98	10	11.2	134	500
SMCJ7.0A	SMCJ7.0CA	7.0	7.78	8.60	10	12.0	125	200
SMCJ7.5A	SMCJ7.5CA	7.5	8.33	9.21	1	12.9	116.3	100
SMCJ8.0A	SMCJ8.0CA	8.0	8.89	9.83	1	13.6	110.3	50
SMCJ8.5A	SMCJ8.5CA	8.5	9.44	10.40	1	14.4	104.2	20
SMCJ9.0A	SMCJ9.0CA	9.0	10.00	11.10	1	15.4	97.4	10
SMCJ10A	SMCJ10CA	10	11.10	12.30	1	17.0	88.3	5
SMCJ11A	SMCJ11CA	11	12.20	13.50	1	18.2	82.5	1
SMCJ12A	SMCJ12CA	12	13.30	14.7	1	19.9	75.4	1
SMCJ13A	SMCJ13CA	13	14.40	15.90	1	21.5	69.8	1
SMCJ14A	SMCJ14CA	14	15.60	17.20	1	23.2	64.7	1
SMCJ15A	SMCJ15CA	15	16.70	18.50	1	24.4	61.5	1
SMCJ16A	SMCJ16CA	16	17.80	19.70	1	26.0	57.7	1
SMCJ17A	SMCJ17CA	17	18.90	20.90	1	27.6	54.4	1
SMCJ18A	SMCJ18CA	18	20.00	22.10	1	29.2	51.4	1
SMCJ20A	SMCJ20CA	20	22.20	24.50	1	32.4	46.3	1
SMCJ22A	SMCJ22CA	22	24.40	26.90	1	35.5	42.3	1
SMCJ24A	SMCJ24CA	24	26.70	29.50	1	38.9	38.6	1
SMCJ26A	SMCJ26CA	26	28.90	31.90	1	42.1	35.7	1
SMCJ28A	SMCJ28CA	28	31.10	34.40	1	45.4	33.1	1
SMCJ30A	SMCJ30CA	30	33.30	36.80	1	48.4	31	1
SMCJ33A	SMCJ33CA	33	36.70	40.60	1	53.3	28.2	1
SMCJ36A	SMCJ36CA	36	40.00	44.20	1	58.1	25.9	1
SMCJ40A	SMCJ40CA	40	44.40	49.10	1	64.5	23.3	1
SMCJ43A	SMCJ43CA	43	47.80	52.80	1	69.4	21.7	1

**Electrical Characteristics (Cont.)**

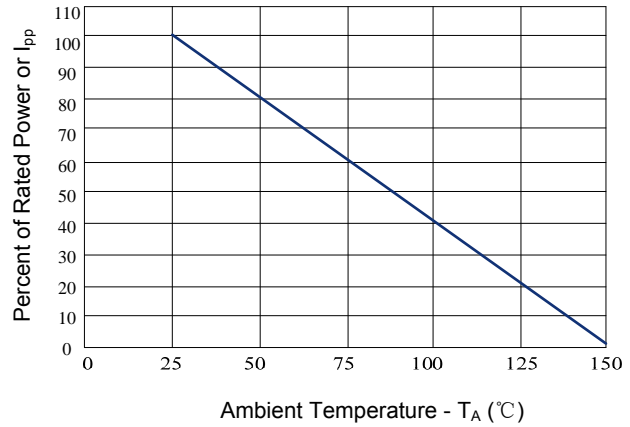
Part Number		Reverse Stand off Voltage $V_{RWM}$ (Volts)	Breakdown Voltage		Test Current $I_T$ (mA)	Maximum Clamping Voltage $V_C@I_{PP}$ (Volts)	Maximum PeakPulse Current $I_{pp}$ (Amps)	Maximum Reverse Leakage $I_R@V_{RWM}$ ( $\mu$ A)
			$V_{BR}(\text{Volts})@I_T$	MIN				
UNI-POLAR	BI-POLAR							
SMCJ45A	SMCJ45CA	45	50.00	55.30	1	72.7	20.6	1
SMCJ48A	SMCJ48CA	48	53.30	58.90	1	77.4	19.4	1
SMCJ51A	SMCJ51CA	51	56.70	62.70	1	82.4	18.2	1
SMCJ54A	SMCJ54CA	54	60.00	66.30	1	87.1	17.3	1
SMCJ58A	SMCJ58CA	58	64.40	71.20	1	93.6	16.1	1
SMCJ60A	SMCJ60CA	60	66.70	73.70	1	96.8	15.5	1
SMCJ64A	SMCJ64CA	64	71.10	78.60	1	103	14.6	1
SMCJ70A	SMCJ70CA	70	77.80	86.00	1	113	13.3	1
SMCJ75A	SMCJ75CA	75	83.30	92.10	1	121	12.4	1
SMCJ78A	SMCJ78CA	78	86.70	95.80	1	126	11.9	1
SMCJ85A	SMCJ85CA	85	94.40	104	1	137	11	1
SMCJ90A	SMCJ90CA	90	100	111	1	146	10.3	1
SMCJ100A	SMCJ100CA	100	111	123	1	162	9.3	1
SMCJ110A	SMCJ110CA	110	122	135	1	177	8.5	1
SMCJ120A	SMCJ120CA	120	133	147	1	193	7.8	1
SMCJ130A	SMCJ130CA	130	144	159	1	209	7.2	1
SMCJ150A	SMCJ150CA	150	167	185	1	243	6.2	1
SMCJ160A	SMCJ160CA	160	178	197	1	259	5.8	1
SMCJ170A	SMCJ170CA	170	189	209	1	275	5.5	1
SMCJ180A	SMCJ180CA	180	201	222	1	292	5.1	1
SMCJ200A	SMCJ200CA	200	224	247	1	324	4.6	1
SMCJ220A	SMCJ220CA	220	246	272	1	356	4.2	1
SMCJ250A	SMCJ250CA	250	279	309	1	405	3.7	1
SMCJ300A	SMCJ300CA	300	335	371	1	486	3.1	1
SMCJ350A	SMCJ350CA	350	391	432	1	567	2.6	1
SMCJ400A	SMCJ400CA	400	447	494	1	648	2.3	1
SMCJ440A	SMCJ440CA	440	492	543	1	713	2.1	1

## Typical Characteristics

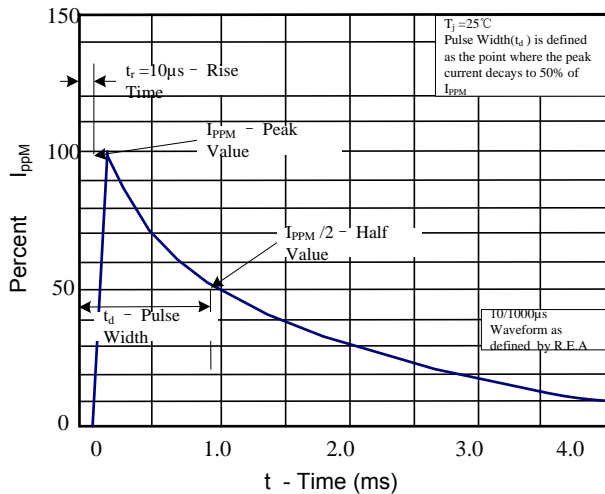
**Figure 1: Peak Pulse Power Rating Curve**



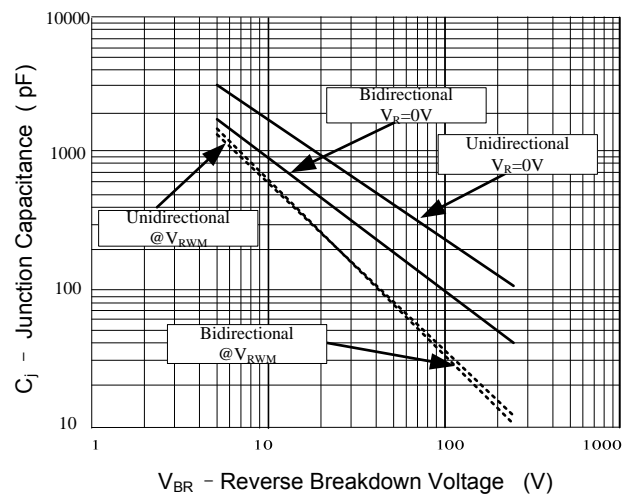
**Figure 2: Pulse Derating Curve**



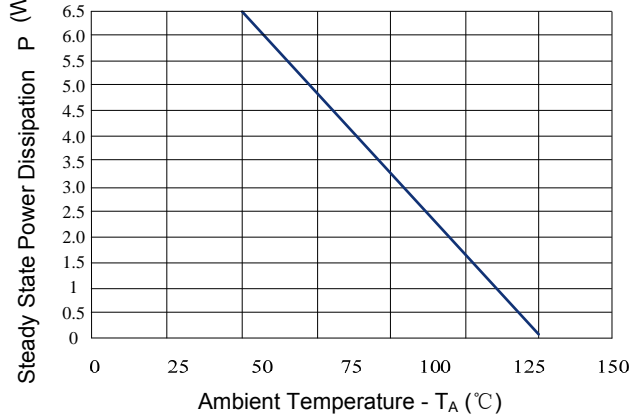
**Figure 3: Pulse Waveform**



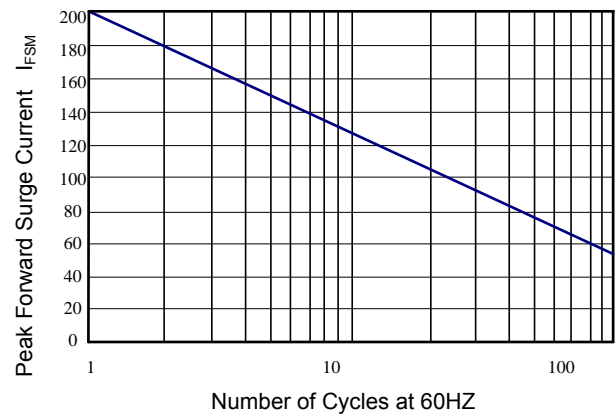
**Figure 4: Typical Junction Capacitance**



**Figure 5: Steady State Power Dissipation Derating Curve**

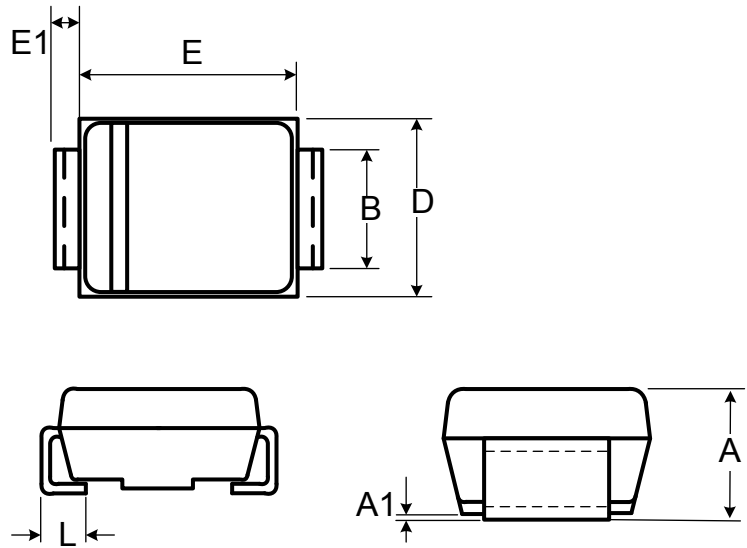


**Figure 6: Maximum Non-Repetitive Forward Surge Current Only Unidirectional**



### Outline Drawing – SMCJ (DO-214AB)

Ref. (mm)	Millimeters	
	Min.	Max.
A	2.060	2.620
A1	-	0.203
B	2.900	3.200
E	6.600	7.110
E1	0.152	0.305
D	5.590	6.220
L	0.760	1.520



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