

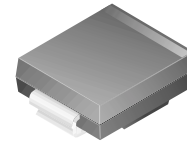


1500W Transient Voltage Suppressors

SMCJ5V0(C)A - SMCJ170(C)A iS Electronics

Features

- Glass passivated junction.
- 1500 W Peak Pulse Power capability on 10/1000 μ s waveform.
- Excellent clamping capability.
- Low incremental surge resistance.
- Fast response time; typically less than 1.0 ps from 0 volts to BV for unidirectional and 5.0 ns for bidirectional.
- Typical I_R less than 1.0 μ A above 10V.
- UL certified, UL #E210467.



SMC/DO-214AB

COLOR BAND DENOTES CATHODE ON UNIDIRECTIONAL DEVICES ONLY. NO COLOR BAND ON BIDIRECTIONAL DEVICES.

DEVICES FOR BIPOLAR APPLICATIONS

Bidirectional types use CA suffix.
Electrical Characteristics apply in both directions.

Absolute Maximum Ratings* @ $T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units
P_{PPM}	Peak Pulse Power Dissipation on 10/1000 μ s waveform	1500	W
I_{PPM}	Peak Pulse Current on 10/1000 μ s waveform	see table	A
I_{FSM}	Non-repetitive Peak Forward Surge Current superimposed on rated load (JEDEC method) (Note 1)	200	A
T_{stg}	Storage Temperature Range	-55 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	+ 150	$^\circ\text{C}$

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Note 1: Measured on 8.3 ms single half-sine wave or equivalent square wave; Duty cycle = 4 pulses per minute maximum.

Electrical Characteristics @T_A = 25°C unless otherwise noted

Uni-directional Bi-directional (C) Device 型号	Reverse Stand-off Voltage V _{RWM} (V) 反向对峙电压	Breakdown Voltage V _{BR} (V) 崩溃电压		Test Current I _T (mA) 测试电流	Clamping Voltage@IPPM V _C (V) 嵌位电压	Peak Pulse Current IPPM (A) 峰值脉冲电流	Reverse Leakage @ V _{RWM} I _R (uA)** 反向漏电
		min	max				
SMCJ5V0(C)A	5.0	6.40	7.0	10	9.2	163.0	1000
SMCJ6V0(C)A	6.0	6.67	7.37	10	10.3	145.6	1000
SMCJ6V5(C)A	6.5	7.22	7.98	10	11.2	133.9	500
SMCJ7V0(C)A	7.0	7.78	8.60	10	12.0	125.0	200
SMCJ7V5(C)A	7.5	8.33	9.21	1	12.9	116.3	100
SMCJ8V0(C)A	8.0	8.89	9.83	1	13.6	110.3	50
SMCJ8V5(C)A	8.5	9.44	10.4	1	14.4	104.2	20
SMCJ9V0(C)A	9.0	10.0	11.1	1	15.4	97.4	10
SMCJ10(C)A	10	11.1	12.3	1	17.0	88.2	5
SMCJ11(C)A	11	12.2	13.5	1	18.2	82.4	5
SMCJ12(C)A	12	13.3	14.7	1	19.9	75.3	5
SMCJ13(C)A	13	14.4	15.9	1	21.5	69.8	5
SMCJ14(C)A	14	15.6	17.2	1	23.2	64.7	5
SMCJ15(C)A	15	16.7	18.5	1	24.4	61.5	5
SMCJ16(C)A	16	17.8	19.7	1	26.0	57.7	5
SMCJ17(C)A	17	18.9	20.9	1	27.6	54.3	5
SMCJ18(C)A	18	20.0	22.1	1	29.2	51.4	5
SMCJ20(C)A	20	22.2	24.5	1	32.4	46.3	5
SMCJ22(C)A	22	24.4	26.9	1	35.5	42.3	5
SMCJ24(C)A	24	26.7	29.5	1	38.9	38.6	5
SMCJ26(C)A	26	28.9	31.9	1	42.1	35.6	5
SMCJ28(C)A	28	31.1	34.4	1	45.4	33.0	5
SMCJ30(C)A	30	33.3	36.8	1	48.4	31.0	5
SMCJ33(C)A	33	36.7	40.6	1	53.3	28.1	5
SMCJ36(C)A	36	40.0	44.2	1	58.1	25.8	5
SMCJ40(C)A	40	44.4	49.1	1	64.5	23.3	5
SMCJ43(C)A	43	47.8	52.8	1	69.4	21.6	5
SMCJ45(C)A	45	50.0	55.3	1	72.7	20.6	5
SMCJ48(C)A	48	53.3	58.9	1	77.4	19.4	5
SMCJ51(C)A	51	56.7	62.7	1	82.4	18.2	5
SMCJ54(C)A	54	60.0	66.3	1	87.1	17.2	5
SMCJ58(C)A	58	64.4	71.2	1	93.6	16.0	5
SMCJ60(C)A	60	66.7	73.7	1	96.8	15.5	5
SMCJ64(C)A	64	71.1	78.6	1	103.0	14.6	5
SMCJ70(C)A	70	77.8	86.0	1	113.0	13.3	5
SMCJ75(C)A	75	83.3	92.1	1	121.0	12.4	5
SMCJ78(C)A	78	86.7	95.8	1	126.0	11.9	5
SMCJ85(C)A	85	94.4	104.0	1	137.0	10.9	5
SMCJ90(C)A	90	100.0	111.0	1	146.0	10.3	5
SMCJ100(C)A	100	111.0	123.0	1	162.0	9.3	5
SMCJ110(C)A	110	122.0	135.0	1	177.0	8.5	5
SMCJ120(C)A	120	133.0	147.0	1	193.0	7.8	5
SMCJ130(C)A	130	144.0	159.0	1	209.0	7.2	5
SMCJ150(C)A	150	167.0	185.0	1	243.0	6.2	5
SMCJ160(C)A	160	178.0	197.0	1	259.0	5.8	5
SMCJ170(C)A	170	189.0	209.0	1	275.0	5.5	5

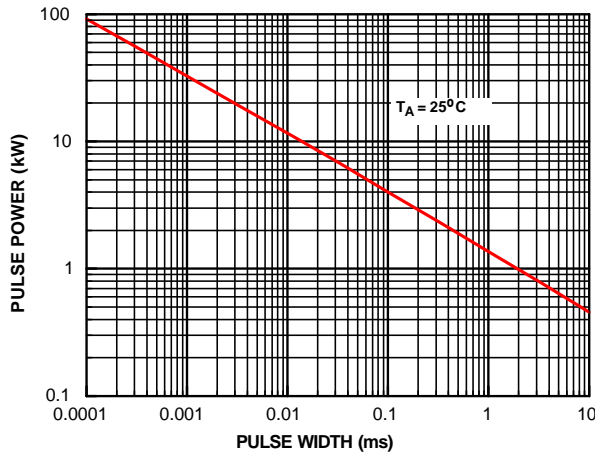
* Color band denotes cathode on unidirectional devices only. No color band on bidirectional devices.

** For bidirectional parts with V_{RWM} < 10V, the I_R max limit is doubled.

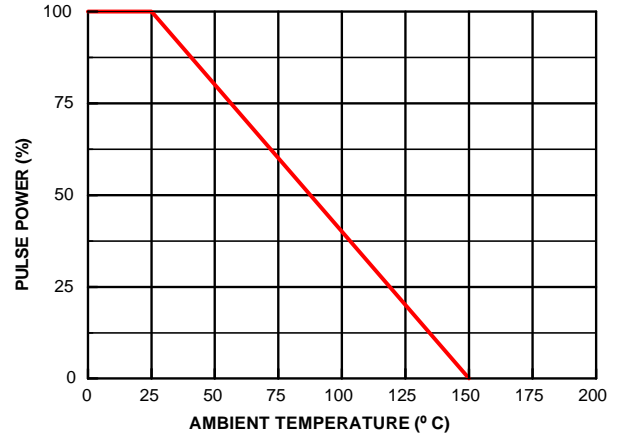


Typical Characteristics

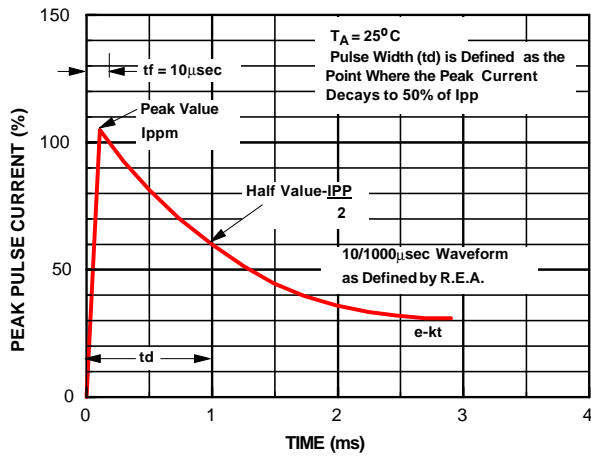
Peak Pulse Power Rating Curve



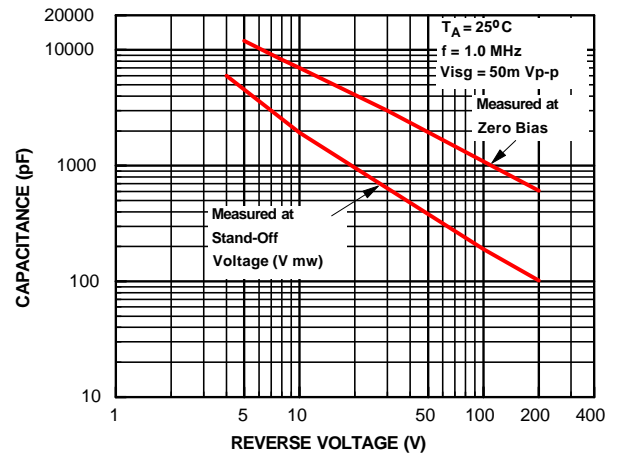
Pulse Derating Curve



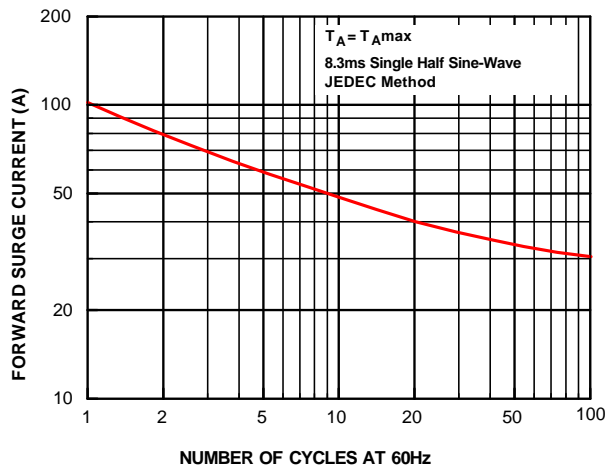
Pulse Waveform



Junction Capacitance



Non-Repetitive Surge Current





PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

