

SMCJ5.0(C)A~SMCJ550(C)A

1500W Surface Mount Transient Voltage Suppressors

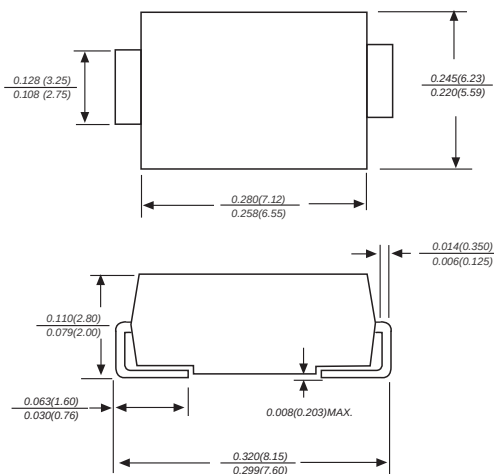
Features

- Glass passivated chip
- 1500 W peak pulse power capability with a 10/1000 us waveform, repetitive rate (duty cycle):0.01 %
- Excellent clamping capability
- Low reverse leakage
- Very fast response time
- Lead and body according with RoHS standard

Mechanical Data

- Case: DO214AB/(SMC) Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end except Bipolar
- Mounting position: Any

DO-214AB/SMC



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	Value	Unit
Peak power dissipation with a 10/1000 us waveform ⁽¹⁾	P _{PP}	1500	W
Peak pulse current with a 10/1000 us waveform ⁽¹⁾	I _{PP}	See Next Table	A
Power dissipation on infinite heatsink at T _L = 50°C	P _D	6.5	W
Peak forward surge current, 8.3 ms single half sinewave unidirectional only ⁽²⁾	I _{FSM}	200	A
Maximum instantaneous forward voltage at 100 A for unidirectional only ⁽³⁾	V _F	3.5/6.5	V
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C
Typical thermal resistance junction to lead	R _{θJL}	15	°C/W
Typical thermal resistance junction to ambient	R _{θJA}	75	°C/W

Note: 1)Non-repetitive current pulse per Fig.5 and derated above T_A= 25 °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 ;

3)V_F<3.5V for devices of V_{BR}<200V and V_F<6.5V for devices of V_{BR}>201V.

Part Number		Reverse Stand-off Voltage	Breakdown Voltage V_{BR} @ I_T		Test Current	Max. Clamping Voltage @ I_{PP}	Max. Peak Pulse Current	Max. Reverse Leakage @ V_{RWM}
UNI-POLAR	BI-POLAR	$V_{RWM}(V)$	Min.(V)	Max.(V)	$I_T(mA)$	$V_{C MAX}(V)$	$I_{PP}(A)$	$I_R(\mu A)$
SMCJ5.0A	SMCJ5.0CA	5.0	6.40	7.00	10	9.2	163.0	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	134.0	500
SMCJ7.0A	SMCJ7.0CA	7.0	7.78	8.60	10	12.0	125.0	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	10.0	11.10	12.30	1	17.0	88.3	5
SMCJ11A	SMCJ11CA	11.0	12.20	13.50	1	18.2	82.5	1
SMCJ12A	SMCJ12CA	12.0	13.30	14.70	1	19.9	75.4	1
SMCJ13A	SMCJ13CA	13.0	14.40	15.90	1	21.5	69.8	1
SMCJ14A	SMCJ14CA	14.0	15.60	17.20	1	23.2	64.7	1
SMCJ15A	SMCJ15CA	15.0	16.70	18.50	1	24.4	61.5	1
SMCJ16A	SMCJ16CA	16.0	17.80	19.70	1	26.0	57.7	1
SMCJ17A	SMCJ17CA	17.0	18.90	20.90	1	27.6	54.4	1
SMCJ18A	SMCJ18CA	18.0	20.00	22.10	1	29.2	51.4	1
SMCJ20A	SMCJ20CA	20.0	22.20	24.50	1	32.4	46.3	1
SMCJ22A	SMCJ22CA	22.0	24.40	26.90	1	35.5	42.3	1
SMCJ24A	SMCJ24CA	24.0	26.70	29.50	1	38.9	38.6	1
SMCJ26A	SMCJ26CA	26.0	28.90	31.90	1	42.1	35.7	1
SMCJ28A	SMCJ28CA	28.0	31.10	34.40	1	45.4	33.1	1
SMCJ30A	SMCJ30CA	30.0	33.30	36.80	1	48.4	31.0	1
SMCJ33A	SMCJ33CA	33.0	36.70	40.60	1	53.3	28.2	1
SMCJ36A	SMCJ36CA	36.0	40.00	44.20	1	58.1	25.9	1
SMCJ40A	SMCJ40CA	40.0	44.40	49.10	1	64.5	23.3	1
SMCJ43A	SMCJ43CA	43.0	47.80	52.80	1	69.4	21.7	1
SMCJ45A	SMCJ45CA	45.0	50.00	55.30	1	72.7	20.6	1
SMCJ48A	SMCJ48CA	48.0	53.30	58.90	1	77.4	19.4	1
SMCJ51A	SMCJ51CA	51.0	56.70	62.70	1	82.4	18.2	1
SMCJ54A	SMCJ54CA	54.0	60.00	66.30	1	87.1	17.3	1
SMCJ58A	SMCJ58CA	58.0	64.40	71.20	1	93.6	16.1	1
SMCJ60A	SMCJ60CA	60.0	66.70	73.70	1	96.8	15.5	1
SMCJ64A	SMCJ64CA	64.0	71.10	78.60	1	103.0	14.6	1
SMCJ70A	SMCJ70CA	70.0	77.80	86.00	1	113.0	13.3	1
SMCJ75A	SMCJ75CA	75.0	83.30	92.10	1	121.0	12.4	1
SMCJ78A	SMCJ78CA	78.0	86.70	95.80	1	126.0	11.9	1
SMCJ85A	SMCJ85CA	85.0	94.4	104.0	1	137.0	11.0	1
SMCJ90A	SMCJ90CA	90.0	100.0	111.0	1	146.0	10.3	1
SMCJ100A	SMCJ100CA	100.0	111.0	123.0	1	162.0	9.3	1
SMCJ110A	SMCJ110CA	110.0	122.0	135.0	1	177.0	8.5	1
SMCJ120A	SMCJ120CA	120.0	133.0	147.0	1	193.0	7.8	1
SMCJ130A	SMCJ130CA	130.0	144.0	159.0	1	209.0	7.2	1
SMCJ150A	SMCJ150CA	150.0	167.0	185.0	1	243.0	6.2	1
SMCJ160A	SMCJ160CA	160.0	178.0	197.0	1	259.0	5.8	1
SMCJ170A	SMCJ170CA	170.0	189.0	209.0	1	275.0	5.5	1
SMCJ180A	SMCJ180CA	180.0	201.0	222.0	1	292.0	5.1	1
SMCJ190A	SMCJ190CA	190.0	209.0	243.0	1	308.0	4.8	1
SMCJ200A	SMCJ200CA	200.0	224.0	247.0	1	324.0	4.6	1
SMCJ210A	SMCJ210CA	210.0	231.0	268.0	1	340.0	4.4	1
SMCJ220A	SMCJ220CA	220.0	246.0	272.0	1	356.0	4.2	1
SMCJ250A	SMCJ250CA	250.0	279.0	309.0	1	405.0	3.7	1
SMCJ300A	SMCJ300CA	300.0	335.0	371.0	1	486.0	3.1	1
SMCJ350A	SMCJ350CA	350.0	391.0	432.0	1	567.0	2.6	1
SMCJ400A	SMCJ400CA	400.0	447.0	494.0	1	648.0	2.3	1
SMCJ440A	SMCJ440CA	440.0	492.0	543.0	1	713.0	2.1	1
SMCJ480A	SMCJ480CA	480.0	536.0	593.0	1	750.0	2.0	1
SMCJ520A	SMCJ520CA	520.0	578.0	640.0	1	762.0	2.0	1
SMCJ550A	SMCJ550CA	550.0	615.0	680.0	1	860.0	1.7	1

Ratings And Characteristic Curves

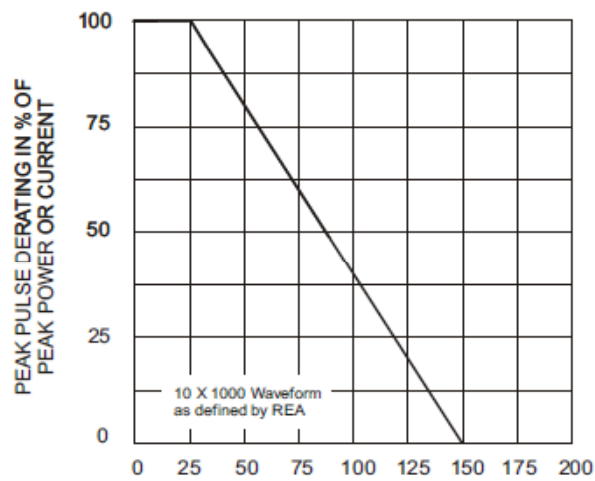


Fig. 1 - Pulse Derating Curve

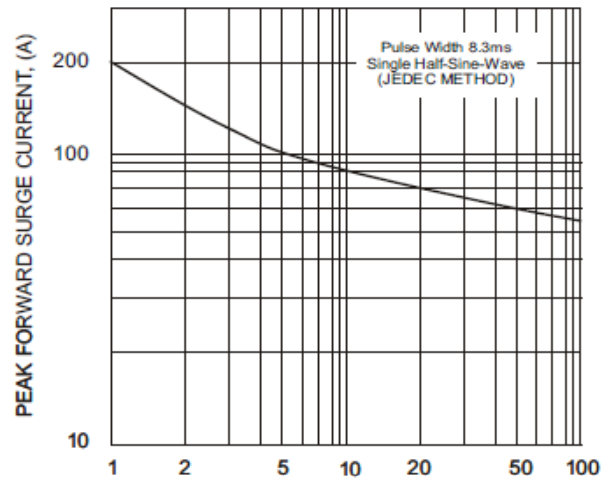


Fig. 2 - Maximum Non-Repetitive Surge Current

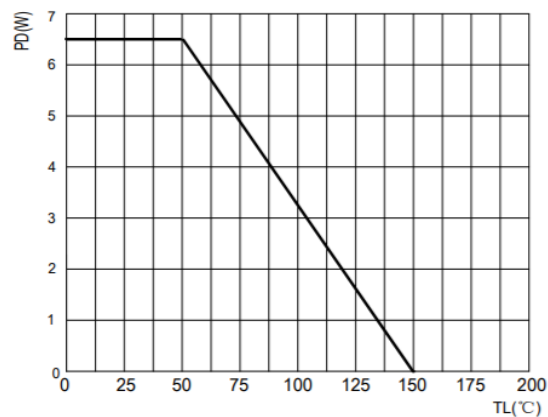


Fig. 3 - Steady State Power Derating Curve

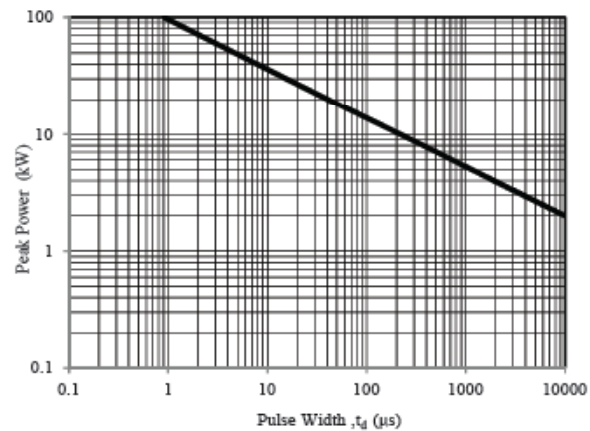


Fig. 4 - Peak Pulse Power Rating Curve

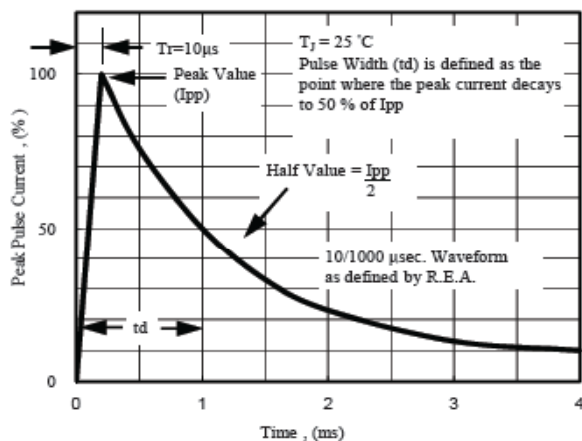


Fig. 5 - Pulse Waveform

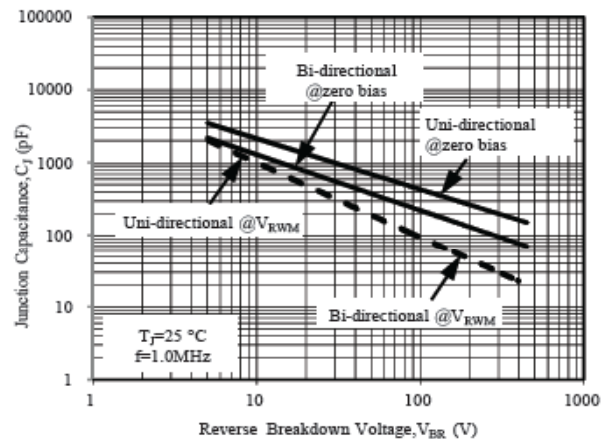


Fig. 6 - Typical Junction Capacitance