



Surface Mount Transient Voltage Suppressor
5000W Peak Power Pulse Voltage 11.0 to 440V



FEATURES

- For surface mounted applications in order to optimize board space.
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering : 260°C /10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

MECHANICAL DATA

- Case : JEDEC DO-214AB, Molded plastic over passivated junction.
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes positive end (cathode)

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C Suffix for types 5.0SMCJ11CA thru types 5.0SMCJ440CA Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.
 For Capacitive load derate current by 20%.

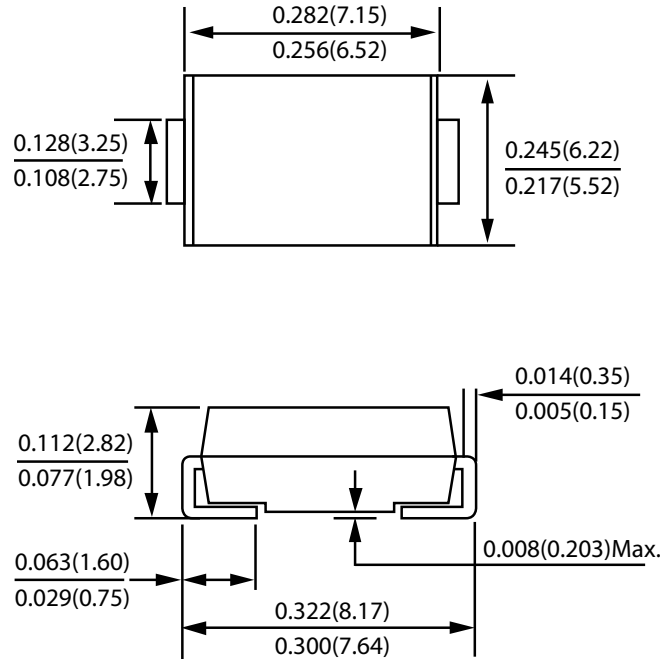
Parameter	Symbol	Value	Unit
Peak Power Dissipation on 10/1000us waveform (Note1)	P _{PP}	5000	W
Peak Forward Surge Current, 8.3ms single half sine - wave uni-directional only (Notes 2)	I _{FSM}	300	A
Peak Pulse Current on 10/1000us waveform (Note1)	I _{PP}	See Next Table	A
Operating and Storage Temperature Range	T _J , T _{STG}	-55~+150	°C

NOTES :

1. Non-repetitive current pulse, per Fig.3 and derated above TA = 25°C per Fig.2.
2. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

SMC/DO-214AB

Unit:inch(mm)



DEVICE CHARACTERISTICS

5.0SMCJ Series

Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max Clamping Voltage	Peak Pulse Current	Package	
			$V_{BR@I_T}$						SMC / DO-214AB	
		V_{RRM}	Min.	Max.	I_T	$I_R@V_{RWM}$	$V_C@I_{PP}$	I_{PP}	UNI	BI
UNI	BI	V	V	V	mA	uA	V	A	UNI	BI
5000W Transient Voltage Suppressor										
5.0SMCJ11A	5.0SMCJ11CA	11.0	12.20	13.50	10	800	18.2	274.73	5C11A	5C11D
5.0SMCJ12A	5.0SMCJ12CA	12.0	13.30	14.70	10	800	19.9	251.26	5C12A	5C12D
5.0SMCJ13A	5.0SMCJ13CA	13.0	14.40	15.90	10	500	21.5	232.56	5C13A	5C13D
5.0SMCJ14A	5.0SMCJ14CA	14.0	15.60	17.20	10	200	23.2	215.52	5C14A	5C14D
5.0SMCJ15A	5.0SMCJ15CA	15.0	16.70	18.50	1	100	24.4	204.92	5C15A	5C15D
5.0SMCJ16A	5.0SMCJ16CA	16.0	17.80	19.70	1	50	26.0	192.31	5C16A	5C16D
5.0SMCJ17A	5.0SMCJ17CA	17.0	18.90	20.90	1	20	27.6	181.16	5C17A	5C17D
5.0SMCJ18A	5.0SMCJ18CA	18.0	20.00	22.10	1	10	29.2	171.23	5C18A	5C18D
5.0SMCJ19A	5.0SMCJ19CA	19.0	21.10	23.30	1	10	30.8	162.44	5C19A	5C19D
5.0SMCJ20A	5.0SMCJ20CA	20.0	22.20	24.50	1	5	32.4	154.32	5C20A	5C20D
5.0SMCJ22A	5.0SMCJ22CA	22.0	24.40	26.90	1	5	35.5	140.85	5C22A	5C22D
5.0SMCJ24A	5.0SMCJ24CA	24.0	26.70	29.50	1	5	38.9	128.53	5C24A	5C24D
5.0SMCJ26A	5.0SMCJ26CA	26.0	28.90	31.90	1	5	42.1	118.76	5C26A	5C26D
5.0SMCJ28A	5.0SMCJ28CA	28.0	31.10	34.40	1	5	45.4	110.13	5C28A	5C28D
5.0SMCJ30A	5.0SMCJ30CA	30.0	33.30	36.80	1	5	48.4	103.31	5C30A	5C30D
5.0SMCJ33A	5.0SMCJ33CA	33.0	36.70	40.60	1	5	53.3	93.81	5C33A	5C33D
5.0SMCJ36A	5.0SMCJ36CA	36.0	40.00	44.20	1	5	58.1	86.06	5C36A	5C36D
5.0SMCJ40A	5.0SMCJ40CA	40.0	44.40	49.10	1	5	64.5	77.52	5C40A	5C40D
5.0SMCJ43A	5.0SMCJ43CA	43.0	47.80	52.80	1	5	69.4	72.05	5C43A	5C43D
5.0SMCJ45A	5.0SMCJ45CA	45.0	50.00	55.30	1	5	72.7	68.78	5C45A	5C45D
5.0SMCJ48A	5.0SMCJ48CA	48.0	53.30	58.90	1	5	77.4	64.60	5C48A	5C48D
5.0SMCJ51A	5.0SMCJ51CA	51.0	56.70	62.70	1	5	82.4	60.68	5C51A	5C51D
5.0SMCJ54A	5.0SMCJ54CA	54.0	60.00	66.30	1	5	87.1	57.41	5C54A	5C54D
5.0SMCJ58A	5.0SMCJ58CA	58.0	64.40	71.20	1	5	93.6	53.42	5C58A	5C58D
5.0SMCJ60A	5.0SMCJ60CA	60.0	66.70	73.70	1	5	96.8	51.65	5C60A	5C60D
5.0SMCJ64A	5.0SMCJ64CA	64.0	71.10	78.60	1	5	103.0	48.54	5C64A	5C64D
5.0SMCJ70A	5.0SMCJ70CA	70.0	77.80	86.00	1	5	113.0	44.25	5C70A	5C70D
5.0SMCJ75A	5.0SMCJ75CA	75.0	83.30	92.10	1	5	121.0	41.32	5C75A	5C75D
5.0SMCJ78A	5.0SMCJ78CA	78.0	86.70	95.80	1	5	126.0	39.68	5C78A	5C78D

DEVICE CHARACTERISTICS

5.0SMCJ Series

Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max Clamping Voltage	Peak Pulse Current	Package	
			$V_{BR@I_T}$						SMC / DO-214AB	
		V_{RRM}	Min.	Max.	I_T	$I_R@V_{RWM}$	$V_C@I_{PP}$	I_{PP}	Device Marking Code	
UNI	BI	V	V	V	mA	uA	V	A	UNI	BI
5000W Transient Voltage Suppressor										
5.0SMCJ80A	5.0SMCJ80CA	80.0	88.80	97.60	1	5	129.6	38.58	5C80A	5C80D
5.0SMCJ85A	5.0SMCJ85CA	85.0	94.40	104.00	1	5	137.0	36.50	5C85A	5C85D
5.0SMCJ90A	5.0SMCJ90CA	90.0	100.00	111.00	1	5	146.0	34.25	5C90A	5C90D
5.0SMCJ100A	5.0SMCJ100CA	100.0	111.00	123.00	1	5	162.0	30.86	5C100A	5C100D
5.0SMCJ110A	5.0SMCJ110CA	110.0	122.00	135.00	1	5	177.0	28.25	5C110A	5C110D
5.0SMCJ120A	5.0SMCJ120CA	120.0	133.00	147.00	1	5	193.0	25.91	5C120A	5C120D
5.0SMCJ130A	5.0SMCJ130CA	130.0	144.00	159.00	1	5	209.0	23.92	5C130A	5C130D
5.0SMCJ140A	5.0SMCJ140CA	140.0	155.00	171.00	1	5	226.8	22.05	5C140A	5C140D
5.0SMCJ150A	5.0SMCJ150CA	150.0	167.00	185.00	1	5	243.0	20.58	5C150A	5C150D
5.0SMCJ160A	5.0SMCJ160CA	160.0	178.00	197.00	1	5	259.0	19.31	5C160A	5C160D
5.0SMCJ170A	5.0SMCJ170CA	170.0	189.00	209.00	1	5	275.0	18.18	5C170A	5C170D
5.0SMCJ180A	5.0SMCJ180CA	180.0	200.00	220.00	1	5	291.6	17.15	5C180A	5C180D
5.0SMCJ190A	5.0SMCJ190CA	190.0	211.00	232.00	1	5	307.8	16.24	5C190A	5C190D
5.0SMCJ200A	5.0SMCJ200CA	200.0	224.00	247.00	1	5	324.0	15.43	5C200A	5C200D
5.0SMCJ220A	5.0SMCJ220CA	220.0	246.00	272.00	1	5	356.0	14.04	5C220A	5C220D
5.0SMCJ250A	5.0SMCJ250CA	250.0	279.00	309.00	1	5	405.0	12.35	5C250A	5C250D
5.0SMCJ300A	5.0SMCJ300CA	300.0	335.00	371.00	1	5	486.0	10.29	5C300A	5C300D
5.0SMCJ350A	5.0SMCJ350CA	350.0	391.00	432.00	1	5	567.0	8.82	5C350A	5C350D
5.0SMCJ400A	5.0SMCJ400CA	400.0	447.00	494.00	1	5	648.0	7.72	5C400A	5C400D
5.0SMCJ440A	5.0SMCJ440CA	440.0	492.00	543.00	1	5	713.0	7.01	5C440A	5C440D

NOTES :

1. Suffix 'A' denotes 5% tolerance device.
2. Add suffix 'C' after part number to specify Bi-directional devices.
3. For Bi-Directional devices having V_R of 20 volts and under, the I_R limit is double

DEVICE CHARACTERISTICS

5.0SMCJ Series

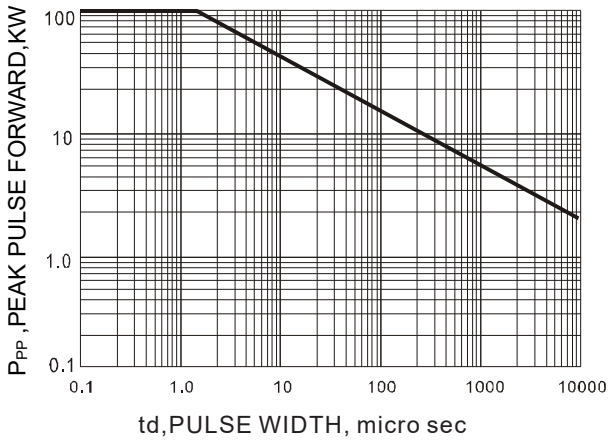


Fig.1 PEAK PULSE POWER RATING CURVE

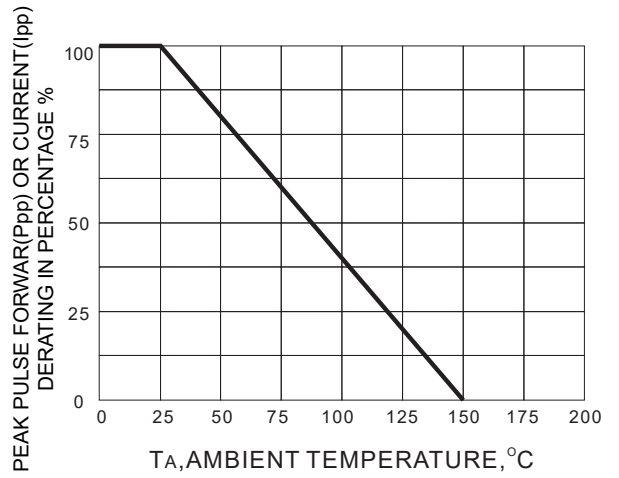


Fig.2 DERATING CURVE

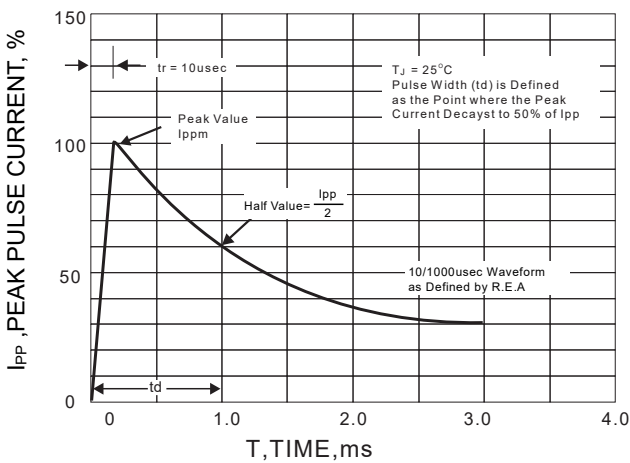


Fig.3 PULSE WAVE FORM

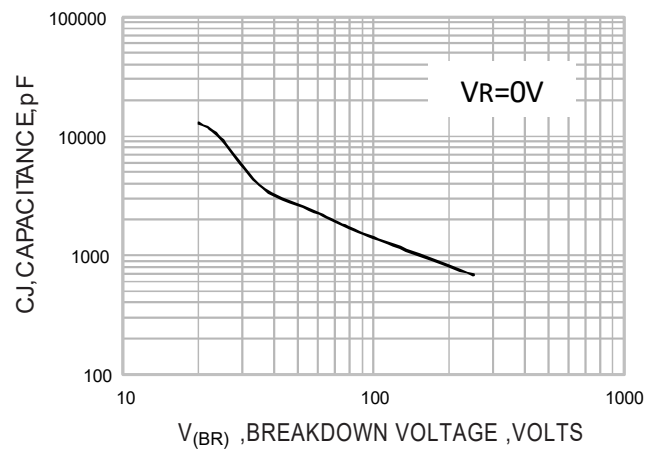


Fig.4 TYPICAL CAPACITANCE

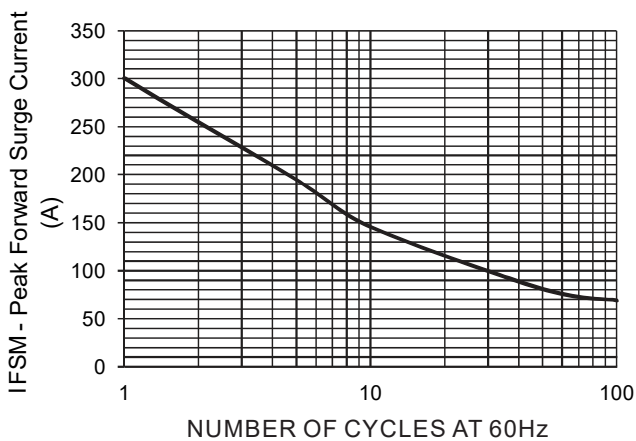


Fig.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT