DATA SHEET

SEMICONDUCTOR

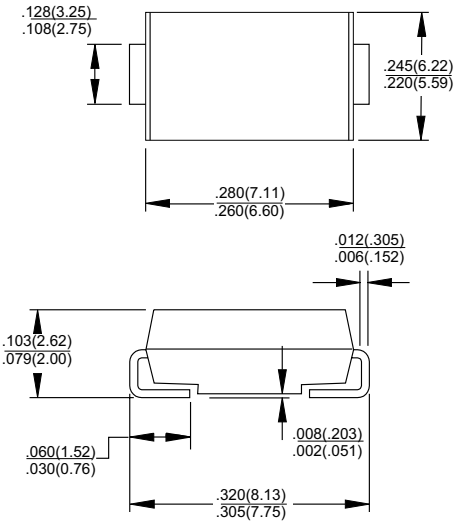
1.5SMC -A Series

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR
VOLTAGE 6.8 to 47 Volts 1500 Watt Peak Power Pulse

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-O
- High temperature soldering : 260°C /10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request
- AEC-Q101 qualified

SMC/DO-214AB Unit:inch(mm)



MECHANICAL DATA

- Case: JEDEC DO-214AB,Molded plastic over passivated junction.
  Base P/N - RoHS compliant, commercial grade
  Base P/N-A - RoHS compliant, AEC-Q101 qualified
- Terminals: Solder plated,solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes positive end (cathode)
- Standard Packaging:16mm tape (EIA-481)
- Quantify Per Reel : 3000 pcs

DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 1.5SMCJ5.0 thru types 1.5SMCJ220.
Electrical characteristics apply in both directions.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

RATING	SYMBOL	VALUE	UNITS
Peak Power Dissipation on 10/1000us waveform (Note1.2 , Fig.1)	Ppp	1500	Watts
Peak Forward Surge Current, 8.3ms single half sine - wave uni- directional only (JEDEC method) (Notes 2,3)	IFSM	200	Amps
Peak Pulse Current on 10/1000s waveform(Note 1 , Fig.3)	IPP	See Table 1	Amps
Operating and Storage Temperature Range	TJ, TSTG	-55 ~ +150	°C

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above TA = 25°C per Fig.2.
2. Mounted on 5.0 mm^2(0.13mm thick) land areas.
3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

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Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage		Max. Clamp Voltage	Peak Pulse Current	Package	
			VBR @ IT		IT	IR@VRWM		Vc@ Ipp	Ipp	SMC/DO-214AB	
		VRWM	Min.	Max.		UNI	BI			Device Marking Code	
UNI	BI	V	V	V	m A	μA	μA	V	A	UNI	BI
1500W Transient Voltage Suppresor											
1.5SMC6.8	1.5SMC6.8C	5.5	6.12	7.48	10	1000.0	2000.0	10.8	139.0	TC6.8V	TC6.8C
1.5SMC6.8A	1.5SMC6.8CA	5.8	6.45	7.14	10	1000.0	2000.0	10.5	143.0	TC6.8A	TC6.8D
1.5SMC7.5	1.5SMC7.5C	6.1	6.75	8.25	10	500.0	1000.0	11.7	128.0	TC7.5V	TC7.5C
1.5SMC7.5A	1.5SMC7.5CA	6.4	7.13	7.88	10	500.0	1000.0	11.3	133.0	TC7.5A	TC7.5D
1.5SMC8.2	1.5SMC8.2C	6.6	7.38	9.02	10	200.0	400.0	12.5	120.0	TC8.2V	TC8.2C
1.5SMC8.2A	1.5SMC8.2CA	7.0	7.79	8.61	10	200.0	400.0	12.1	124.0	TC8.2A	TC8.2D
1.5SMC9.1	1.5SMC9.1C	7.4	8.19	10.00	1	50.0	100.0	13.8	109.0	TC9.1V	TC9.1C
1.5SMC9.1A	1.5SMC9.1CA	7.8	8.65	9.55	1	50.0	100.0	13.4	112.0	TC9.1A	TC9.1D
1.5SMC10	1.5SMC10C	8.1	9.00	11.00	1	10.0	20.0	15.0	100.0	TC10V	TC10C
1.5SMC10A	1.5SMC10CA	8.6	9.50	10.50	1	10.0	20.0	14.5	103.0	TC10A	TC10D
1.5SMC11	1.5SMC11C	8.9	9.90	12.10	1	5.0	10.0	16.2	92.6	TC11V	TC11C
1.5SMC11A	1.5SMC11CA	9.4	10.50	11.60	1	5.0	10.0	15.6	96.2	TC11A	TC11D
1.5SMC12	1.5SMC12C	9.7	10.80	13.20	1	5.0	10.0	17.3	86.7	TC12V	TC12C
1.5SMC12A	1.5SMC12CA	10.2	11.40	12.60	1	5.0	5.0	16.7	89.8	TC12A	TC12D
1.5SMC13	1.5SMC13C	10.5	11.70	14.30	1	5.0	5.0	19.0	78.9	TC13V	TC13C
1.5SMC13A	1.5SMC13CA	11.1	12.40	13.70	1	5.0	5.0	18.2	82.4	TC13A	TC13D
1.5SMC15	1.5SMC15C	12.1	13.50	16.50	1	5.0	5.0	22.0	68.2	TC15V	TC15C
1.5SMC15A	1.5SMC15CA	12.8	14.30	15.80	1	5.0	5.0	21.2	70.8	TC15A	TC15D
1.5SMC16	1.5SMC16C	12.9	14.40	17.60	1	5.0	5.0	23.5	63.8	TC16V	TC16C
1.5SMC16A	1.5SMC16CA	13.6	15.20	16.80	1	5.0	5.0	22.5	66.7	TC16A	TC16D
1.5SMC18	1.5SMC18C	14.5	16.20	19.80	1	5.0	5.0	26.5	56.6	TC18V	TC18C
1.5SMC18A	1.5SMC18CA	15.3	17.10	18.90	1	5.0	5.0	25.2	59.5	TC18A	TC18D
1.5SMC20	1.5SMC20C	16.2	18.00	22.00	1	5.0	5.0	29.1	51.5	TC20V	TC20C
1.5SMC20A	1.5SMC20CA	17.1	19.00	21.00	1	5.0	5.0	27.7	54.2	TC20A	TC20D
1.5SMC22	1.5SMC22C	17.8	19.80	24.20	1	5.0	5.0	31.9	47.0	TC22V	TC22C
1.5SMC22A	1.5SMC22CA	18.8	20.90	23.10	1	5.0	5.0	30.6	49.0	TC22A	TC22D
1.5SMC24	1.5SMC24C	19.4	21.60	26.40	1	5.0	5.0	34.7	43.2	TC24V	TC24C
1.5SMC24A	1.5SMC24CA	20.5	22.80	25.20	1	5.0	5.0	33.2	45.2	TC24A	TC24D
1.5SMC27	1.5SMC27C	21.8	24.30	29.70	1	5.0	5.0	39.1	38.4	TC27V	TC27C
1.5SMC27A	1.5SMC27CA	23.1	25.70	28.40	1	5.0	5.0	37.5	40.0	TC27A	TC27D
1.5SMC30	1.5SMC30C	24.3	27.00	33.00	1	5.0	5.0	43.5	34.5	TC30V	TC30C
1.5SMC30A	1.5SMC30CA	25.6	28.50	31.50	1	5.0	5.0	41.4	36.2	TC30A	TC30D
1.5SMC33	1.5SMC33C	26.8	29.70	36.30	1	5.0	5.0	47.7	31.4	TC33V	TC33C
1.5SMC33A	1.5SMC33CA	28.2	31.40	34.70	1	5.0	5.0	45.7	32.8	TC33A	TC33D
1.5SMC36	1.5SMC36C	29.1	32.40	39.60	1	5.0	5.0	52.0	28.8	TC36V	TC36C
1.5SMC36A	1.5SMC36CA	30.8	34.20	37.80	1	5.0	5.0	49.9	31.0	TC36A	TC36D
1.5SMC39	1.5SMC39C	31.6	35.10	42.90	1	5.0	5.0	56.4	26.6	TC39V	TC39C
1.5SMC39A	1.5SMC39CA	33.3	37.10	41.00	1	5.0	5.0	53.9	27.8	TC39A	TC39D
1.5SMC43	1.5SMC43C	34.8	38.70	47.30	1	5.0	5.0	61.9	24.2	TC43V	TC43C
1.5SMC43A	1.5SMC43CA	36.8	40.90	45.20	1	5.0	5.0	59.3	25.3	TC43A	TC43D
1.5SMC47	1.5SMC47C	38.1	42.30	51.70	1	5.0	5.0	67.8	22.1	TC47V	TC47C
1.5SMC47A	1.5SMC47CA	40.2	44.70	49.40	1	5.0	5.0	64.8	23.1	TC47A	TC47D

DEVICE CHARACTERISTICS

1.5SMC -A Series

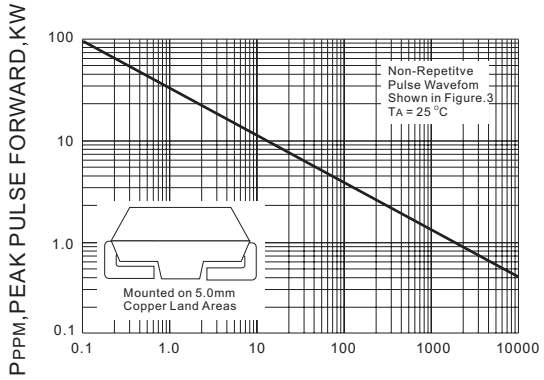


Fig.1 PEAK PULSE POWER RATING CURVE

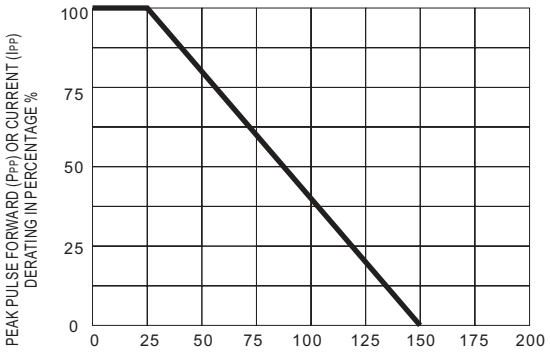


Fig.2 DERATING CURVE

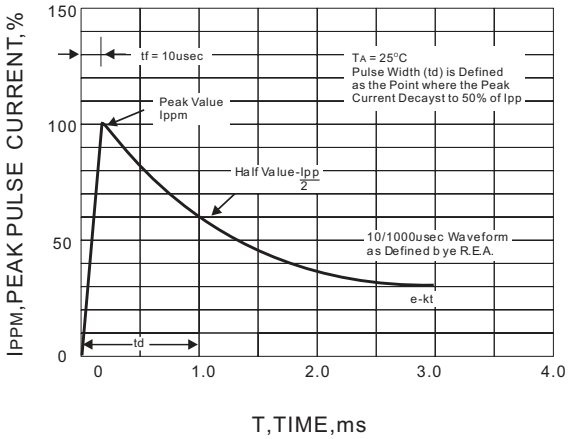


Fig.3 PULSE WAVE FORM

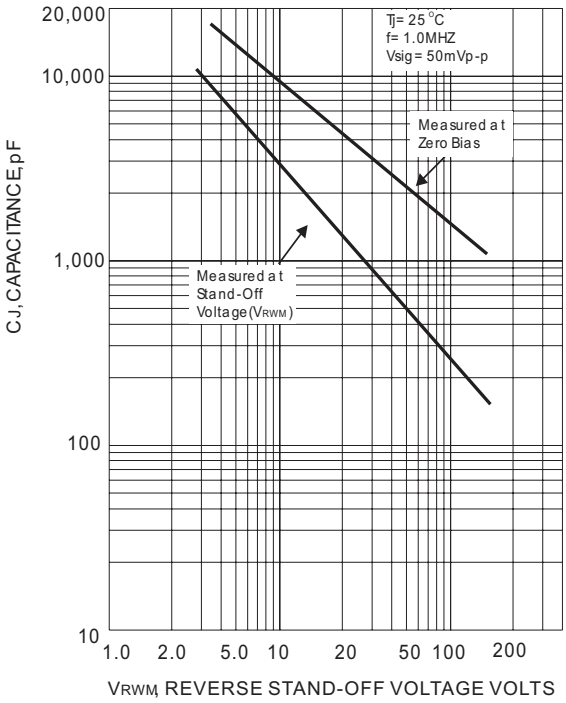


Fig.4 TYPICAL CAPACITANCE

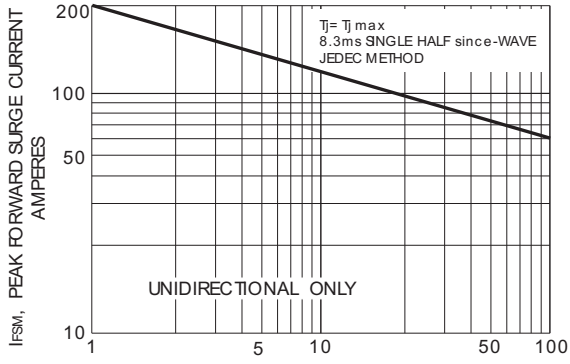


Fig.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT