



1.5SMCJ SERIES

SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

Voltage Range 5.0-220 Volts

Power 1500 Watts

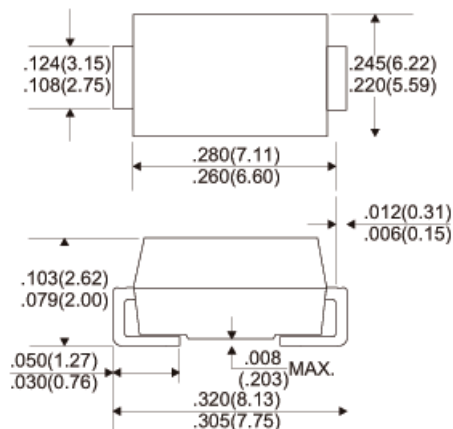
Features

- * 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 are available : 99% Sn above can meet Rohs environment substance directive request

Mechanical Data

Case: JEDEC DO-214AB, Molded plastic over passivated junction.
 Terminals: Solder plated, solderable per MIL-STD-202G, Method 208
 Polarity: Color band denotes positive end (cathode)
 Standard Packaging: 16mm tape (EIA-481)
 Weight: 0.007 ounce, 0.021 gram

DO-214AB (SMC)



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

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

Rating	Symbol	Value	Units
Peak Power Dissipation at T _A =25 °C, T _P =1ms(Note 1,2 ,Fig.1)	P _{PPM}	1500	Watts
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (Note 2,3)	I _{FSM}	100	Amps
Peak Pulse Current Current on 10/1000s waveform(Note 1, Fig.3)	I _{PPM}	See Table 1	Amps
Operating Junction and Storage Temperature Range	T _J , T _S T _G	-55 to +150	°C

NOTES:

1. Non-repetitive current pulse, per Fig.3 and derated above T_A = 25°C per Fig. 2.
2. Mounted on on 5.0mm² (.013mm thick) land areas.
3. Measured on 8.3ms , single half sine-wave or equivalent square wave , duty cycle= 4 pulses per minutes maximum.



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Part Number	Part Number	Marking Code		VRWM	VBR @ IT			IR @ VRWM		VC @ IPP	
		UNI-	BI-		Min.	Max.	IT	UNI-	BI-		
UNI-	BI-	UNI-	BI-	V	V	V	mA	uA	uA	V	A
1500W Transient Voltage Suppressor											
1.5SMCJ5.0	1.5SMCJ5.0C	GDD	BDD	5.0	6.40	7.55	10	1000	2000	9.6	156.2
1.5SMCJ5.0A	1.5SMCJ5.0CA	GDE	BDE	5.0	6.40	7.25	10	1000	2000	9.2	163.0
1.5SMCJ6.0	1.5SMCJ6.0C	GDF	BDF	6.0	6.67	8.45	10	1000	2000	11.4	131.6
1.5SMCJ6.0A	1.5SMCJ6.0CA	GDG	BDG	6.0	6.67	7.67	10	1000	2000	10.3	145.6
1.5SMCJ6.5	1.5SMCJ6.5C	GDH	BDH	6.5	7.22	9.14	10	500	1000	12.3	122.0
1.5SMCJ6.5A	1.5SMCJ6.5CA	GDK	BDK	6.5	7.22	8.30	10	500	1000	11.2	133.9
1.5SMCJ7.0	1.5SMCJ7.0C	GDL	BDL	7.0	7.78	9.86	10	200	400	13.3	112.8
1.5SMCJ7.0A	1.5SMCJ7.0CA	GDM	BDM	7.0	7.78	8.95	10	200	400	12.0	125.0
1.5SMCJ7.5	1.5SMCJ7.5C	GDN	BDN	7.5	8.33	10.67	1.0	100	200	14.3	104.9
1.5SMCJ7.5A	1.5SMCJ7.5CA	GDP	BDP	7.5	8.33	9.58	1.0	100	200	12.9	116.3
1.5SMCJ8.0	1.5SMCJ8.0C	GDQ	BDQ	8.0	8.89	11.30	1.0	50	100	15.0	100.0
1.5SMCJ8.0A	1.5SMCJ8.0CA	GDR	BDR	8.0	8.89	10.23	1.0	50	100	13.6	110.3
1.5SMCJ8.5	1.5SMCJ8.5C	GDS	BDS	8.5	9.44	11.92	1.0	25	50	15.9	94.3
1.5SMCJ8.5A	1.5SMCJ8.5CA	GDT	BDT	8.5	9.44	10.82	1.0	25	50	14.4	104.2
1.5SMCJ9.0	1.5SMCJ9.0C	GDU	BDU	9.0	10.0	12.6	1.0	10	20	16.9	88.7
1.5SMCJ9.0A	1.5SMCJ9.0CA	GDV	BDV	9.0	10.0	11.5	1.0	10	20	15.4	97.4
1.5SMCJ10	1.5SMCJ10C	GDW	BDW	10	11.1	14.1	1.0	5	5	18.8	79.8
1.5SMCJ10A	1.5SMCJ10CA	GDX	BDX	10	11.1	12.8	1.0	5	5	17.0	88.2
1.5SMCJ11	1.5SMCJ11C	GDY	BDY	11	12.2	15.4	1.0	5	5	20.1	74.6
1.5SMCJ11A	1.5SMCJ11CA	GDZ	BDZ	11	12.2	14.0	1.0	5	5	18.2	82.4
1.5SMCJ12	1.5SMCJ12C	GED	BED	12	13.3	16.9	1.0	5	5	22.0	68.2
1.5SMCJ12A	1.5SMCJ12CA	GEE	BEE	12	13.3	15.3	1.0	5	5	19.9	75.3
1.5SMCJ13	1.5SMCJ13C	GEF	BEF	13	14.4	18.2	1.0	1	1	23.8	63.0
1.5SMCJ13A	1.5SMCJ13CA	GEG	BEG	13	14.4	16.5	1.0	1	1	21.5	69.7
1.5SMCJ14	1.5SMCJ14C	GEH	BEH	14	15.6	19.8	1.0	1	1	25.8	58.1
1.5SMCJ14A	1.5SMCJ14CA	GEK	BEK	14	15.6	17.9	1.0	1	1	23.2	64.7
1.5SMCJ15	1.5SMCJ15C	GEL	BEL	15	16.7	21.1	1.0	1	1	26.9	55.8
1.5SMCJ15A	1.5SMCJ15CA	GEM	BEM	15	16.7	19.2	1.0	1	1	24.4	61.5
1.5SMCJ16	1.5SMCJ16C	GEN	BEN	16	17.8	22.6	1.0	1	1	28.8	52.1
1.5SMCJ16A	1.5SMCJ16CA	GEP	BEP	16	17.8	20.5	1.0	1	1	26.0	57.7
1.5SMCJ17	1.5SMCJ17C	GEQ	BEQ	17	18.9	23.9	1.0	1	1	30.5	49.2
1.5SMCJ17A	1.5SMCJ17CA	GER	BER	17	18.9	21.7	1.0	1	1	27.6	53.3
1.5SMCJ18	1.5SMCJ18C	GES	BES	18	20.0	25.3	1.0	1	1	32.2	46.6
1.5SMCJ18A	1.5SMCJ18CA	GET	BET	18	20.0	23.3	1.0	1	1	29.2	51.4
1.5SMCJ20	1.5SMCJ20C	GEU	BEU	20	22.2	28.1	1.0	1	1	35.8	41.9
1.5SMCJ20A	1.5SMCJ20CA	GEV	BEV	20	22.2	25.5	1.0	1	1	32.4	46.3
1.5SMCJ22	1.5SMCJ22C	GEW	BEW	22	24.4	30.9	1.0	1	1	39.4	38.1
1.5SMCJ22A	1.5SMCJ22CA	GEX	BEX	22	24.4	28.0	1.0	1	1	35.5	42.2
1.5SMCJ24	1.5SMCJ24C	GEY	BEY	24	26.7	33.8	1.0	1	1	43.0	34.9
1.5SMCJ24A	1.5SMCJ24CA	GEZ	BEZ	24	26.7	30.7	1.0	1	1	38.9	38.6
1.5SMCJ26	1.5SMCJ26C	GFD	BEF	26	28.9	36.6	1.0	1	1	46.6	32.2
1.5SMCJ26A	1.5SMCJ26CA	GFE	BFE	26	28.9	33.2	1.0	1	1	42.1	35.6
1.5SMCJ28	1.5SMCJ28C	GFF	BFF	28	31.1	39.4	1.0	1	1	50.0	30.0
1.5SMCJ28A	1.5SMCJ28CA	GFG	BFG	28	31.1	35.8	1.0	1	1	45.4	33.0
1.5SMCJ30	1.5SMCJ30C	GFH	BFH	30	33.3	42.2	1.0	1	1	53.5	28.0
1.5SMCJ30A	1.5SMCJ30CA	GFK	BFK	30	33.3	38.3	1.0	1	1	48.4	31.0
1.5SMCJ33	1.5SMCJ33C	GFL	BFL	33	36.7	46.5	1.0	1	1	59.0	25.2
1.5SMCJ33A	1.5SMCJ33CA	GFM	BFM	33	36.7	42.2	1.0	1	1	53.3	28.1
1.5SMCJ36	1.5SMCJ36C	GFN	BFN	36	40.0	50.7	1.0	1	1	64.3	23.3
1.5SMCJ36A	1.5SMCJ36CA	GFP	BFP	36	40.0	46.0	1.0	1	1	58.1	25.8
1.5SMCJ40	1.5SMCJ40C	GFQ	BFQ	40	44.4	56.3	1.0	1	1	71.4	21.0
1.5SMCJ40A	1.5SMCJ40CA	GFR	BFR	40	44.4	51.1	1.0	1	1	64.5	23.2

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Part Number	Part Number	Marking Code		V _{RRM}	V _{BR} @ I _T			I _R @ V _{RRM}		V _C @ I _{PP}	
					Min.	Max.	I _T	UNI-	BI-		
UNI-	BI-	UNI-	BI-	V	V	V	mA	uA	uA	V	A
1500W Transient Voltage Suppressor											
1.5SMCJ43	1.5SMCJ43C	GFS	BFS	43	47.8	60.5	1.0	1	1	76.7	19.6
1.5SMCJ43A	1.5SMCJ43CA	GFT	BFT	43	47.8	54.9	1.0	1	1	69.4	21.6
1.5SMCJ45	1.5SMCJ45C	GFU	BFU	45	50.0	63.3	1.0	1	1	80.3	18.7
1.5SMCJ45A	1.5SMCJ45CA	GFV	BFV	45	50.0	57.5	1.0	1	1	72.7	20.6
1.5SMCJ48	1.5SMCJ48C	GFW	BFW	48	53.3	67.5	1.0	1	1	85.5	17.5
1.5SMCJ48A	1.5SMCJ48CA	GFX	BFX	48	53.3	61.3	1.0	1	1	77.4	19.4
1.5SMCJ51	1.5SMCJ51C	GFY	BFY	51	56.7	71.8	1.0	1	1	91.1	18.5
1.5SMCJ51A	1.5SMCJ51CA	GFZ	BFZ	51	56.7	65.2	1.0	1	1	82.4	18.2
1.5SMCJ54	1.5SMCJ54C	GGD	BGD	54	60.0	76.0	1.0	1	1	96.3	15.6
1.5SMCJ54A	1.5SMCJ54CA	GGE	BGE	54	60.0	69.0	1.0	1	1	87.1	17.2
1.5SMCJ58	1.5SMCJ58C	GGF	BGF	58	64.4	81.6	1.0	1	1	103	14.6
1.5SMCJ58A	1.5SMCJ58CA	GGG	BGG	58	64.4	74.1	1.0	1	1	93.6	16.0
1.5SMCJ60	1.5SMCJ60C	GGH	BGH	60	66.7	84.5	1.0	1	1	107	14.0
1.5SMCJ60A	1.5SMCJ60CA	GGK	BGK	60	66.7	76.7	1.0	1	1	96.8	15.5
1.5SMCJ64	1.5SMCJ64C	GGL	BGL	64	71.1	90.1	1.0	1	1	114	13.2
1.5SMCJ64A	1.5SMCJ64CA	GGM	BGM	64	71.1	81.8	1.0	1	1	103	14.6
1.5SMCJ70	1.5SMCJ70C	GGN	BGN	70	77.8	98.6	1.0	1	1	125	12.0
1.5SMCJ70A	1.5SMCJ70CA	GGP	BGP	70	77.8	89.5	1.0	1	1	113	13.3
1.5SMCJ75	1.5SMCJ75C	GGQ	BGQ	75	83.3	105.7	1.0	1	1	134	11.2
1.5SMCJ75A	1.5SMCJ75CA	GGR	BGR	75	83.3	95.8	1.0	1	1	121	12.4
1.5SMCJ78	1.5SMCJ78C	GGS	BGS	78	86.7	109.8	1.0	1	1	139	10.8
1.5SMCJ78A	1.5SMCJ78CA	GGT	BGT	78	86.7	99.7	1.0	1	1	126	11.4
1.5SMCJ85	1.5SMCJ85C	GGU	BGU	85	94.4	119.2	1.0	1	1	151	9.9
1.5SMCJ85A	1.5SMCJ85CA	GGV	BGV	85	94.4	108.2	1.0	1	1	137	10.4
1.5SMCJ90	1.5SMCJ90C	GGW	BGW	90	100	126.5	1.0	1	1	160	9.4
1.5SMCJ90A	1.5SMCJ90CA	GGX	BGX	90	100	115.5	1.0	1	1	146	10.3
1.5SMCJ100	1.5SMCJ100C	GGY	BGY	100	111	141.0	1.0	1	1	179	8.4
1.5SMCJ100A	1.5SMCJ100CA	GGZ	BGZ	100	111	128.0	1.0	1	1	162	9.3
1.5SMCJ110	1.5SMCJ110C	GHD	BHD	110	122	154.5	1.0	1	1	196	7.7
1.5SMCJ110A	1.5SMCJ110CA	GHE	BHE	110	122	140.5	1.0	1	1	177	8.4
1.5SMCJ120	1.5SMCJ120C	GHF	BHF	120	133	169.0	1.0	1	1	214	7.0
1.5SMCJ120A	1.5SMCJ120CA	GHG	BHG	120	133	153.0	1.0	1	1	193	7.9
1.5SMCJ130	1.5SMCJ130C	GHH	BHH	130	144	182.5	1.0	1	1	231	6.5
1.5SMCJ130A	1.5SMCJ130CA	GHK	BHK	130	144	165.5	1.0	1	1	209	7.2
1.5SMCJ150	1.5SMCJ150C	GHL	BHL	150	167	211.5	1.0	1	1	268	5.6
1.5SMCJ150A	1.5SMCJ150CA	GHM	BHM	150	167	192.5	1.0	1	1	243	6.2
1.5SMCJ160	1.5SMCJ160C	GHN	BHN	160	178	226.0	1.0	1	1	287	5.2
1.5SMCJ160A	1.5SMCJ160CA	GHP	BHP	160	178	205.0	1.0	1	1	259	5.8
1.5SMCJ170	1.5SMCJ170C	GHQ	BHQ	170	189	239.5	1.0	1	1	304	4.9
1.5SMCJ170A	1.5SMCJ170CA	GHR	BHR	170	189	217.5	1.0	1	1	275	5.5
1.5SMCJ180	1.5SMCJ180C	GHS	BHS	180	198	253.8	1.0	1	1	322	4.7
1.5SMCJ180A	1.5SMCJ180CA	GHT	BHT	180	198	230.4	1.0	1	1	292	5.1
1.5SMCJ190	1.5SMCJ190C	GHU	BHU	190	209	267.9	1.0	1	1	340	4.4
1.5SMCJ190A	1.5SMCJ190CA	GHV	BHV	190	209	243.2	1.0	1	1	308	4.8
1.5SMCJ200	1.5SMCJ200C	GHW	BHW	200	220	282.0	1.0	1	1	358	4.1
1.5SMCJ200A	1.5SMCJ200CA	GHX	BHX	200	220	256.0	1.0	1	1	324	4.6
1.5SMCJ210	1.5SMCJ210C	GHY	BHY	210	231	296.1	1.0	1	1	376	4.0
1.5SMCJ210A	1.5SMCJ210CA	GHZ	BHZ	210	231	268.8	1.0	1	1	340	4.4
1.5SMCJ220	1.5SMCJ220C	GID	BID	220	242	310.2	1.0	1	1	394	3.8
1.5SMCJ220A	1.5SMCJ220CA	GIE	BIE	220	242	281.6	1.0	1	1	356	4.2

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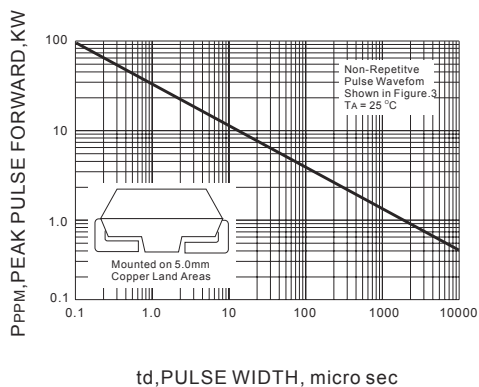


Fig.1 PEAK PULSE POWER RATING CURVE

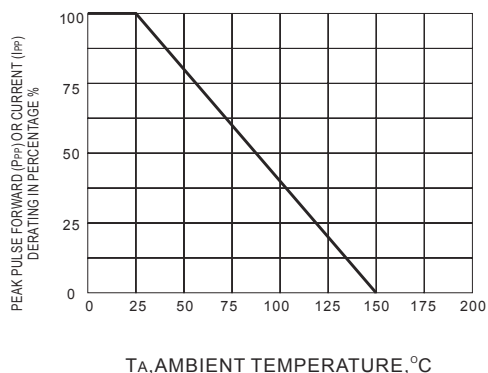


Fig.2 DERATING CURVE

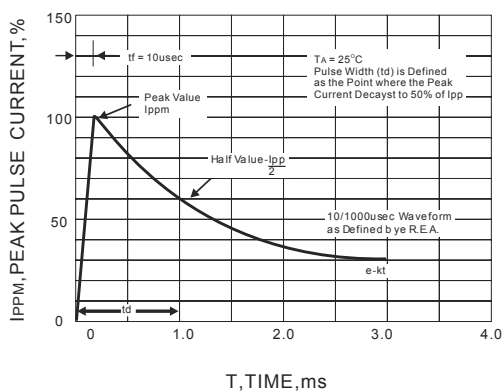


Fig.3 PULSE WAVEFORM

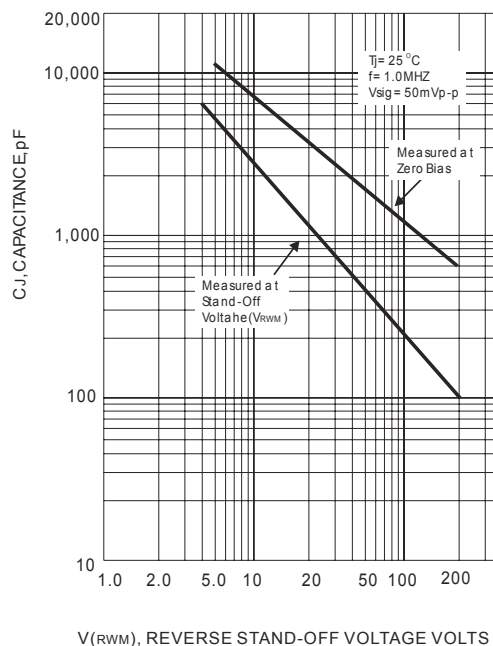


Fig.4 TYPICAL CAPACITANCE

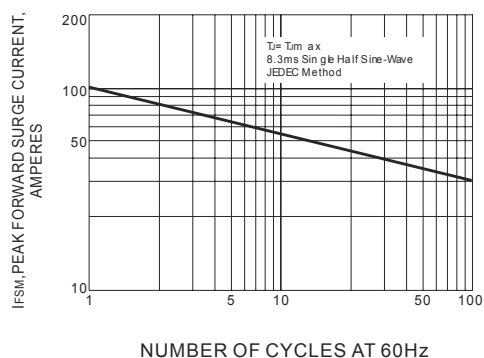


Fig.5 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT