

## 1500W SURFACE MOUNT TVS

### Features

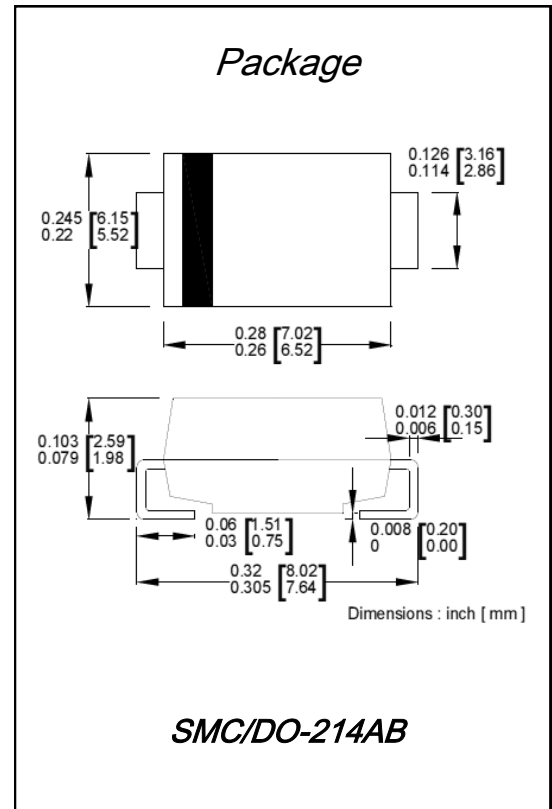
- ◆ Glass Passivated Chip
- ◆ Low Leakage
- ◆ Uni and Bidirectional Unit
- ◆ Excellent Clamping Capability
- ◆ Very Fast Response Time
- ◆ RoHS Compliant
- ◆ 1500 W peak pulse power capability with 10/1000us waveform, repetitive rate (duty cycle): 0.01 %

### Application

- ◆ IPC
- ◆ Car Electronics
- ◆ Power Supply
- ◆ Smart Meters

### Mechanical Characteristics

- ◆ Case: Molded Plastic
- ◆ Epoxy: UL 94V-0 rate flame retardant
- ◆ Lead: Solderable per MIL-STD-750, method 2026
- ◆ Polarity: Color band denotes cathode end except Bi-directional parts
- ◆ Mounting position: Any



Packing Info	
Reel Size	13"
Qty / Reel	3000
Reel / Box	2
Box / Carton	8

## DEVICE CHARACTERISTICS

Maximum Rating			
Parameter	Symbol	Value	Units
Peak Power Dissipation With 10/1000us Waveform	P <sub>PP</sub>	1500	Watt
Peak Pulse Current With 10/1000us Waveform	I <sub>PP</sub>	-	A
Power Dissipation On Infinite Heatsink @ T <sub>L</sub> = 75°C	P <sub>D</sub>	6.5	Watt
Peak Forward Surge Current	I <sub>FSM</sub>	200	A
Maximum Instantaneous Forward Voltage @ 50 A	V <sub>F</sub>	3.5/5	V
Operating Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C

ELECTRICAL CHARACTERISTICS @ 25°C										
Part Number	Part Number	Marking Code		Breakdown Voltage VBR @IT			IR @ V <sub>RWM</sub> (uA)	V <sub>RWM</sub> (V)	I <sub>PP</sub> (A)	V <sub>C</sub> @ I <sub>PP</sub> (V)
		Uni	Bi	Min (V)	Max (V)	IT (mA)				
SMCJ5.0A	SMCJ5.0CA	GDE	BDE	6.4	7.23	10	1000	5	163	9.2
SMCJ6.0A	SMCJ6.0CA	GDG	BDG	6.67	7.67	10	1000	6	145.6	10.3
SMCJ6.5A	SMCJ6.5CA	GDK	BDK	7.22	8.3	10	500	6.5	133.9	11.2
SMCJ7.0A	SMCJ7.0CA	GDM	BDM	7.78	8.95	10	200	7	125	12
SMCJ7.5A	SMCJ7.5CA	GDP	BDP	8.33	9.58	1	100	7.5	116.3	12.9
SMCJ8.0A	SMCJ8.0CA	GDR	BDR	8.89	10.2	1	50	8	110.3	13.6
SMCJ8.5A	SMCJ8.5CA	GDT	BDT	9.44	10.8	1	20	8.5	104.2	14.4
SMCJ9.0A	SMCJ9.0CA	GDV	BDV	10	11.5	1	10	9	97.4	15.4
SMCJ10A	SMCJ10CA	GDX	BDX	11.1	12.8	1	5	10	88.2	17
SMCJ11A	SMCJ11CA	GDZ	BDZ	12.2	14.4	1	5	11	82.4	18.2
SMCJ12A	SMCJ12CA	GEE	BEE	13.3	15.3	1	5	12	75.3	19.9
SMCJ13A	SMCJ13CA	GEG	BEG	14.4	16.5	1	5	13	69.7	21.5
SMCJ14A	SMCJ14CA	GEK	BEK	15.6	17.9	1	5	14	64.7	23.2
SMCJ15A	SMCJ15CA	GEM	BEM	16.7	19.2	1	5	15	61.5	24.4
SMCJ16A	SMCJ16CA	GEP	BEP	17.8	20.5	1	5	16	57.7	26
SMCJ17A	SMCJ17CA	GER	BER	18.9	21.7	1	5	17	53.3	27.6
SMCJ18A	SMCJ18CA	GET	BET	20	23.3	1	5	18	51.4	29.2
SMCJ20A	SMCJ20CA	GEV	BEV	22.2	25.5	1	5	20	46.3	32.4

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ELECTRICAL CHARACTERISTICS @ 25°C										
Part Number	Part Number	Marking Code		Breakdown Voltage VBR @IT			IR @ V <sub>RWM</sub>	V <sub>RWM</sub>	I <sub>PP</sub>	V <sub>C</sub> @ I <sub>PP</sub>
		Uni	Bi	Min (V)	Max (V)	IT (mA)	(uA)	(V)	(A)	(V)
SMCJ22A	SMCJ22CA	GEX	BEX	24.4	28	1	5	22	42.2	35.5
SMCJ24A	SMCJ24CA	GEZ	BEZ	26.7	30.7	1	5	24	38.6	38.9
SMCJ26A	SMCJ26CA	GFE	BFE	28.9	32.2	1	5	26	35.6	42.1
SMCJ28A	SMCJ28CA	GFG	BFG	31.1	35.8	1	5	28	33	45.4
SMCJ30A	SMCJ30CA	GFK	BFK	33.3	38.3	1	5	30	31	48.4
SMCJ33A	SMCJ33CA	GFM	BFM	36.7	42.2	1	5	33	28.1	53.3
SMCJ36A	SMCJ36CA	GFP	BFP	40	46	1	5	36	25.8	58.1
SMCJ40A	SMCJ40CA	GFR	BFR	44.4	51.1	1	5	40	23.3	64.5
SMCJ43A	SMCJ43CA	GFT	BFT	47.8	54.9	1	5	43	21.6	69.4
SMCJ45A	SMCJ45CA	GFV	BFV	50	57.5	1	5	45	20.6	72.7
SMCJ48A	SMCJ48CA	GFX	BFX	53.3	61.3	1	5	48	19.4	77.4
SMCJ51A	SMCJ51CA	GFZ	BFZ	56.7	65.2	1	5	51	18.2	82.4
SMCJ54A	SMCJ54CA	GGE	BGE	60	69	1	5	54	17.2	87.1
SMCJ58A	SMCJ58CA	GGG	BGG	64.4	74.6	1	5	58	16	93.6
SMCJ60A	SMCJ60CA	GGK	BGK	66.7	76.7	1	5	60	15.5	96.8
SMCJ64A	SMCJ64CA	GGM	BGM	71.1	81.8	1	5	64	14.6	103
SMCJ70A	SMCJ70CA	GGP	BGP	77.8	89.5	1	5	70	13.3	113
SMCJ75A	SMCJ75CA	GGR	BGR	83.3	95.8	1	5	75	12.4	121
SMCJ78A	SMCJ78CA	GGT	BGT	86.7	99.7	1	5	78	11.4	126
SMCJ85A	SMCJ85CA	GGV	BGV	94.4	108.2	1	5	85	10.4	137
SMCJ90A	SMCJ90CA	GGX	BGX	100	115.5	1	5	90	10.3	146
SMCJ100A	SMCJ100CA	GGZ	BGZ	111	128	1	5	100	9.3	162
SMCJ110A	SMCJ110CA	GHE	BHE	122	140	1	5	110	8.4	177
SMCJ120A	SMCJ120CA	GHG	BHG	133	153	1	5	120	7.9	193
SMCJ130A	SMCJ130CA	GHK	BHK	144	165	1	5	130	7.2	209
SMCJ150A	SMCJ150CA	GHM	BHM	167	192	1	5	150	6.2	243
SMCJ160A	SMCJ160CA	GHP	BHP	178	205	1	5	160	5.8	259
SMCJ170A	SMCJ170CA	GHR	BHR	189	217.5	1	5	170	5.5	275
SMCJ180A	SMCJ180CA	GHT	BHT	201	222	1	5	180	5.1	292
SMCJ200A	SMCJ200CA	GHV	BHV	224	247	1	5	200	4.6	324
SMCJ220A	SMCJ220CA	GHX	BHX	246	272	1	5	220	4.2	356
SMCJ250A	SMCJ250CA	GHZ	BHZ	279	309	1	5	250	3.7	405
SMCJ300A	SMCJ300CA	GJE	BJE	335	371	1	5	300	3.1	486
SMCJ350A	SMCJ350CA	GJG	BJG	391	432	1	5	350	2.6	567
SMCJ400A	SMCJ400CA	GJK	BJK	447	494	1	5	400	2.3	648
SMCJ440A	SMCJ440CA	GJM	BJM	492	543	1	5	440	2.1	713

**RATING CURVES**

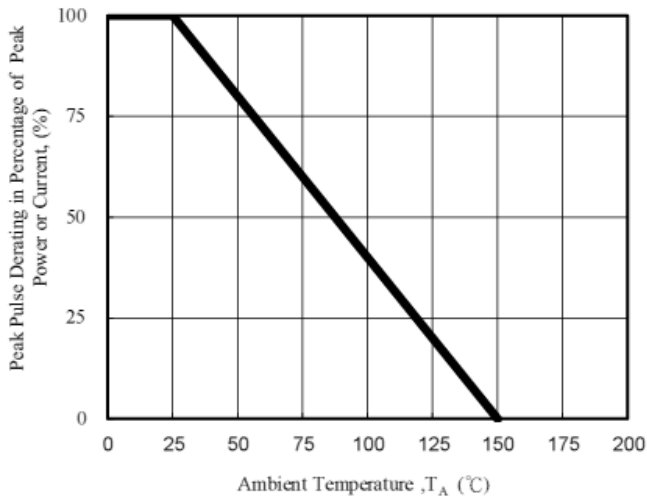


Fig. 1 - Pulse Derating Curve

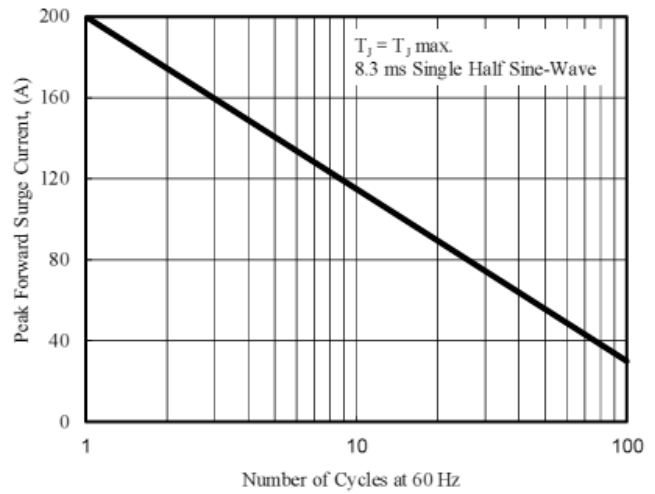


Fig. 2 - Maximum Non-Repetitive Surge Current

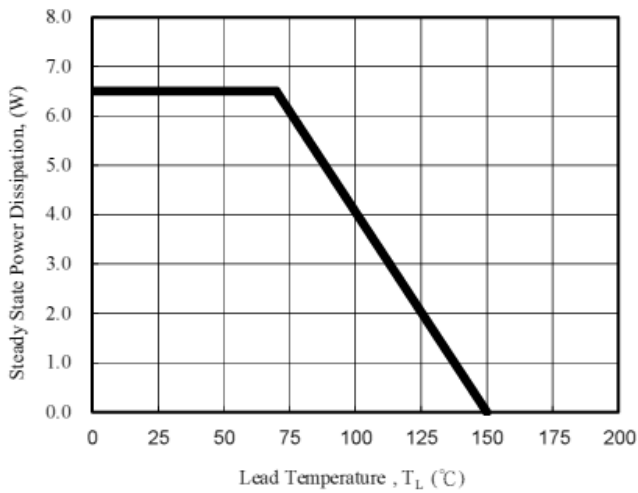


Fig. 3 - Steady State Power Derating Curve

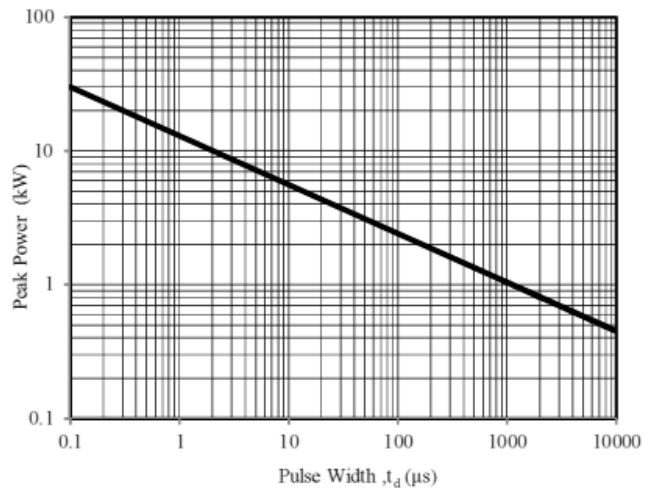


Fig. 4 - Peak Pulse Power Rating Curve

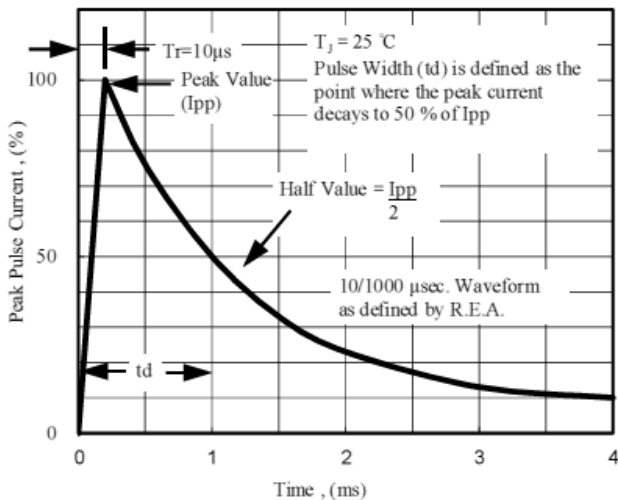


Fig. 5 - Pulse Waveform

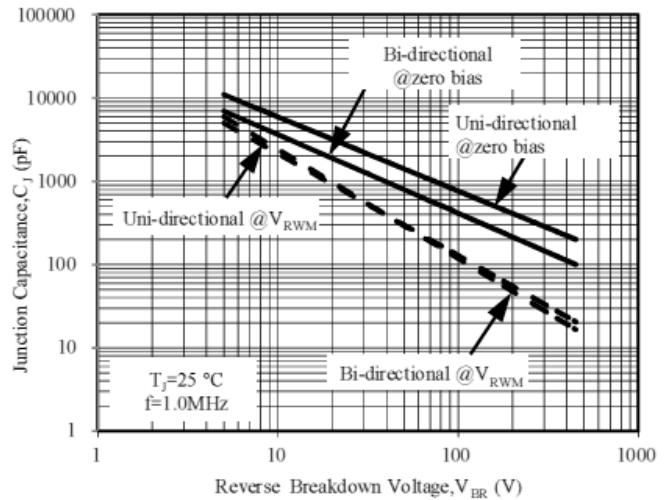


Fig. 6 - Typical Junction Capacitance

**REFERENCE**

<b>Revision History</b>	<b>Modification Description</b>
<b>Rev.1.0</b>	<b>Initial Release</b>
<b>Rev.1.01</b>	<b>Edit Document Layout</b>