



# 1.5SMCJ8.5AS ~ 1.5SMCJ220CAS Series

## Transient Voltage Suppressor

**Recongnized File # E210467 (1.5SMCJ8.5AS ~ 1.5SMCJ170CAS Series)**

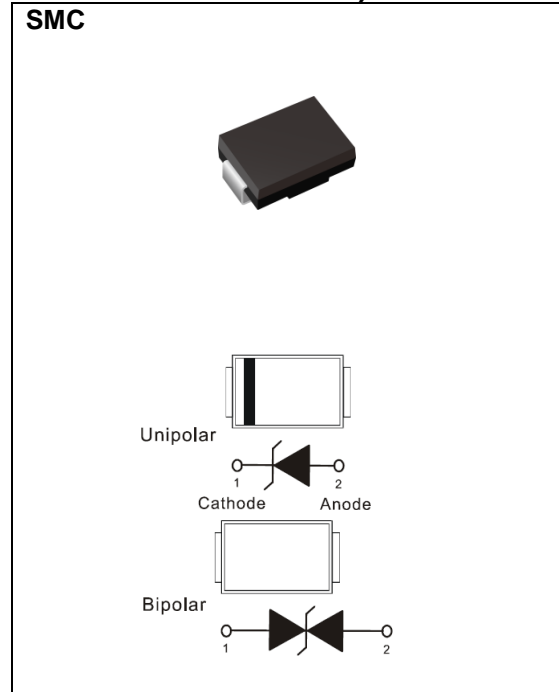
**Voltage** 8.5~220 V **Power** 1500 W

### Features

- Fast response time
- Low incremental surge resistance
- Ultra thin profile package for space constrained utilization
- High temperature soldering : 260°C/10 seconds at terminals
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### Mechanical Data

- Case: Molded plastic, SMC
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0082 ounces, 0.2325 grams



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Peak Pulse Power Dissipation(tp = 10 / 1000 us)	P <sub>PP</sub> <sup>(1) (2)</sup>	1500	W
Peak Pulse Current on tp = 10 / 1000 us waveform <sup>(Fig.2)</sup>	I <sub>PPM</sub> <sup>(1)</sup>	See table 1	A
Power Dissipation on Infinite Heat Sink at T <sub>L</sub> = 50 °C	P <sub>D</sub>	6.5	W
ESD IEC61000-4-2(Air)	V <sub>ESD</sub>	±30	kV
ESD IEC61000-4-2(Contact)		±30	
Typical Thermal Resistance Junction to Ambient	R <sub>θJA</sub> <sup>(3)</sup>	125	°C/W
Operating Junction Temperature Range	T <sub>J</sub>	-55~150	°C
Storage Temperature Range	T <sub>STG</sub>	-55~150	°C



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## Electrical Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

Part Number		V <sub>RWM</sub>	V <sub>BR</sub>			I <sub>R</sub>		V <sub>C@IPP</sub>		Marking Code	
			Min.	Max.	I <sub>T</sub>	@V <sub>RWM</sub>					
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
1500W Transient Voltage Suppressor											
1.5SMCJ8.5AS	1.5SMCJ8.5CAS	8.5	9.44	10.82	1	25	50	14.4	104.2	C8V5AS	C8V5CAS
1.5SMCJ9.0AS	1.5SMCJ9.0CAS	9	10	11.5	1	10	20	15.4	97.4	C9V0AS	C9V0CAS
1.5SMCJ10AS	1.5SMCJ10CAS	10	11.1	12.8	1	5	5	17	88.2	C10AS	C10CAS
1.5SMCJ11AS	1.5SMCJ11CAS	11	12.2	14	1	1	1	18.2	82.4	C11AS	C11CAS
1.5SMCJ12AS	1.5SMCJ12CAS	12	13.3	15.3	1	1	1	19.9	75.3	C12AS	C12CAS
1.5SMCJ13AS	1.5SMCJ13CAS	13	14.4	16.5	1	1	1	21.5	69.7	C13AS	C13CAS
1.5SMCJ14AS	1.5SMCJ14CAS	14	15.6	17.9	1	1	1	23.2	64.7	C14AS	C14CAS
1.5SMCJ15AS	1.5SMCJ15CAS	15	16.7	19.2	1	1	1	24.4	61.5	C15AS	C15CAS
1.5SMCJ16AS	1.5SMCJ16CAS	16	17.8	20.5	1	1	1	26	57.7	C16AS	C16CAS
1.5SMCJ17AS	1.5SMCJ17CAS	17	18.9	21.7	1	1	1	27.6	53.3	C17AS	C17CAS
1.5SMCJ18AS	1.5SMCJ18CAS	18	20	23.3	1	1	1	29.2	51.4	C18AS	C18CAS
1.5SMCJ20AS	1.5SMCJ20CAS	20	22.2	25.5	1	1	1	32.4	46.3	C20AS	C20CAS
1.5SMCJ22AS	1.5SMCJ22CAS	22	24.4	28	1	1	1	35.5	42.2	C22AS	C22CAS
1.5SMCJ24AS	1.5SMCJ24CAS	24	26.7	30.7	1	1	1	38.9	38.6	C24AS	C24CAS
1.5SMCJ26AS	1.5SMCJ26CAS	26	28.9	33.2	1	1	1	42.1	35.6	C26AS	C26CAS
1.5SMCJ28AS	1.5SMCJ28CAS	28	31.1	35.8	1	1	1	45.4	33	C28AS	C28CAS
1.5SMCJ30AS	1.5SMCJ30CAS	30	33.3	38.3	1	1	1	48.4	31	C30AS	C30CAS
1.5SMCJ33AS	1.5SMCJ33CAS	33	36.7	42.2	1	1	1	53.3	28.1	C33AS	C33CAS
1.5SMCJ36AS	1.5SMCJ36CAS	36	40	46	1	1	1	58.1	25.8	C36AS	C36CAS
1.5SMCJ40AS	1.5SMCJ40CAS	40	44.4	51.1	1	1	1	64.5	23.2	C40AS	C40CAS
1.5SMCJ43AS	1.5SMCJ43CAS	43	47.8	55	1	1	1	69.4	21.6	C43AS	C43CAS
1.5SMCJ45AS	1.5SMCJ45CAS	45	50	57.5	1	1	1	72.7	20.6	C45AS	C45CAS
1.5SMCJ48AS	1.5SMCJ48CAS	48	53.3	61.3	1	1	1	77.4	19.4	C48AS	C48CAS
1.5SMCJ51AS	1.5SMCJ51CAS	51	56.7	65.2	1	1	1	82.4	18.2	C51AS	C51CAS
1.5SMCJ54AS	1.5SMCJ54CAS	54	60	69	1	1	1	87.1	17.2	C54AS	C54CAS
1.5SMCJ58AS	1.5SMCJ58CAS	58	64.4	74.1	1	1	1	93.6	16	C58AS	C58CAS
1.5SMCJ60AS	1.5SMCJ60CAS	60	66.7	76.7	1	1	1	96.8	15.5	C60AS	C60CAS
1.5SMCJ64AS	1.5SMCJ64CAS	64	71.1	81.8	1	1	1	103	14.6	C64AS	C64CAS
1.5SMCJ70AS	1.5SMCJ70CAS	70	77.8	89.5	1	1	1	113	13.3	C70AS	C70CAS



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## Electrical Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

Part Number		V <sub>RWM</sub>	V <sub>BR</sub>			I <sub>R</sub>		V <sub>C@I<sub>PP</sub></sub>		Marking Code	
			Min.	Max.	I <sub>T</sub>	@ V <sub>RWM</sub>	uA				
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
1500W Transient Voltage Suppressor											
1.5SMCJ75AS	1.5SMCJ75CAS	75	83.3	95.8	1	1	1	121	12.4	C75AS	C75CAS
1.5SMCJ78AS	1.5SMCJ78CAS	78	86.7	99.7	1	1	1	126	11.4	C78AS	C78CAS
1.5SMCJ85AS	1.5SMCJ85CAS	85	94.4	108.2	1	1	1	137	10.4	C85AS	C85CAS
1.5SMCJ90AS	1.5SMCJ90CAS	90	100	115.5	1	1	1	146	10.3	C90AS	C90CAS
1.5SMCJ100AS	1.5SMCJ100CAS	100	111	128	1	1	1	162	9.3	C100AS	C100CAS
1.5SMCJ110AS	1.5SMCJ110CAS	110	122	140.5	1	1	1	177	8.4	C110AS	C110CAS
1.5SMCJ120AS	1.5SMCJ120CAS	120	133	153	1	1	1	193	7.9	C120AS	C120CAS
1.5SMCJ130AS	1.5SMCJ130CAS	130	144	165.5	1	1	1	209	7.2	C130AS	C130CAS
1.5SMCJ150AS	1.5SMCJ150CAS	150	167	192.5	1	1	1	243	6.2	C150AS	C150CAS
1.5SMCJ160AS	1.5SMCJ160CAS	160	178	205	1	1	1	259	5.8	C160AS	C160CAS
1.5SMCJ170AS	1.5SMCJ170CAS	170	189	217.5	1	1	1	275	5.5	C170AS	C170CAS
1.5SMCJ180AS	1.5SMCJ180CAS	180	198	230.4	1	1	1	292	5.1	C180AS	C180CAS
1.5SMCJ190AS	1.5SMCJ190CAS	190	209	243.2	1	1	1	308	4.8	C190AS	C190CAS
1.5SMCJ200AS	1.5SMCJ200CAS	200	220	256	1	1	1	324	4.6	C200AS	C200CAS
1.5SMCJ210AS	1.5SMCJ210CAS	210	231	268.8	1	1	1	340	4.4	C210AS	C210CAS
1.5SMCJ220AS	1.5SMCJ220CAS	220	242	281.6	1	1	1	356	4.2	C220AS	C220CAS

**Notes :**

1. Non-repetitive current pulse, per Fig.3 and derated above T<sub>A</sub>=25°C per Fig.2
2. Mounted on 100cm<sup>2</sup> copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, standard footprint



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## TYPICAL CHARACTERISTIC CURVES



Fig.1 Pulse Power Rating Curve



Fig.2 Derating Curve

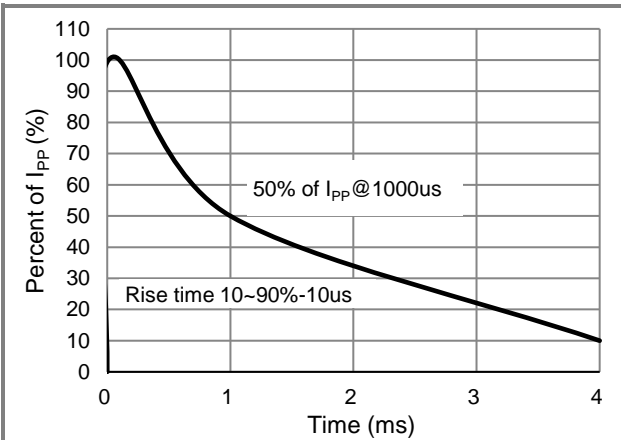


Fig.3 10/1000us Pulse Waveform

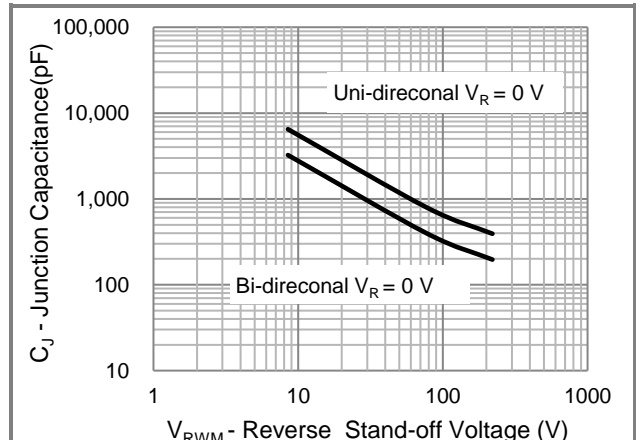


Fig.4 Typical Capacitance



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Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
1.5SMCJxxxxAS_R1_00001	SMC	0.8K pcs / 7" reel	See Table	Halogen free RoHS compliant

## Packaging Information & Mounting Pad Layout

