



# 1.5SMC10AS ~ 1.5SMC250CAS Series

## Transient Voltage Suppressor

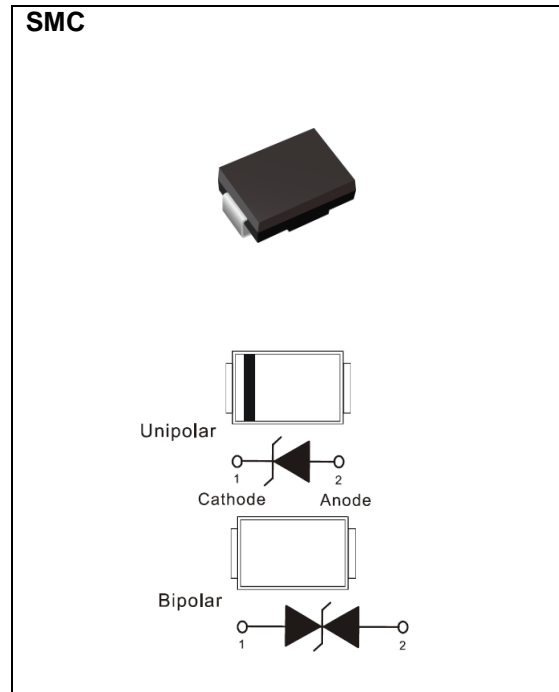
**Voltage** 10~250 V **Power** 1500 W

### 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>	uA				
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
1500W Transient Voltage Suppressor											
1.5SMC10AS	1.5SMC10CAS	8.55	9.5	10.5	1	10	20	14.5	103	MC10AS	MC10CAS
1.5SMC11AS	1.5SMC11CAS	9.4	10.5	11.6	1	5	10	15.6	96	MC11AS	MC11CAS
1.5SMC12AS	1.5SMC12CAS	10.2	11.4	12.6	1	5	5	16.7	90	MC12AS	MC12CAS
1.5SMC13AS	1.5SMC13CAS	11.1	12.4	13.7	1	1	1	18.2	82	MC13AS	MC13CAS
1.5SMC15AS	1.5SMC15CAS	12.8	14.3	15.8	1	1	1	21.2	71	MC15AS	MC15CAS
1.5SMC16AS	1.5SMC16CAS	13.6	15.2	16.8	1	1	1	22.5	67	MC16AS	MC16CAS
1.5SMC18AS	1.5SMC18CAS	15.3	17.1	18.9	1	1	1	25.2	59.5	MC18AS	MC18CAS
1.5SMC20AS	1.5SMC20CAS	17.1	19	21	1	1	1	27.7	54	MC20AS	MC20CAS
1.5SMC22AS	1.5SMC22CAS	18.8	20.9	23.1	1	1	1	30.6	49	MC22AS	MC22CAS
1.5SMC24AS	1.5SMC24CAS	20.5	22.8	25.2	1	1	1	33.2	45	MC24AS	MC24CAS
1.5SMC27AS	1.5SMC27CAS	23.1	25.7	28.4	1	1	1	37.5	40	MC27AS	MC27CAS
1.5SMC30AS	1.5SMC30CAS	25.6	28.5	31.5	1	1	1	41.4	36	MC30AS	MC30CAS
1.5SMC33AS	1.5SMC33CAS	28.2	31.4	34.7	1	1	1	45.7	33	MC33AS	MC33CAS
1.5SMC36AS	1.5SMC36CAS	30.8	34.2	37.8	1	1	1	49.9	30	MC36AS	MC36CAS
1.5SMC39AS	1.5SMC39CAS	33.3	37.1	41	1	1	1	53.9	28	MC39AS	MC39CAS
1.5SMC43AS	1.5SMC43CAS	36.8	40.9	45.2	1	1	1	59.3	25.3	MC43AS	MC43CAS
1.5SMC47AS	1.5SMC47CAS	40.2	44.7	49.4	1	1	1	64.8	23.2	MC47AS	MC47CAS
1.5SMC51AS	1.5SMC51CAS	43.6	48.5	53.6	1	1	1	70.1	21.4	MC51AS	MC51CAS
1.5SMC56AS	1.5SMC56CAS	47.8	53.2	58.8	1	1	1	77	19.5	MC56AS	MC56CAS
1.5SMC62AS	1.5SMC62CAS	53	58.9	65.1	1	1	1	85	17.7	MC62AS	MC62CAS
1.5SMC68AS	1.5SMC68CAS	58.1	64.6	71.4	1	1	1	92	16.3	MC68AS	MC68CAS
1.5SMC75AS	1.5SMC75CAS	64.1	71.3	78.8	1	1	1	103	14.6	MC75AS	MC75CAS
1.5SMC82AS	1.5SMC82CAS	70.1	77.9	86.1	1	1	1	113	13.3	MC82AS	MC82CAS
1.5SMC91AS	1.5SMC91CAS	77.8	86.5	95.5	1	1	1	125	12	MC91AS	MC91CAS
1.5SMC100AS	1.5SMC100CAS	85.5	95	105	1	1	1	137	11	MC1AAS	MC1ACAS
1.5SMC110AS	1.5SMC110CAS	94	105	116	1	1	1	152	9.9	MC1BAS	MC1BCAS
1.5SMC120AS	1.5SMC120CAS	102	114	126	1	1	1	165	9.1	MC1CAS	MC1CCAS
1.5SMC130AS	1.5SMC130CAS	111	124	137	1	1	1	179	8.4	MC1DAS	MC1DCAS
1.5SMC150AS	1.5SMC150CAS	128	143	158	1	1	1	207	7.2	MC1EAS	MC1ECAS



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## Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Part Number		$V_{RWM}$	$V_{BR}$			$I_R$		$V_C @ I_{PP}$		Marking Code	
			Min.	Max.	$I_T$	@ $V_{RWM}$					
UNI	BI	V	V	V	mA	UNI	BI	V	A	UNI	BI
1500W Transient Voltage Suppressor											
1.5SMC160AS	1.5SMC160CAS	136	152	168	1	1	1	219	6.8	MC1FAS	MC1FCAS
1.5SMC170AS	1.5SMC170CAS	145	162	179	1	1	1	234	6.4	MC1GAS	MC1GCAS
1.5SMC180AS	1.5SMC180CAS	154	171	189	1	1	1	246	6.1	MC1HAS	MC1HCAS
1.5SMC200AS	1.5SMC200CAS	171	190	210	1	1	1	274	5.5	MC2IAS	MC2ICAS
1.5SMC220AS	1.5SMC220CAS	185	209	231	1	1	1	328	4.6	MC2JAS	MC2JCAS
1.5SMC250AS	1.5SMC250CAS	214	237	263	1	1	1	344	4.5	MC2KAS	MC2KCAS

**Notes :**

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ\text{C}$  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

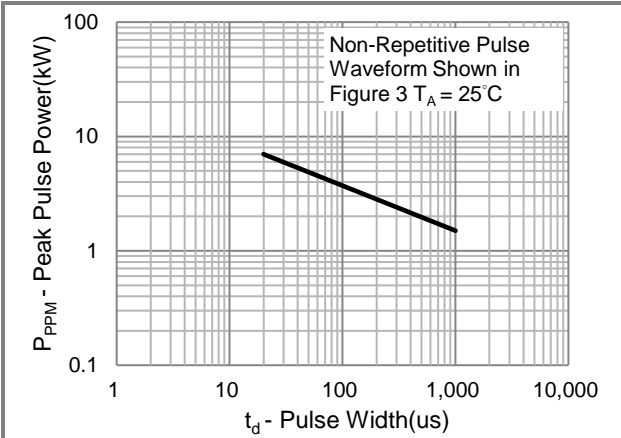


Fig.1 Pulse Power Rating Curve

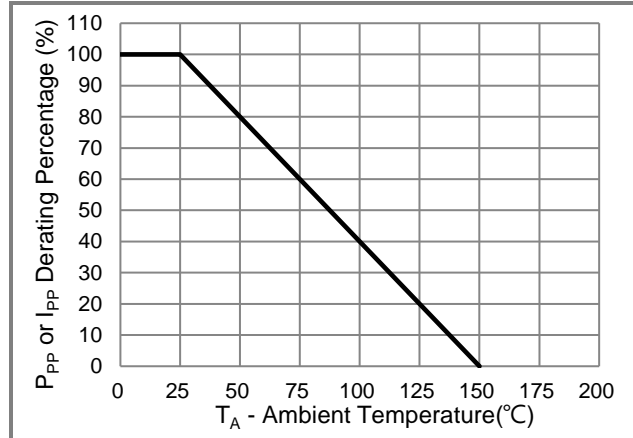


Fig.2 Derating Curve

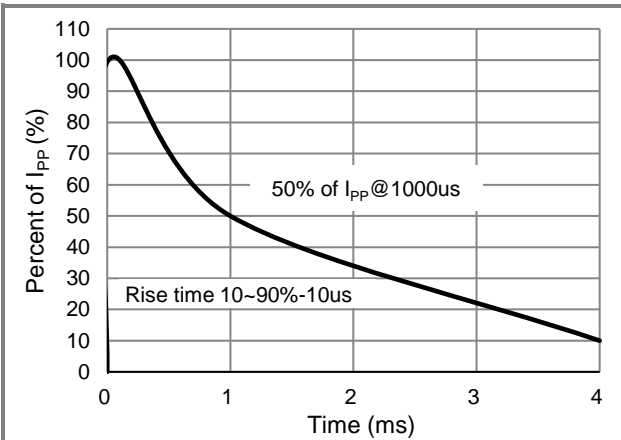


Fig.3 10/1000us Pulse Waveform

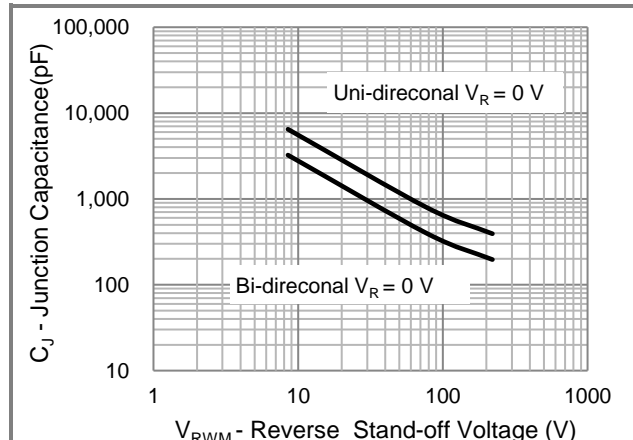


Fig.4 Typical Capacitance

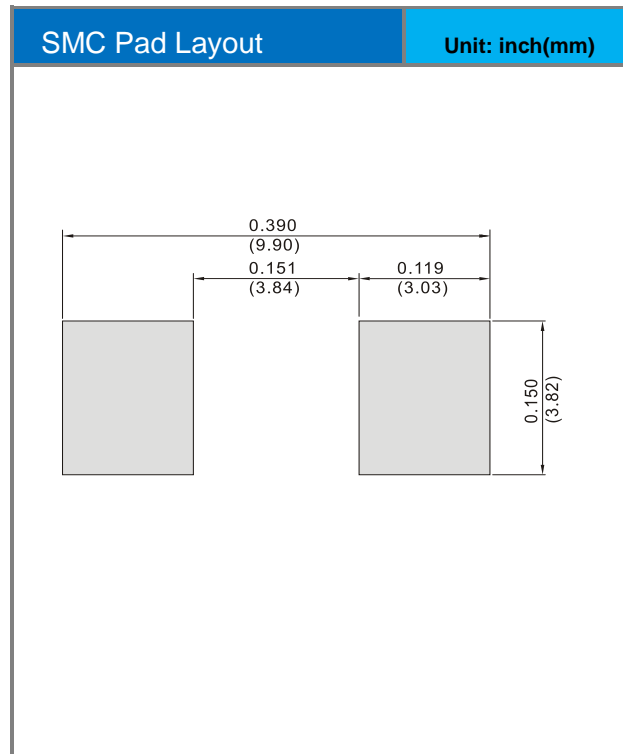
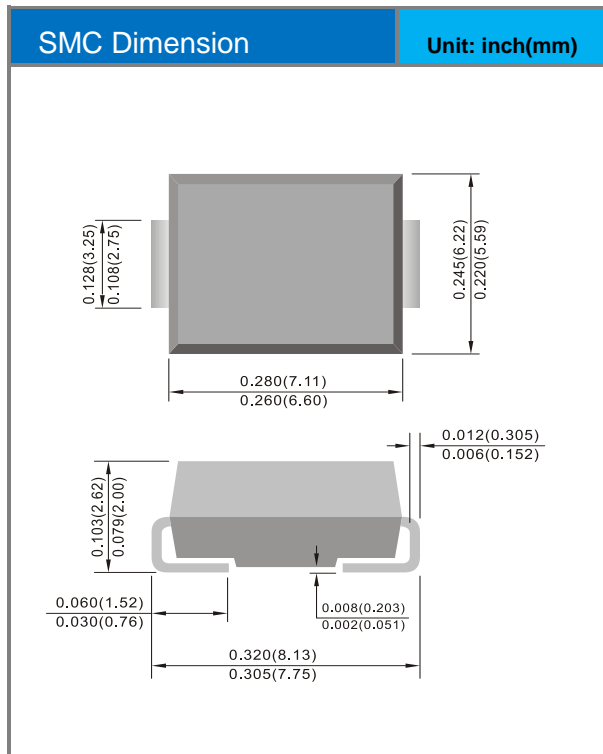


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## Part No. Packing Code Version

Part No. Packing Code	Package Type	Packing Type	Marking	Version
1.5SMCxxxxAS_R1_00001	SMC	0.8K pcs / 7" reel	See Table	Halogen free RoHS compliant

## Packaging Information & Mounting Pad Layout





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