

## 1.5SMCJ5.0A-AU~1.5SMCJ70CA-AU

### SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR PEAK PULSE POWER 1500 Watt

**STAND-OFF VOLTAGE**

**5 to 70 Volt**

**SMC / DO-214AB**

Unit : inch(mm)



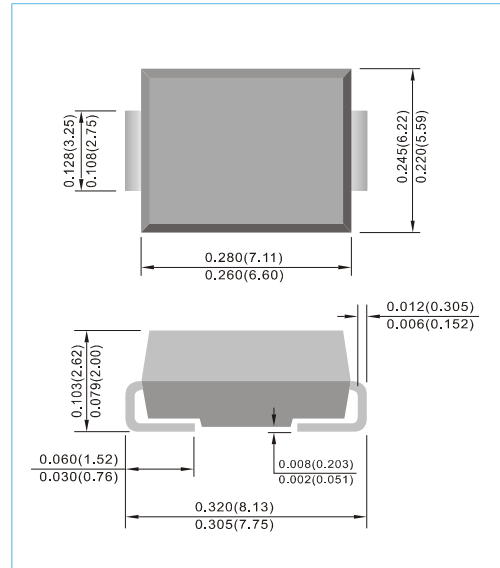
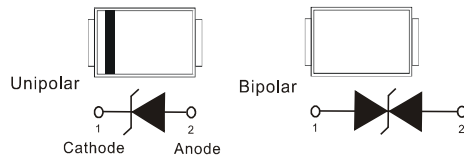
**Recongnized File # E210467**

#### FEATURES

- For surface mounted applications in order to optimize board space.
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- AEC-Q101 qualified
- ESD IEC-61000-4-2 Air  $\pm 30$ kV, Contact  $\pm 30$ kV
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### MECHANICAL DATA

- Case: JEDEC DO-214AB, Molded plastic over passivated junction.
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard Packaging: 16mm tape (EIA-481)
- Weight: 0.0082 ounce, 0.2325 gram



#### DEVICES FOR BIPOLAR APPLICATIONS

For Bidirectional use C or CA Suffix for types 1.5SMCJ5.0 thru types 1.5SMCJ70.  
Electrical characteristics apply in both directions.

#### MAXIMUM RATINGS AND CHARACTERISTICS

Rating 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 $T_A=25^\circ\text{C}$ , $t_p=1\text{ms}$ (Notes 1)	$P_{PP}$	1500	W
Peak Pulse Current on $t_p=10/1000\mu\text{s}$ waveform (Notes 1)	$I_{PPM}$	See table	A
Typical Thermal Resistance Junction to Air (Notes 2)	$R_{\theta JA}$	50	$^\circ\text{C} / \text{W}$
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (Notes 3)	$I_{FSM}$	200	A
ESD IEC-61000-4-2 (Air) ESD IEC-61000-4-2 (Contact)	$V_{ESD}$	$\pm 30$ $\pm 30$	kV
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

#### NOTES :

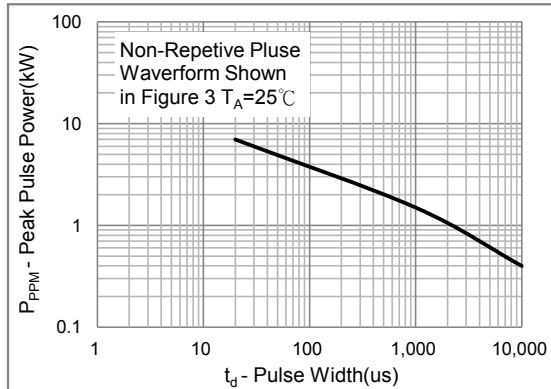
1. Non-repetitive current pulse, per Fig. 3 and derated above  $T_A=25^\circ\text{C}$  per Fig. 2.
2. Mounted on  $2\text{mm}^2$  (0.013mm thick) land areas.
3. Measured on 8.3ms, single half sine-wave or equivalent square wave, duty cycle= 4 pulses per minutes maximum.
4. A transient suppressor is selected according to the working peak reverse voltage ( $V_{RWM}$ ), which should be equal to or greater than the DC or continuous peak operating voltage level.



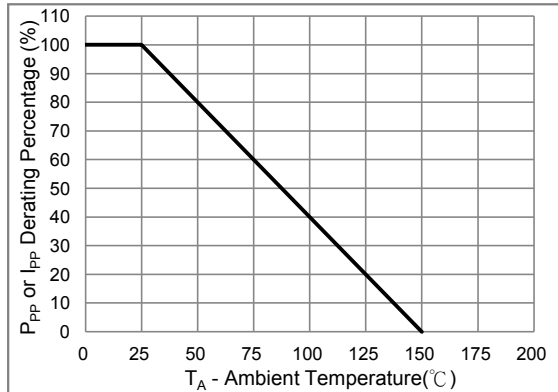
# 1.5SMCJ5.0A-AU~1.5SMCJ70CA-AU

Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage		Max. Clamp Voltage 10/1000µs	Peak Pulse Current 10/1000µs	Marking Code	
		V <sub>RWM</sub> (Notes 4)	V <sub>BR</sub> @ I <sub>T</sub>		I <sub>T</sub>	I <sub>R</sub> @ V <sub>RWM</sub>		V <sub>C</sub> @ I <sub>PP</sub>	I <sub>PP</sub>		
			Min.	Max.		UNI	BI				
UNI	BI	V	V	V	mA	µA	µA	V	A	UNI	BI
1500W Transient Voltage Suppressor											
1.5SMCJ5.0A-AU	1.5SMCJ5.0CA-AU	5	6.4	7.25	10	1000	2000	9.2	163	GDE	BDE
1.5SMCJ6.0A-AU	1.5SMCJ6.0CA-AU	6	6.67	7.67	10	1000	2000	10.3	145.6	GDG	BDG
1.5SMCJ6.5A-AU	1.5SMCJ6.5CA-AU	6.5	7.22	8.3	10	500	1000	11.2	133.9	GDK	BDK
1.5SMCJ7.0A-AU	1.5SMCJ7.0CA-AU	7	7.78	8.95	10	200	400	12	125	GDM	BDM
1.5SMCJ7.5A-AU	1.5SMCJ7.5CA-AU	7.5	8.33	9.58	1	100	200	12.9	116.3	GDP	BDP
1.5SMCJ8.0A-AU	1.5SMCJ8.0CA-AU	8	8.89	10.23	1	50	100	13.6	110.3	GDR	BDR
1.5SMCJ8.5A-AU	1.5SMCJ8.5CA-AU	8.5	9.44	10.82	1	25	50	14.4	104.2	GDT	BDT
1.5SMCJ9.0A-AU	1.5SMCJ9.0CA-AU	9	10	11.5	1	10	20	15.4	97.4	GDV	BDV
1.5SMCJ10A-AU	1.5SMCJ10CA-AU	10	11.1	12.8	1	5	5	17	88.2	GDX	BDX
1.5SMCJ11A-AU	1.5SMCJ11CA-AU	11	12.2	14	1	1	1	18.2	82.4	GDZ	BDZ
1.5SMCJ12A-AU	1.5SMCJ12CA-AU	12	13.3	15.3	1	1	1	19.9	75.3	GEE	BEE
1.5SMCJ13A-AU	1.5SMCJ13CA-AU	13	14.4	16.5	1	1	1	21.5	69.7	GEG	BEG
1.5SMCJ14A-AU	1.5SMCJ14CA-AU	14	15.6	17.9	1	1	1	23.2	64.7	GEK	BEK
1.5SMCJ15A-AU	1.5SMCJ15CA-AU	15	16.7	19.2	1	1	1	24.4	61.5	GEM	BEM
1.5SMCJ16A-AU	1.5SMCJ16CA-AU	16	17.8	20.5	1	1	1	26	57.7	GEP	BEP
1.5SMCJ17A-AU	1.5SMCJ17CA-AU	17	18.9	21.7	1	1	1	27.6	53.3	GER	BER
1.5SMCJ18A-AU	1.5SMCJ18CA-AU	18	20	23.3	1	1	1	29.2	51.4	GET	BET
1.5SMCJ20A-AU	1.5SMCJ20CA-AU	20	22.2	25.5	1	1	1	32.4	46.3	GEV	BEV
1.5SMCJ22A-AU	1.5SMCJ22CA-AU	22	24.4	28	1	1	1	35.5	42.2	GEX	BEX
1.5SMCJ24A-AU	1.5SMCJ24CA-AU	24	26.7	30.7	1	1	1	38.9	38.6	GEZ	BEZ
1.5SMCJ26A-AU	1.5SMCJ26CA-AU	26	28.9	33.2	1	1	1	42.1	35.6	GFE	BFE
1.5SMCJ28A-AU	1.5SMCJ28CA-AU	28	31.1	35.8	1	1	1	45.4	33	GFG	BFG
1.5SMCJ30A-AU	1.5SMCJ30CA-AU	30	33.3	38.3	1	1	1	48.4	31	GFK	BFK
1.5SMCJ33A-AU	1.5SMCJ33CA-AU	33	36.7	42.2	1	1	1	53.3	28.1	GFM	BFM
1.5SMCJ36A-AU	1.5SMCJ36CA-AU	36	40	46	1	1	1	58.1	25.8	GFP	BFP
1.5SMCJ40A-AU	1.5SMCJ40CA-AU	40	44.4	51.1	1	1	1	64.5	23.2	GFR	BFR
1.5SMCJ43A-AU	1.5SMCJ43CA-AU	43	47.8	55	1	1	1	69.4	21.6	GFT	BFT
1.5SMCJ45A-AU	1.5SMCJ45CA-AU	45	50	57.5	1	1	1	72.7	20.6	GFV	BFV
1.5SMCJ48A-AU	1.5SMCJ48CA-AU	48	53.3	61.3	1	1	1	77.4	19.4	GFX	BFX
1.5SMCJ51A-AU	1.5SMCJ51CA-AU	51	56.7	65.2	1	1	1	82.4	18.2	GFZ	BFZ
1.5SMCJ54A-AU	1.5SMCJ54CA-AU	54	60	69	1	1	1	87.1	17.2	GGE	BGE
1.5SMCJ58A-AU	1.5SMCJ58CA-AU	58	64.4	74.1	1	1	1	93.6	16	GGG	BGG
1.5SMCJ60A-AU	1.5SMCJ60CA-AU	60	66.7	76.7	1	1	1	96.8	15.5	GGK	BG K
1.5SMCJ64A-AU	1.5SMCJ64CA-AU	64	71.1	81.8	1	1	1	103	14.6	GGM	BGM
1.5SMCJ70A-AU	1.5SMCJ70CA-AU	70	77.8	89.5	1	1	1	113	13.3	GGP	BGP

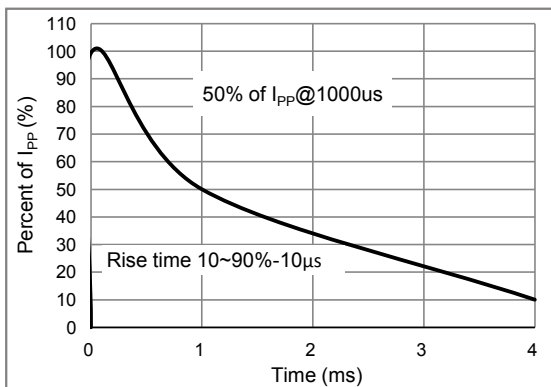
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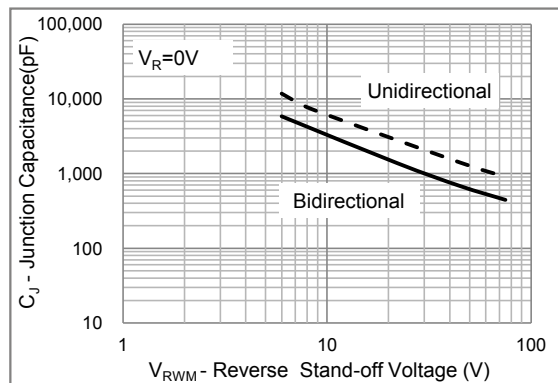
**Fig.1 Peak Pulse Power Rating Curve**



**Fig.2 Derating Curve**



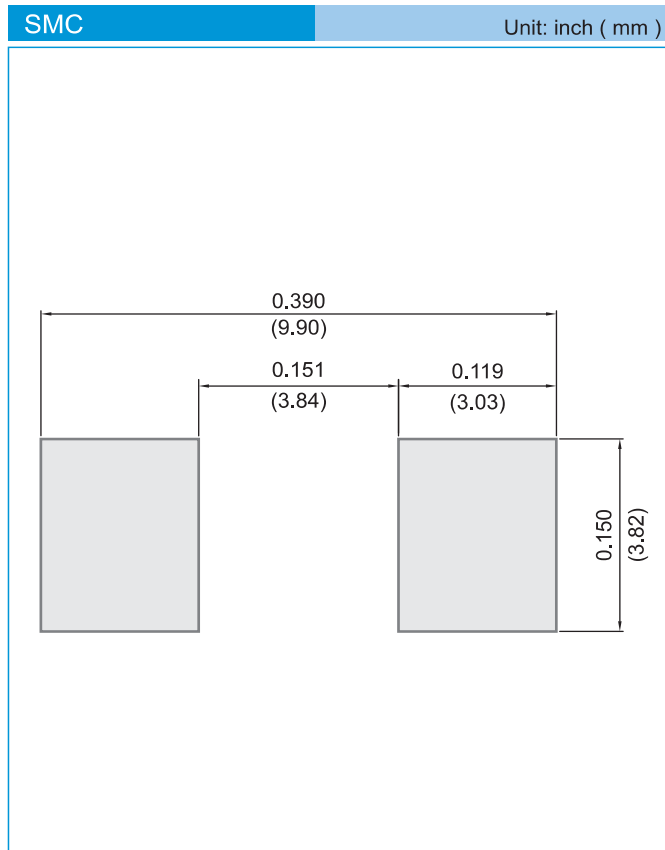
**Fig.3 10/1000us Pulse Waveform**



**Fig.4 Typical Capacitance**

## 1.5SMCJ5.0A-AU~1.5SMCJ70CA-AU

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

- Packing information
  - T/R - 3K per 13" plastic Reel
  - T/R - 0.8K per 7" plastic Reel

## 1.5SMCJ5.0A-AU~1.5SMCJ70CA-AU

### Part No\_packing code\_Version

1.5SMCJ5.0A-AU\_R1\_000A1

1.5SMCJ5.0A-AU\_R2\_000A1

For example :

**RB500V-40\_R2\_00001**

Part No.

Serial number

Version code means HF

Packing size code means 13"

Packing type means T/R

Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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