



## 3.0SMCJ5.0A ~ 3.0SMCJ220CA Series

### SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR PEAK PULSE POWER 3000 Watt

**STAND-OFF VOLTAGE**

**5 to 220 Volt**

**SMC / DO-214AB**

Unit : inch(mm)

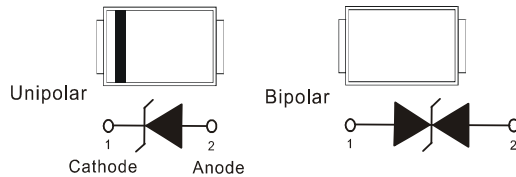
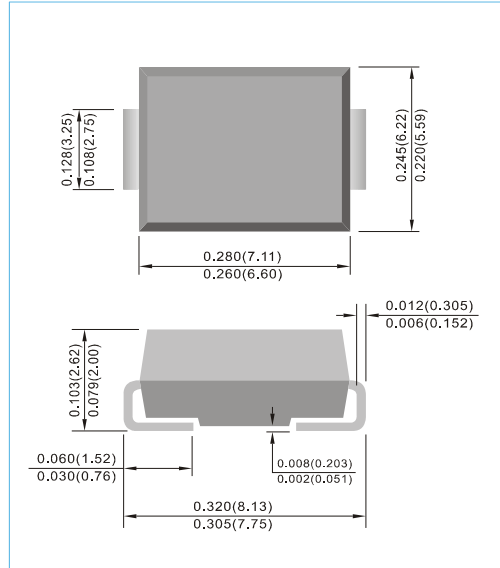
**Recongized File # E210467**

#### FEATURES

- For surface mounted applications in order to optimize board space
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering : 260°C /10 seconds at terminals
- ESD IEC-61000-4-2 Air  $\pm$  30kV, Contact  $\pm$  30kV
- 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)
- Approx. Weight : 0.2325 grams



#### DEVICES FOR BIPOLARAPPLICATIONS

For Bidirectional use CA Suffix for types 3.0SMCJ5.0CA thru types 3.0SMCJ220CA.  
Electrical characteristics apply in both directions.

#### MAXIMUM RATINGSAND 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 Pulse Power Dissipation on $t_p=10/1000\mu s$ waveform (Notes 1, Fig.1)	PPP	3000	Watts
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (Notes 2)	IFSM	300	Amps
Peak Pulse Current on $t_p=10/1000\mu s$ waveform (Notes 1) Fig.3	IPPM	see Table 1	Amps
Typical Thermal Resistance Junction to Air	$R_{\theta JA}$	25	$^{\circ}C / W$
ESD IEC-61000-4-2 (Air) ESD IEC-61000-4-2 (Contact)	VESD	$\pm 30$ $\pm 30$	kV
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^{\circ}C$

#### NOTES :

- 1.Non-repetitive current pulse, per Fig. 3 and derated above  $T_A=25^{\circ}C$  per Fig. 2.
- 2.Measured on 8.3ms single half sine wave or equivalent square wave for unidirectional device only, duty cycle=4 per minute maximum.
- 3.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.

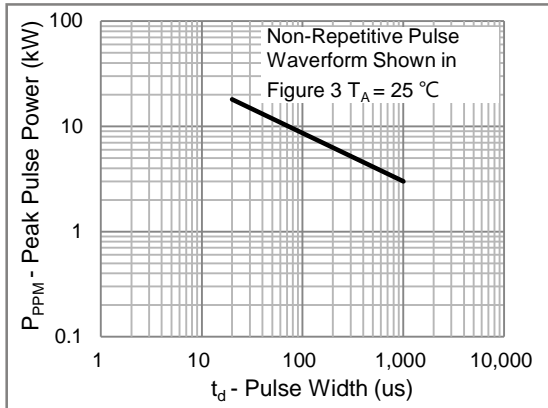


## 3.0SMCJ5.0~3.0SMCJ220CA

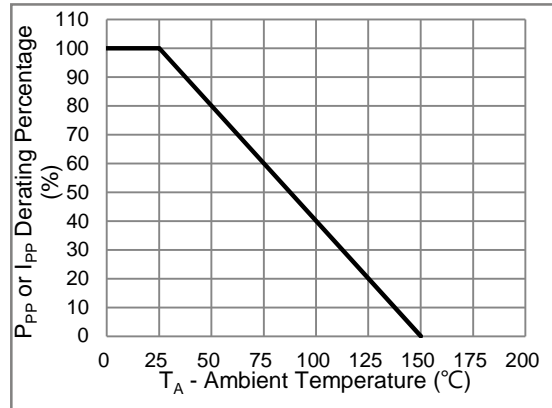
Part Number		Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage		Max. Clamp Voltage 10/1000us	Peak Pulse Current 10/1000us	Marking Code	
			$V_{BR} @ I_T$			$I_R @ V_{RWM}$					
UNI	BI	$V_{RWM}$ (Notes 3)	Min.	Max.	$I_T$	UNI	BI	$V_C @ I_{PP}$	$I_{PP}$	UNI	BI
			V	V		mA	uA				
<b>3000W Transient Voltage Suppressor</b>											
3.0SMCJ5.0A	3.0SMCJ5.0CA	5	6.4	7.25	10	1000	2000	9.2	326	HDE	IDE
3.0SMCJ6.0A	3.0SMCJ6.0CA	6	6.67	7.67	10	1000	2000	10.3	291.3	HDG	IDG
3.0SMCJ6.5A	3.0SMCJ6.5CA	6.5	7.22	8.3	10	500	1000	11.2	267.9	HDK	IDK
3.0SMCJ7.0A	3.0SMCJ7.0CA	7	7.78	8.95	10	200	400	12	250	HDM	IDM
3.0SMCJ7.5A	3.0SMCJ7.5CA	7.5	8.33	9.6	1	100	200	12.9	232.6	HDP	IDP
3.0SMCJ8.0A	3.0SMCJ8.0CA	8	8.89	10.23	1	50	100	13.6	220.6	HDR	IDR
3.0SMCJ8.5A	3.0SMCJ8.5CA	8.5	9.44	10.82	1	25	50	14.4	208.4	HDT	IDT
3.0SMCJ9.0A	3.0SMCJ9.0CA	9	10	11.5	1	10	20	15.4	194.8	HDV	IDV
3.0SMCJ10A	3.0SMCJ10CA	10	11.1	12.8	1	3	3	17	176.4	HDX	IDX
3.0SMCJ11A	3.0SMCJ11CA	11	12.2	14	1	3	3	18.2	184.8	HDZ	IDZ
3.0SMCJ12A	3.0SMCJ12CA	12	13.3	15.3	1	3	3	19.9	150.6	HEE	IEE
3.0SMCJ13A	3.0SMCJ13CA	13	14.4	16.5	1	3	3	21.5	139.4	HEG	IEG
3.0SMCJ14A	3.0SMCJ14CA	14	15.6	17.9	1	3	3	23.2	129.4	HEK	IEK
3.0SMCJ15A	3.0SMCJ15CA	15	16.7	19.2	1	3	3	24.4	123	HEM	IEM
3.0SMCJ16A	3.0SMCJ16CA	16	17.8	20.5	1	3	3	26	115.4	HEP	IEP
3.0SMCJ17A	3.0SMCJ17CA	17	18.9	21.7	1	3	3	27.6	106.6	HER	IER
3.0SMCJ18A	3.0SMCJ18CA	18	20	23.3	1	3	3	29.2	102.8	HET	IET
3.0SMCJ20A	3.0SMCJ20CA	20	22.2	25.5	1	3	3	32.4	92.6	HEV	IEV
3.0SMCJ22A	3.0SMCJ22CA	22	24.4	28	1	3	3	35.5	84.4	HEX	IEX
3.0SMCJ24A	3.0SMCJ24CA	24	26.7	30.7	1	3	3	38.9	77.2	HEZ	IEZ
3.0SMCJ26A	3.0SMCJ26CA	26	28.9	33.2	1	3	3	42.1	71.2	HFE	IFE
3.0SMCJ28A	3.0SMCJ28CA	28	31.1	35.8	1	3	3	45.4	66	HFG	IFG
3.0SMCJ30A	3.0SMCJ30CA	30	33.3	38.3	1	3	3	48.4	62	HFK	IFK
3.0SMCJ33A	3.0SMCJ33CA	33	36.7	42.2	1	3	3	53.3	56.2	HFM	IFM
3.0SMCJ36A	3.0SMCJ36CA	36	40	46	1	3	3	58.1	51.6	HFP	IFP
3.0SMCJ40A	3.0SMCJ40CA	40	44.4	51.1	1	3	3	64.5	46.4	HFR	IFR
3.0SMCJ43A	3.0SMCJ43CA	43	47.8	54.9	1	3	3	69.4	43.2	HFT	IFT
3.0SMCJ45A	3.0SMCJ45CA	45	50	57.5	1	3	3	72.7	41.2	HFV	IFV
3.0SMCJ48A	3.0SMCJ48CA	48	53.3	61.3	1	3	3	77.4	38.8	HFX	IFX
3.0SMCJ51A	3.0SMCJ51CA	51	56.7	65.2	1	3	3	82.4	36.4	HFZ	IFZ
3.0SMCJ54A	3.0SMCJ54CA	54	60	69	1	3	3	87.1	34.4	HGE	IGE
3.0SMCJ58A	3.0SMCJ58CA	58	64.4	74.1	1	3	3	93.6	32	HGG	IGG
3.0SMCJ60A	3.0SMCJ60CA	60	66.7	76.7	1	3	3	96.8	31	HGK	IGK
3.0SMCJ64A	3.0SMCJ64CA	64	71.1	81.8	1	3	3	103	29.2	HGM	IGM
3.0SMCJ70A	3.0SMCJ70CA	70	77.8	89.5	1	3	3	113	26.6	HGP	IGP
3.0SMCJ75A	3.0SMCJ75CA	75	83.3	95.8	1	3	3	121	24.8	HGR	IGR
3.0SMCJ78A	3.0SMCJ78CA	78	86.7	99.7	1	3	3	126	22.8	HGT	IGT
3.0SMCJ85A	3.0SMCJ85CA	85	94.4	108.2	1	3	3	137	20.8	HGV	IGV
3.0SMCJ90A	3.0SMCJ90CA	90	100	115.5	1	3	3	146	20.6	HGX	IGX
3.0SMCJ100A	3.0SMCJ100CA	100	111	128	1	3	3	162	18.6	HGZ	IGZ
3.0SMCJ110A	3.0SMCJ110CA	110	122	140.5	1	3	3	177	16.8	HHE	IHE
3.0SMCJ120A	3.0SMCJ120CA	120	133	153	1	3	3	193	15.6	HHG	IHG
3.0SMCJ130A	3.0SMCJ130CA	130	144	165.5	1	3	3	209	14.4	HHK	IHK
3.0SMCJ150A	3.0SMCJ150CA	150	167	192.5	1	3	3	243	12.4	HHM	IHM
3.0SMCJ160A	3.0SMCJ160CA	160	178	205	1	3	3	259	11.6	HHP	IHP
3.0SMCJ170A	3.0SMCJ170CA	170	189	217.5	1	3	3	275	11	HHR	IHR
3.0SMCJ180A	3.0SMCJ180CA	180	198	230.4	1	3	3	292	10.3	HHT	IHT
3.0SMCJ190A	3.0SMCJ190CA	190	209	243.2	1	3	3	308	9.7	HHV	IHV
3.0SMCJ200A	3.0SMCJ200CA	200	220	256	1	3	3	324	9.3	HHX	IHX
3.0SMCJ210A	3.0SMCJ210CA	210	231	268.8	1	3	3	340	8.8	HHZ	IHZ
3.0SMCJ220A	3.0SMCJ220CA	220	242	281.6	1	3	3	356	8.4	HIE	IEE



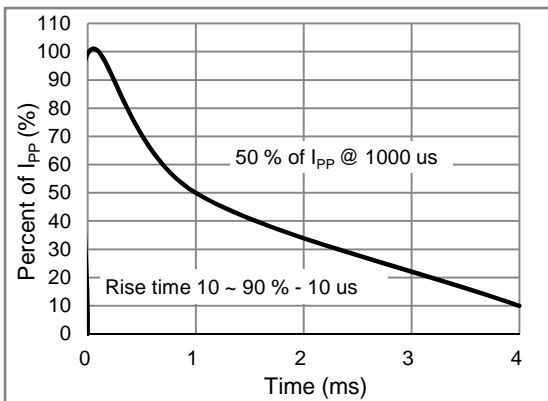
## 3.0SMCJ5.0~3.0SMCJ220CA



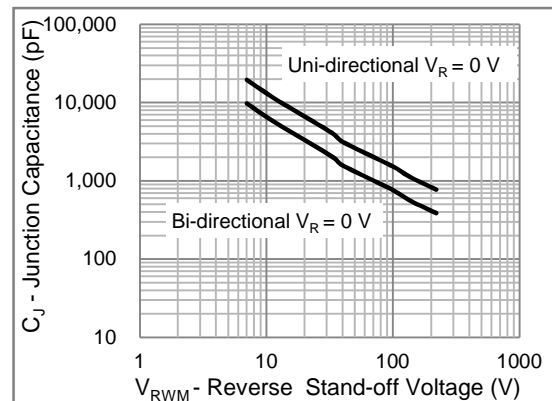
**Fig.1 Peak Pulse Power Rating**



**Fig.2 Derating Curve**



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

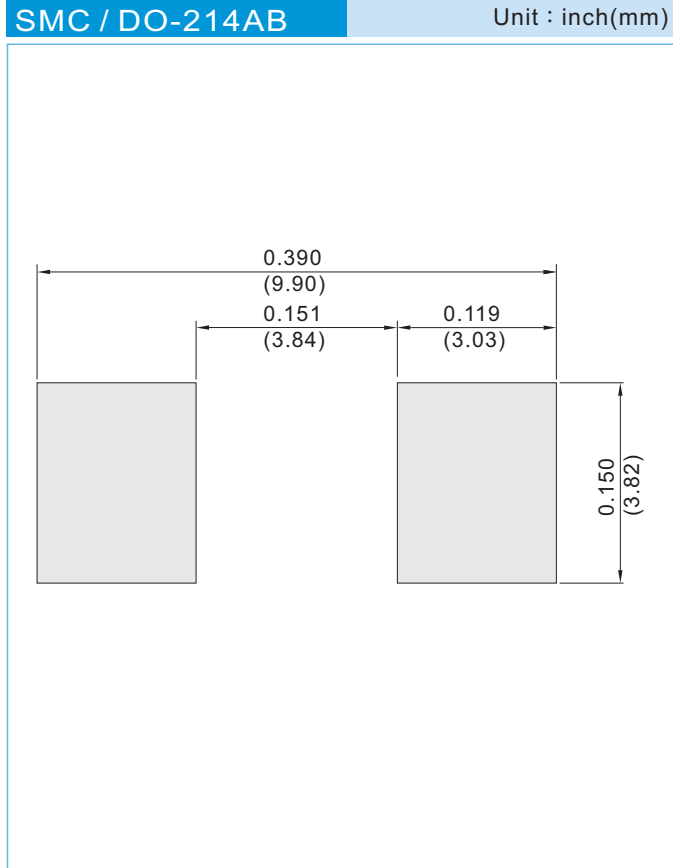


**Fig.4 Typical Capacitance**



## 3.0SMCJ5.0~3.0SMCJ220CA

### MOUNTING PAD LAYOUT



### ORDER INFORMATION

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



## 3.0SMCJ5.0~3.0SMCJ220CA

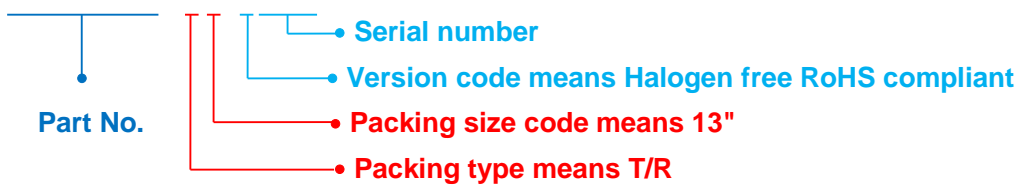
### Part No.\_packing code\_Version

3.0SMCJ5.0A\_R1\_00001

3.0SMCJ5.0A\_R2\_00001

For example :

RB500V-40\_R2\_00001



Packing Code <b>XX</b>				Version Code <b>X</b>		Serial number <b>XXXX</b>
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HSF Level	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>	Halogen free RoHS compliant	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	RoHS compliant	<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>			



## 3.0SMCJ5.0~3.0SMCJ220CA

---

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [ESD Suppressors / TVS Diodes](#) category:*

*Click to view products by [Panjit](#) manufacturer:*

Other Similar products are found below :

[60KS200C](#) [D18V0L1B2LP-7B](#) [D5V0F4U5P5-7](#) [NTE4902](#) [P4KE27CA](#) [P6KE11CA](#) [P6KE8.2A](#) [SA60CA](#) [SA64CA](#) [SMBJ12CATR](#)  
[SMBJ33CATR](#) [SMBJ6.5A](#) [SMBJ8.0A](#) [ESD101-B1-02ELS](#) [E6327](#) [ESD112-B1-02EL](#) [E6327](#) [ESD7451N2T5G](#) [19180-510](#) [CPDT-5V0USP-](#)  
[HF](#) [3.0SMCJ33CA-F](#) [3.0SMCJ36A-F](#) [HSPC16701B02TP](#) [JANTX1N6126A](#) [D3V3Q1B2DLP3-7](#) [D55V0M1B2WS-7](#) [SCM1293A-04SO](#)  
[ESD200-B1-CSP0201](#) [E6327](#) [SM12-7](#) [CEN955](#) [W/DATA](#) [VESD12A1A-HD1-GS08](#) [CPDQC5V0-HF](#) [D1213A-01LP4-7B](#) [ESD101-B1-02EL](#)  
[E6327](#) [AOZ8808DI-03](#) [5KP15A](#) [5KP48A](#) [5KP90A](#) [ESD3V3D7-TP](#) [15KPA36A-LF](#) [P4KE56CA](#) [P4KE68A](#) [P4KE91CATR](#) [P6KE120A](#)  
[P6KE13CA](#) [P6KE43CA](#) [P6KE6.8CA](#) [P6KE8.2](#) [P6SMBJ20CA](#) [JANTX1N6072A](#) [SR2835ESKG](#) [SA90CA](#)