



## 5.0SMCJ SERIES

### SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR PEAK PULSE POWER 5000 Watts

**STAND-OFF VOLTAGE**

**58 to 100 Volts**

**SMC / DO-214AB**

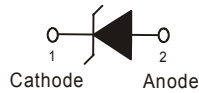
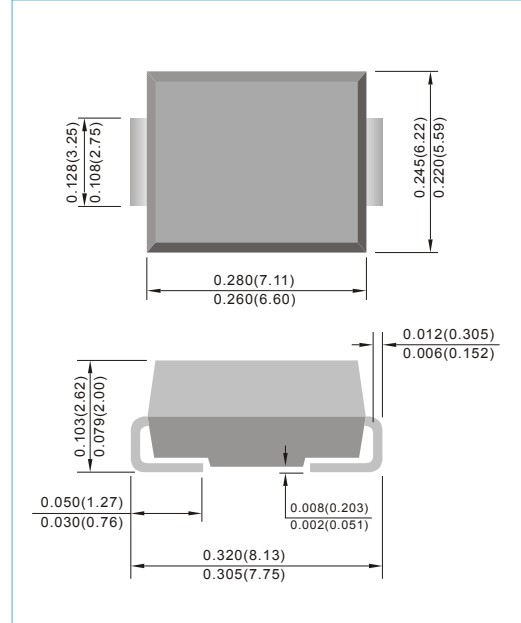
Unit : inch(mm)

#### FEATURES

- For surface mounted applications in order to optimize board space.
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature soldering : 260°C /10 seconds at terminals
- Lead free in comply with EU RoHS 2011/65/EU directives
- Green molding compound as per IEC61249 Std. . (Halogen Free)

#### 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, 0.232 gram



#### 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 (10/1000µs waveform) (Notes 1)	$P_{PP}$	5000	Watts
Peak Pulse Current on 10/1000µs waveform (Notes 1)	$I_{PPM}$	See table	Amps
Typical Thermal Resistance Junction to Air (Notes 2)	$R_{\theta JA}$	110	°C / W
Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JECED Method)	$I_{FSM}$	300	Amps
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	°C

#### NOTES:

1. Non-repetitive current pulse.
2. Mounted on an FR4 PCB, single-sided copper, mini pad.
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.

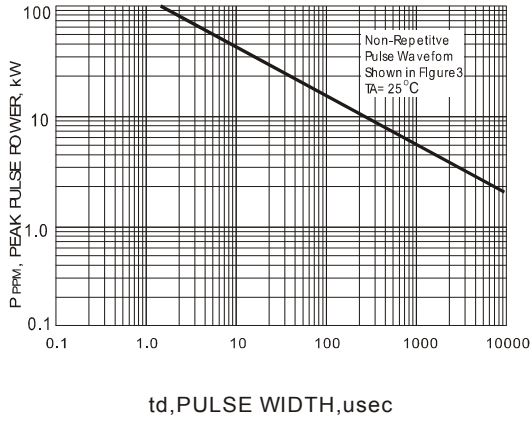


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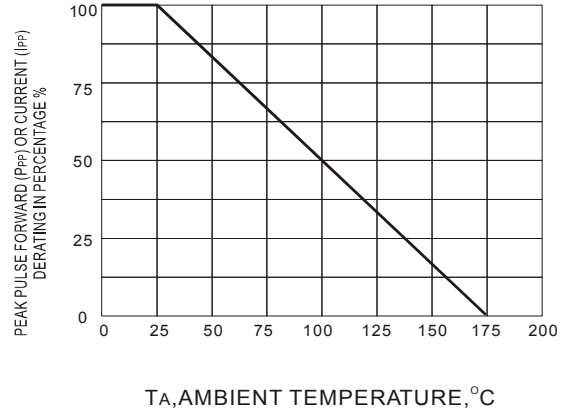
Part Number	Reverse Stand-off Voltage	Breakdown Voltage		Test Current	Reverse Leakage	Max.Clamp Voltage 10/1000 $\mu$ s	Peak Pulse Current 10/1000 $\mu$ s	Marking Code
	V <sub>RWM</sub> (Notes 3)	V <sub>BR</sub> @ I <sub>T</sub>		I <sub>T</sub>	I <sub>R</sub> @ V <sub>RWM</sub>	V <sub>C</sub> @ I <sub>PP</sub>	I <sub>PP</sub>	
		Min.	Max.					
	V	V	V	mA	$\mu$ A	V	A	
5.0SMCJ58A	58	64.4	74.1	1	3	93.6	53.5	5HGG
5.0SMCJ60A	60	66.7	76.7	1	3	96.8	51.7	5HGK
5.0SMCJ64A	64	71.1	81.8	1	3	103	48.6	5HGM
5.0SMCJ70A	70	77.8	89.5	1	3	113	44.3	5HGP
5.0SMCJ75A	75	83.3	95.8	1	3	121	41.4	5HGR
5.0SMCJ78A	78	86.7	99.7	1	3	126	39.7	5HGT
5.0SMCJ85A	85	94.4	108.2	1	3	137	36.5	5HGV
5.0SMCJ90A	90	100	115.5	1	3	146	34.3	5HGX
5.0SMCJ100A	100	111	128	1	3	162	30.9	5HGZ



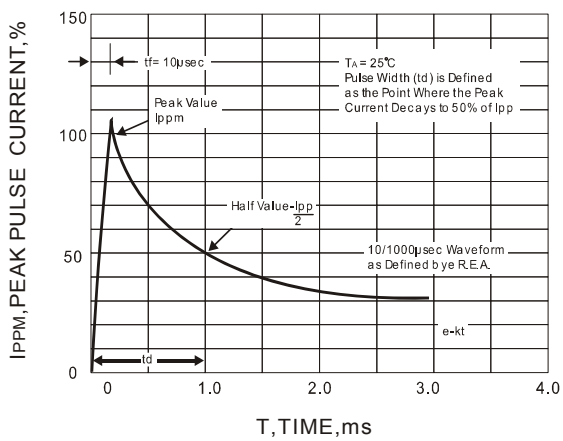
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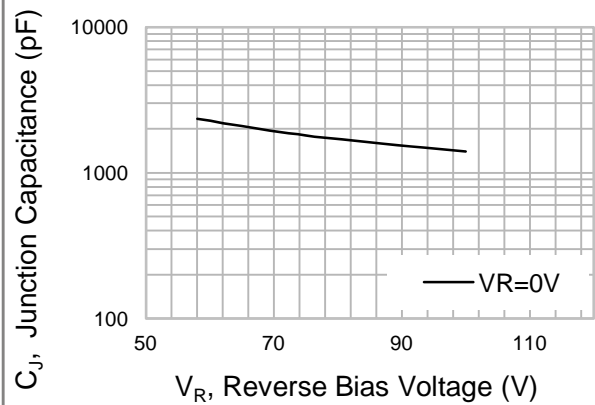
**Fig.1 PEAK PULSE POWER RATING VERSUS PULSE TIME CURVE**



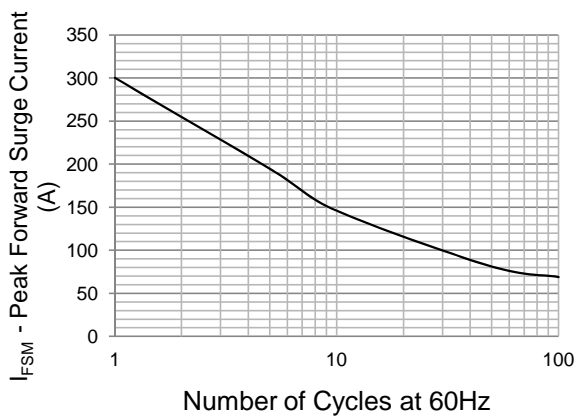
**Fig.2 PULSE DERATING CURVE**



**Fig.3 PULSE WAVEFORM**



**Fig.4 TYPICAL JUNCTION CAPACITANCE**



**Fig.5 TYPICAL PEAK CLAMPING VOLTAGE**

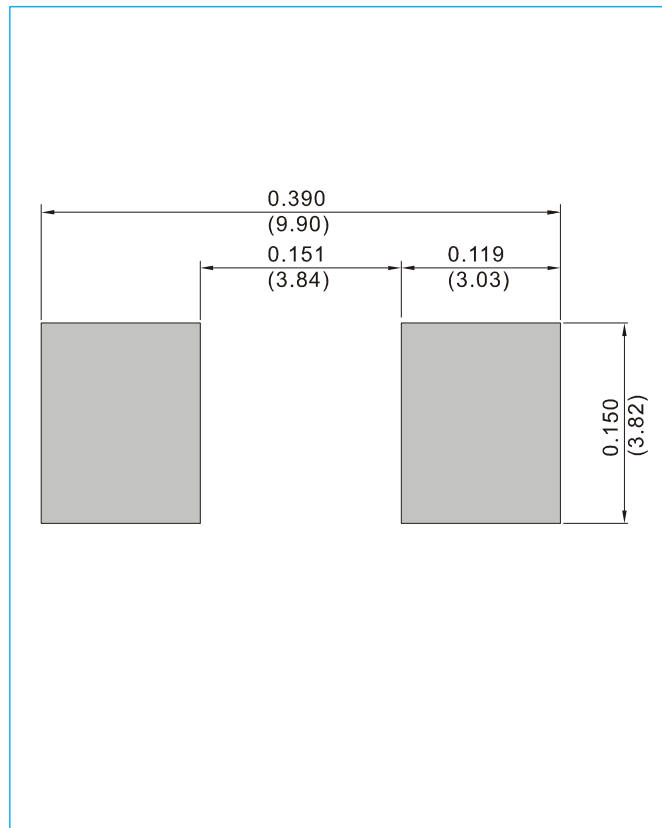


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### MOUNTING PAD LAYOUT

SMC / DO-214AB

Unit : inch(mm)



### ORDER INFORMATION

- Packing information
  - T/R - 3K per 13" plastic Reel
  - T/R - 0.5K per 7" plastic Reel



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### Part No\_packing code\_Version

5.0SMCJ58A\_R1\_00001

5.0SMCJ58A\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



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)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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