

# 3.0SMCJ SERIES

## SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR



**CHENG-YI  
ELECTRONIC**

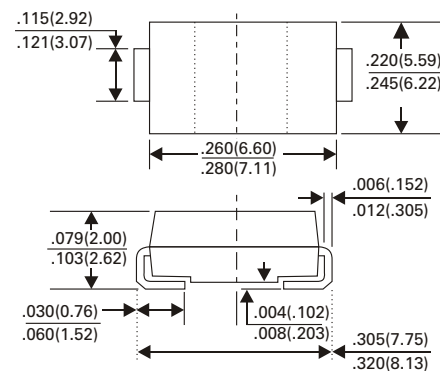


### FEATURES

- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Excellent clamping capability
- Repetition Rate (duty cycle):0.5%
- Fast response time: typically less than 5.0 ns from 0 volts to BV for bidirectional types
- Typical  $I_D$  less than 1  $\mu A$  above 10V
- High temperature soldering:250°C/10 seconds at terminals
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

VOLTAGE 5.0 to 170 VOLTS  
PEAK PULSE POWER 3000 WATTS

### SMC/DO-214AB



Dimensions in inches and (millimeters)  
\*Typical Range

### 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 positive end (cathode) except bidirectional types
- Standard Packaging: 16mm tape (EIA STD EIA-481)
- Weight:0.007 ounce, 0.21 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

RATINGS	SYMBOL	VALUE	UNITS
Peak Pulse Power Dissipation on 10/1000 $\mu s$ (NOTE 1,2,Fig.1)	PPPM	Minimum 3000	Watts
Peak Pulse on Current 10/1000 $\mu s$ waveform (NOTE 1,Fig.3)	IPPM	See Table 1	Amps
Peak forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)(NOTE 2,3)	IFSM	200.0	Amps
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150	°C

- Notes: 1. Non-repetitive current pulse, per Fig.3 and derated above T<sub>A</sub>=25°C per Fig.2  
 2. Measured on 8.0mm<sup>2</sup> copper pads to each terminal.  
 3. 8.3ms single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.

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### RATING AND CHARACTERISTICS CURVES 3.0SMCJ SERIES

Fig. 1 - PEAK PULSE POWER VS PULSE TIME

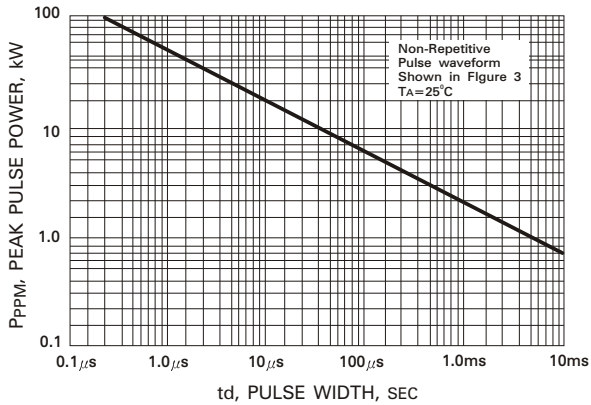


Fig. 2 - PULSE DERATING CURVE

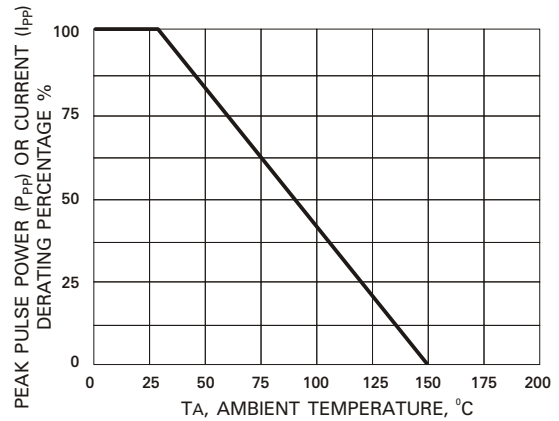


Fig. 3 - PULSE WAVEFORM

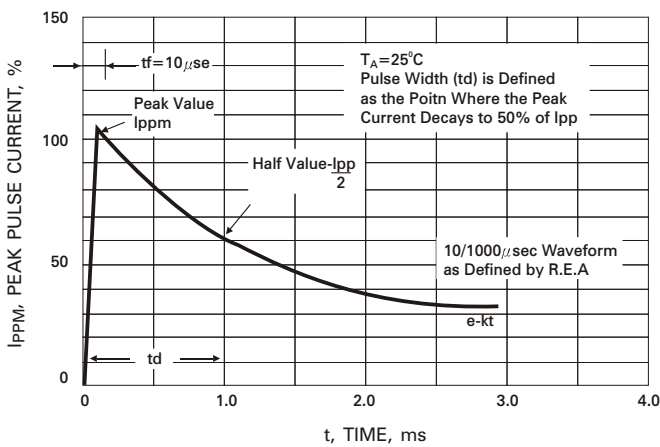


Fig. 4 - TYPICAL CAPACITANCE VS STAND-OFF VOLTAGE

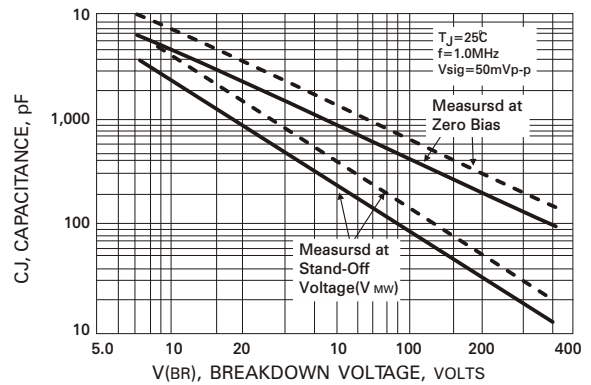


Fig. 5 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

