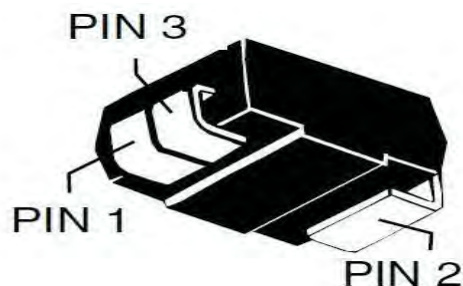


## Power Transient Voltage Suppressor

### Features

- Bidirectional Protection
- Fast Response Time : Typically < 1.5ns
- Excellent Clamping Capability
- Glass Passivated Junction
- Built-in Strain relief
- Low inductance
- Low profile package
- High temperature solder:260°C/10 seconds at terminal



### Mechanical Characteristics

- JEDEC DO-214AB(SMC-3)package
- Molding compound flammability:  
UL 94V-0
- Marking:SMCJ/xx CA(A)2
- Standard Packaging: EIA STD RS-481
- ROHS Compliant

### Applications

- I/O Interfaces
- Power lines
- Automotive and Telecommunication
- Computers & Consumer Electronics
- Industrial Electronics

| <b>Absolute Maximum Rating</b>                                    |                  |              |       |
|-------------------------------------------------------------------|------------------|--------------|-------|
| Rating                                                            | Symbol           | Value        | Units |
| Peak Pulse Power Dissipation on 10/1000μs waveform (Note 1,FIG.1) | PPPM             | Minimum 3000 | Watts |
| Power Dissipation on infinite heat sink TA=50°C (Fig4)            | P <sub>D</sub>   | 6.5          | W     |
| Operating Junction Temperature range                              | T <sub>J</sub>   | -55to+150    | °C    |
| Storage Temperature range                                         | T <sub>STG</sub> | -55to+150    | °C    |

**Note**

**1.Non-repetitive current pulse , per Fig. 3 and dissipated above TA = 25°C per Fig. 2 ..**

**Note 2:** Peak Pulse Power or Current Dissipated above TA=25°C Per Fig. 2 and Non-Repetitive Current Pulse,Per Fig.3.

## Electrical Characteristics

| Part Number   | IDRM@VDRM |    | VBR①@IR |    | VC@IPP② |   | IPP③ | IPP④ |
|---------------|-----------|----|---------|----|---------|---|------|------|
|               | μA        | V  | V       | MA | V       | A | A    | A    |
|               | MAX       |    | MIN     |    | MAX     |   | MIN  | MIN  |
| JK SMDJ58CA-3 | 5         | 58 | 64.4    | 1  | 93.6    | 1 | 500  | 100  |

Absolute maximum ratings measured at T=25°C RH=45%-75%(unless otherwise noted)

- ① VBR is measured at IR=1mA(PIN1 or3to2)
- ② Surg Waveform:10/1000μs(PIN1or3to2)
- ③ Surg Waveform:8/20μs(PIN1 or 3 to 2)
- ④ Surg Waveform:10/1000μs(PIN1 or 3 to 3)

## Summary of Packing Options

| Package Type | Description                | Quantity(pcs) |
|--------------|----------------------------|---------------|
| SMC-3        | Tape & Reel - 12mm/13"tape | 3000          |

## I - V Curve Characteristics

Ratings and Characteristic Curves( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

Fig. 1 - Peak Pulse Power Rating

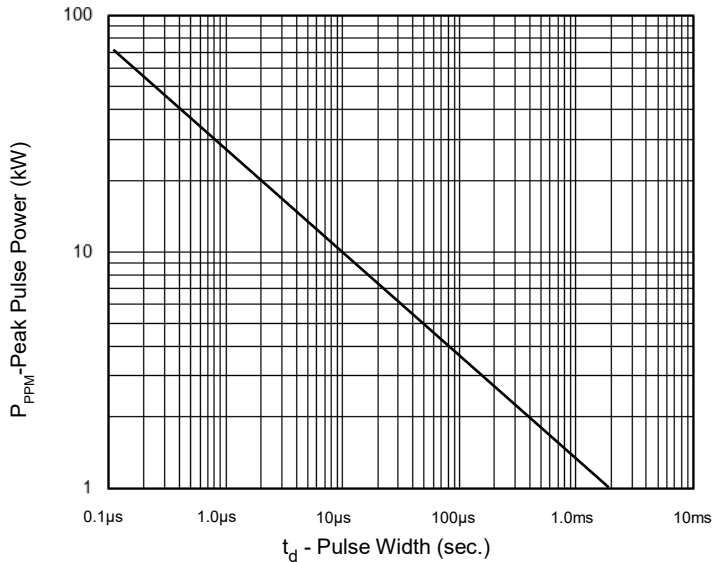


Fig. 2 - Pulse Dissipating Curve

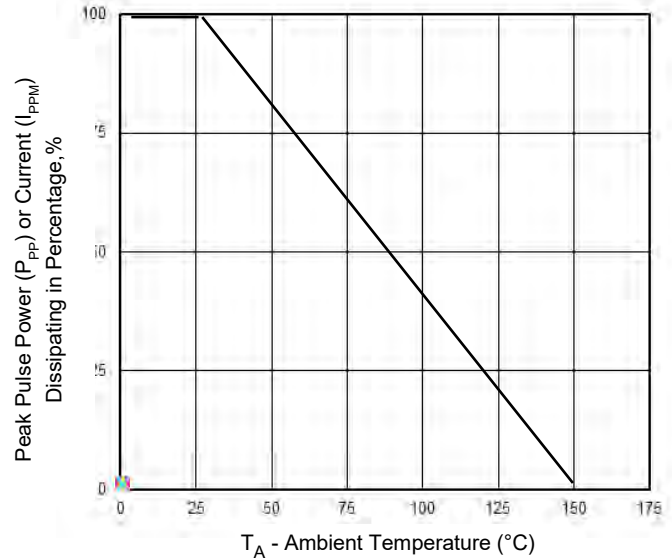


Fig. 3 - Pulse

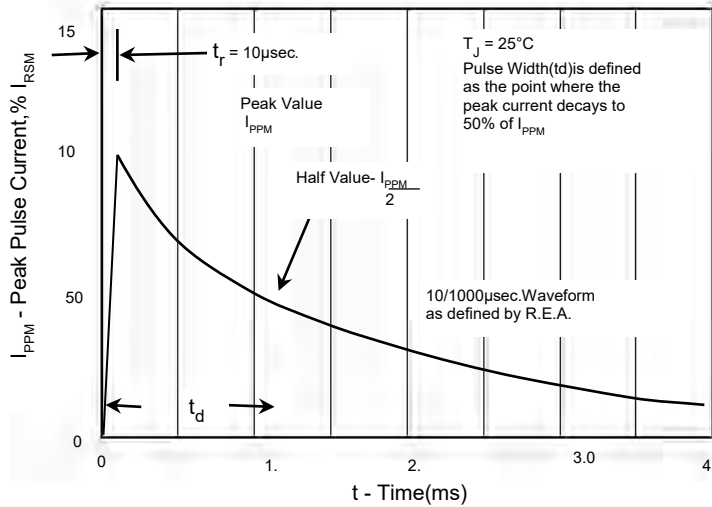


Fig. 4 - Typical Junction Capacitance

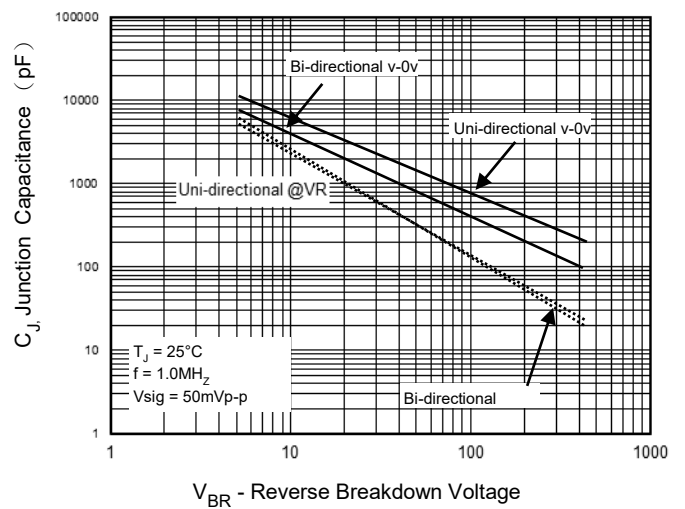


Fig. 5 - Steady State Power Derating Curve

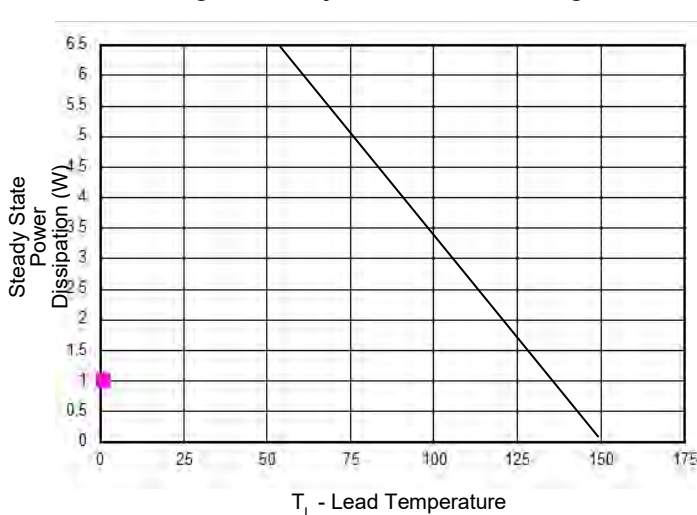
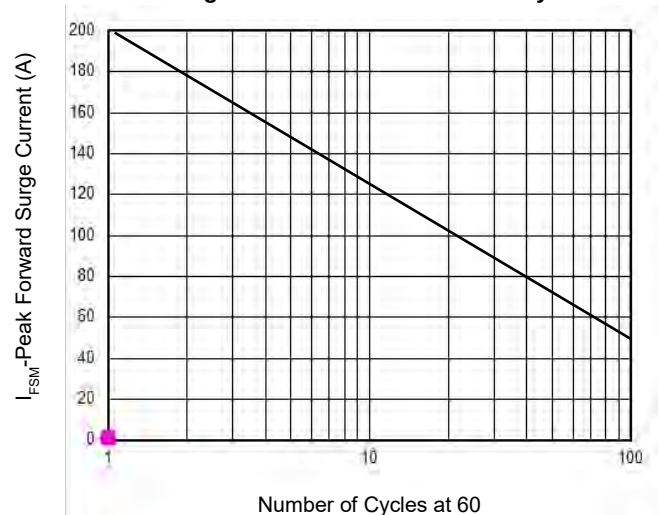
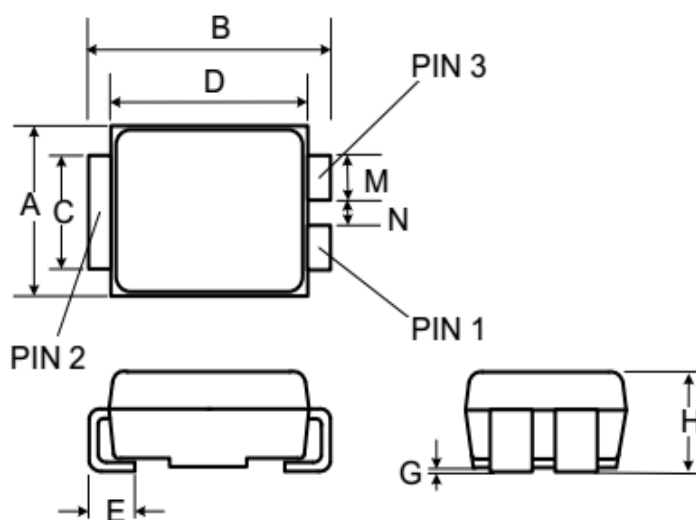


Fig. 6 - Maximum Non-repetitive Forward Surge current uni-directional only



## Outline Drawing - SMC-3

| Ref.(mm) | Millimeters |       |
|----------|-------------|-------|
|          | Min         | Max.  |
| A        | 5.59        | 6.22  |
| B        | 7.75        | 8.21  |
| C        | 2.90        | 3.20  |
| D        | 6.60        | 7.11  |
| E        | 0.76        | 1.52  |
| G        | -           | 0.203 |
| H        | 2.06        | 2.73  |
| M        | 0.8         | 1.3   |
| N        | 0.6         | 1.1   |



## Tape and Reel Specification - Modified DO-214AB-3

