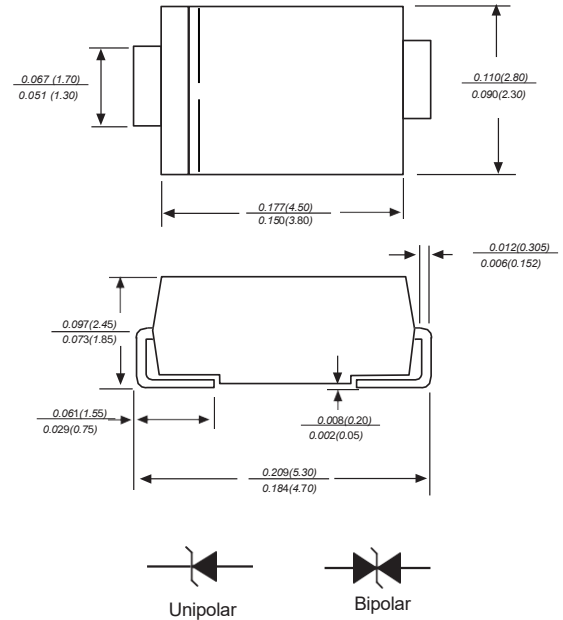


## TRANSIENT VOLTAGE SUPPRESSOR

### Features

- ◆ For surface mounted applications in order to optimize board space
- ◆ Low profile package
- ◆ Low inductance
- ◆ Plastic package has underwriters laboratory flammability

### DO-214AC/SMA

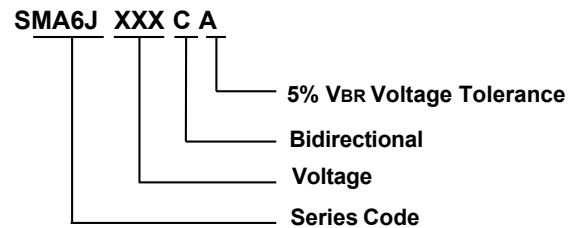


Dimensions in inches and (millimeters)

### Marking Code



### Part Number Code



### MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

|                                                                                                    |                                   |             |      |
|----------------------------------------------------------------------------------------------------|-----------------------------------|-------------|------|
| Peak pulse power dissipation at 10/1000μs waveform                                                 | P <sub>PPM</sub>                  | 600         | W    |
| Peak pulse current of at 10/1000μs waveform                                                        | I <sub>PPM</sub>                  | See Table1  | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load, (JEDEC Method) | I <sub>FSM</sub><br>(UNI)         | 60          | A    |
| Typical thermal resistance junction to ambient(Note 1)                                             | R <sub>θJA</sub>                  | 100         | °C/W |
| Operating junction and Storage Temperature Range.                                                  | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 | °C   |

Note 1: Mounted on 8X8mm copper pads to each terminal.



## Electrical Characteristics (TA=25°C)

Table 1

| Type      |            | Reverse<br>Stand-off<br>Voltage | Breakdown<br>Voltage |      | Test<br>Current | Reverse<br>Leakage | Max. Clamp<br>Voltage | Peak Pulse<br>Current | Package  |                      |
|-----------|------------|---------------------------------|----------------------|------|-----------------|--------------------|-----------------------|-----------------------|----------|----------------------|
|           |            |                                 | $V_{BR} @ I_T$       |      |                 |                    |                       |                       | SMA      |                      |
|           |            |                                 | $V_{RMW}$            | Min  | Max             | $I_T$              | $I_R @ V_{RWM}$       | $V_C @ I_{PP}$        | $I_{PP}$ | Device Marking Ccode |
| UNI       | BI         | V                               | V                    | V    | mA              | μA                 | V                     | A                     | UNI      | BI                   |
| SMA6J5.0A | SMA6J5.0CA | 5.0                             | 6.4                  | 7.07 | 10              | 800                | 9.2                   | 65.22                 | 6AE      | 6HE                  |
| SMA6J6.0A | SMA6J6.0CA | 6.0                             | 6.67                 | 7.37 | 10              | 800                | 10.3                  | 58.25                 | 6AG      | 6HG                  |
| SMA6J6.5A | SMA6J6.5CA | 6.5                             | 7.22                 | 7.98 | 10              | 500                | 11.2                  | 53.57                 | 6AK      | 6HK                  |
| SMA6J7.0A | SMA6J7.0CA | 7.0                             | 7.78                 | 8.6  | 10              | 200                | 12                    | 50                    | 6AM      | 6HM                  |
| SMA6J7.5A | SMA6J7.5CA | 7.5                             | 8.33                 | 9.21 | 1               | 100                | 12.9                  | 46.51                 | 6AP      | 6HP                  |
| SMA6J8.0A | SMA6J8.0CA | 8.0                             | 8.89                 | 9.83 | 1               | 50                 | 13.6                  | 44.12                 | 6AR      | 6HR                  |
| SMA6J8.5A | SMA6J8.5CA | 8.5                             | 9.44                 | 10.4 | 1               | 10                 | 14.4                  | 41.67                 | 6AT      | 6HT                  |
| SMA6J9.0A | SMA6J9.0CA | 9.0                             | 10                   | 11.1 | 1               | 5                  | 15.4                  | 38.96                 | 6AV      | 6HV                  |
| SMA6J10A  | SMA6J10CA  | 10                              | 11.1                 | 12.3 | 1               | 5                  | 17                    | 35.29                 | 6AX      | 6HX                  |
| SMA6J11A  | SMA6J11CA  | 11                              | 12.2                 | 13.5 | 1               | 5                  | 18.2                  | 32.97                 | 6AZ      | 6WZ                  |
| SMA6J12A  | SMA6J12CA  | 12                              | 13.3                 | 14.7 | 1               | 5                  | 19.9                  | 30.15                 | 6BE      | 6XE                  |
| SMA6J13A  | SMA6J13CA  | 13                              | 14.4                 | 15.9 | 1               | 1                  | 21.5                  | 27.91                 | 6BG      | 6XG                  |
| SMA6J14A  | SMA6J14CA  | 14                              | 15.6                 | 17.2 | 1               | 1                  | 23.2                  | 25.86                 | 6BK      | 6XK                  |
| SMA6J15A  | SMA6J15CA  | 15                              | 16.7                 | 18.5 | 1               | 1                  | 24.4                  | 24.59                 | 6BM      | 6XM                  |
| SMA6J16A  | SMA6J16CA  | 16                              | 17.8                 | 19.7 | 1               | 1                  | 26                    | 23.08                 | 6BP      | 6XP                  |
| SMA6J17A  | SMA6J17CA  | 17                              | 18.9                 | 20.9 | 1               | 1                  | 27.6                  | 21.74                 | 6BR      | 6XR                  |
| SMA6J18A  | SMA6J18CA  | 18                              | 20                   | 22.1 | 1               | 1                  | 29.2                  | 20.55                 | 6BT      | 6XT                  |
| SMA6J20A  | SMA6J20CA  | 20                              | 22.2                 | 24.5 | 1               | 1                  | 32.4                  | 18.52                 | 6BV      | 6XV                  |
| SMA6J22A  | SMA6J22CA  | 22                              | 24.4                 | 26.9 | 1               | 1                  | 35.5                  | 16.9                  | 6BX      | 6XX                  |
| SMA6J24A  | SMA6J24CA  | 24                              | 26.7                 | 29.5 | 1               | 1                  | 38.9                  | 15.42                 | 6BZ      | 6XZ                  |
| SMA6J26A  | SMA6J26CA  | 26                              | 28.9                 | 31.9 | 1               | 1                  | 42.1                  | 14.25                 | 6CE      | 6YE                  |
| SMA6J28A  | SMA6J28CA  | 28                              | 31.1                 | 34.4 | 1               | 1                  | 45.4                  | 13.22                 | 6CG      | 6YG                  |
| SMA6J30A  | SMA6J30CA  | 30                              | 33.3                 | 36.8 | 1               | 1                  | 48.4                  | 12.4                  | 6CK      | 6YK                  |
| SMA6J33A  | SMA6J33CA  | 33                              | 36.7                 | 40.6 | 1               | 1                  | 53.3                  | 11.26                 | 6CM      | 6YM                  |
| SMA6J36A  | SMA6J36CA  | 36                              | 40                   | 44.2 | 1               | 1                  | 58.1                  | 10.33                 | 6CP      | 6YP                  |
| SMA6J40A  | SMA6J40CA  | 40                              | 44.4                 | 49.1 | 1               | 1                  | 64.5                  | 9.3                   | 6CR      | 6YR                  |
| SMA6J43A  | SMA6J43CA  | 43                              | 47.8                 | 52.8 | 1               | 1                  | 69.4                  | 8.65                  | 6CT      | 6YT                  |
| SMA6J45A  | SMA6J45CA  | 45                              | 50                   | 55.3 | 1               | 1                  | 72.7                  | 8.25                  | 6CV      | 6YV                  |
| SMA6J48A  | SMA6J48CA  | 48                              | 53.3                 | 58.9 | 1               | 1                  | 77.4                  | 7.75                  | 6CX      | 6YX                  |
| SMA6J51A  | SMA6J51CA  | 51                              | 56.7                 | 62.7 | 1               | 1                  | 82.4                  | 7.28                  | 6CZ      | 6YZ                  |
| SMA6J54A  | SMA6J54CA  | 54                              | 60                   | 66.3 | 1               | 1                  | 87.1                  | 6.89                  | 6RE      | 6ZE                  |
| SMA6J58A  | SMA6J58CA  | 58                              | 64.4                 | 71.2 | 1               | 1                  | 93.6                  | 6.41                  | 6RG      | 6ZG                  |
| SMA6J60A  | SMA6J60CA  | 60                              | 66.7                 | 73.7 | 1               | 1                  | 96.8                  | 6.2                   | 6RK      | 6ZK                  |
| SMA6J64A  | SMA6J64CA  | 64                              | 71.1                 | 78.6 | 1               | 1                  | 103                   | 5.83                  | 6RM      | 6ZM                  |
| SMA6J70A  | SMA6J70CA  | 70                              | 77.8                 | 86   | 1               | 1                  | 113                   | 5.31                  | 6RP      | 6ZP                  |
| SMA6J75A  | SMA6J75CA  | 75                              | 83.3                 | 92.1 | 1               | 1                  | 121                   | 4.96                  | 6RR      | 6ZR                  |
| SMA6J78A  | SMA6J78CA  | 78                              | 86.7                 | 95.8 | 1               | 1                  | 126                   | 4.76                  | 6RT      | 6ZT                  |
| SMA6J85A  | SMA6J85CA  | 85                              | 94.4                 | 104  | 1               | 1                  | 137                   | 4.38                  | 6RV      | 6ZV                  |
| SMA6J90A  | SMA6J90CA  | 90                              | 100                  | 111  | 1               | 1                  | 146                   | 4.11                  | 6RX      | 6MX                  |
| SMA6J100A | SMA6J100CA | 100                             | 111                  | 123  | 1               | 1                  | 162                   | 3.7                   | 6RZ      | 6MZ                  |

## RATINGS AND CHARACTERISTICS CURVES ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.1 Peak Pulse Power Rating Curve

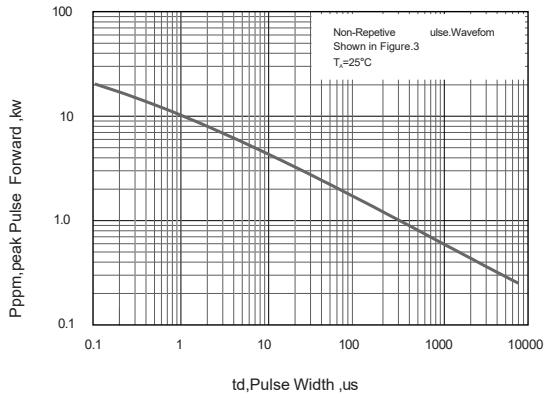


Fig.2 Forward Current Derating Curve

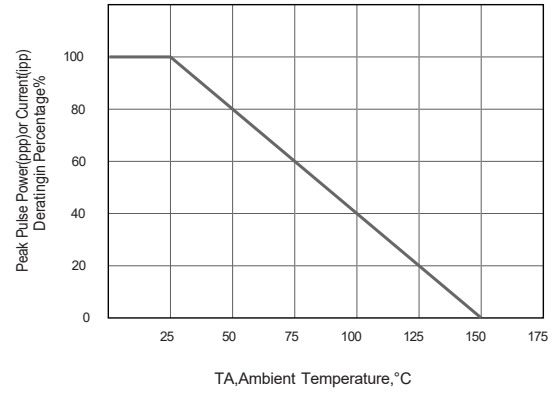


Fig.3 Pulse Waveform

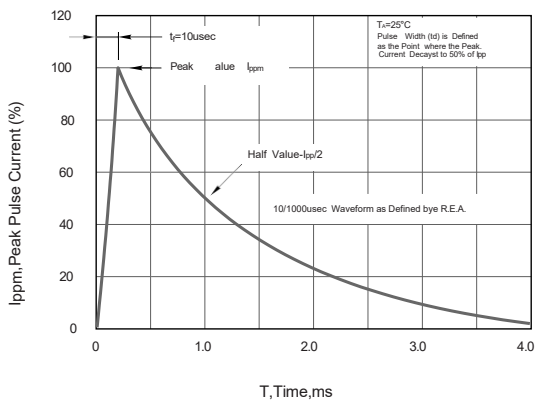


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

