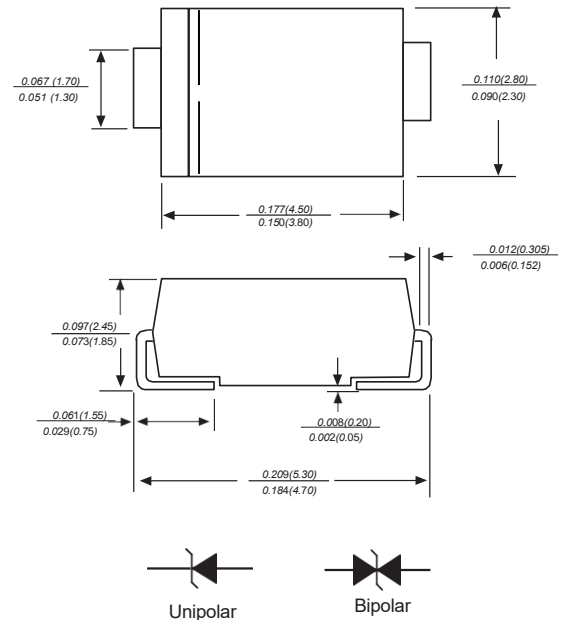


## TRANSIENT VOLTAGE SUPPRESSOR

### Features

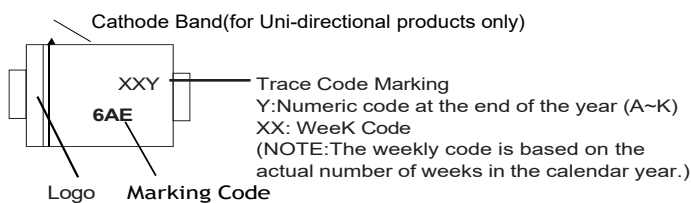
- ◆ For surface mounted applications in order to optimize board space
- ◆ Low profile package
- ◆ Low inductance
- ◆ Plastic package has underwriters laboratory flammability

### DO-214AC/SMA

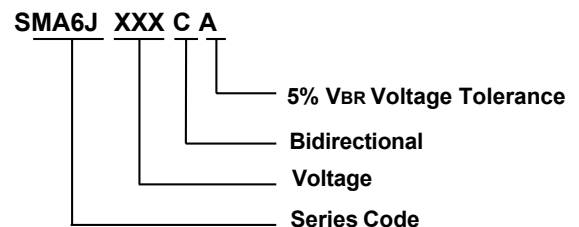


Dimensions in inches and (millimeters)

### 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 <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>       | SMA                  |     |
|           |            |                                 | Min                              | Max  |                 |                                   |                                  |                       | 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

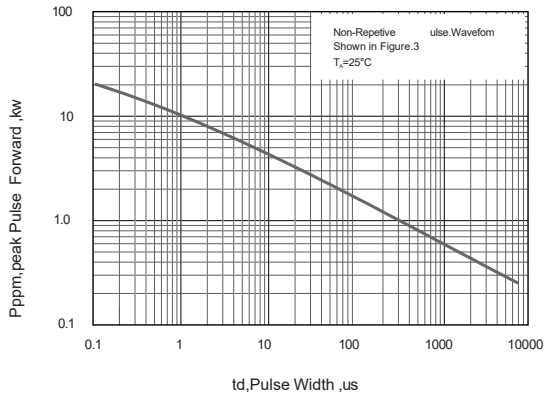


Fig.2 Forward Current Derating Curve

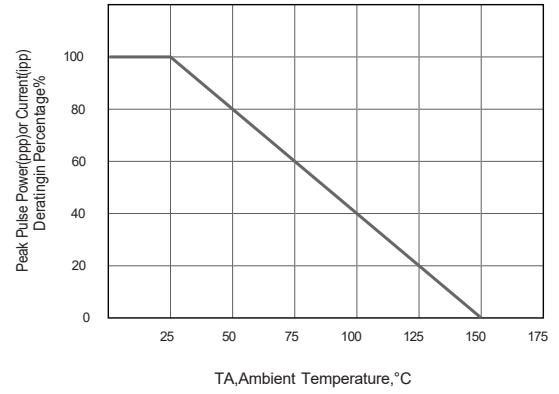


Fig.3 Pulse Waveform

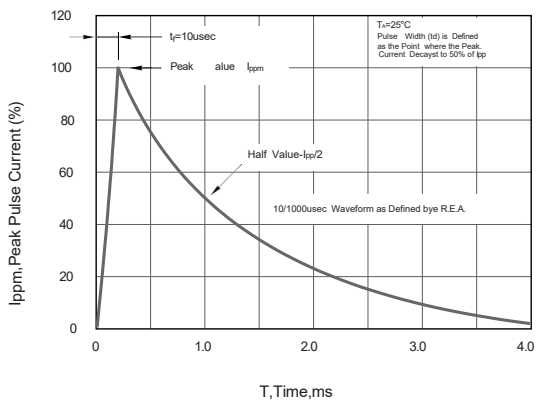


Fig.4 Maximum Non-Repetitive Peak Forward Surge Current

