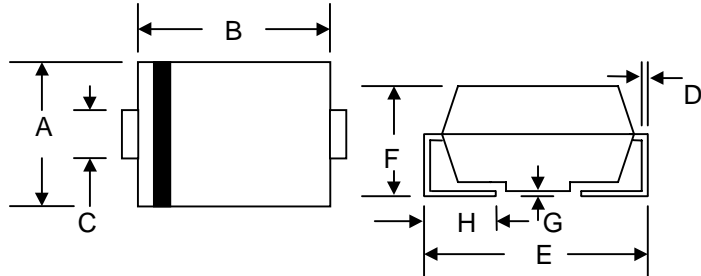


### Features

- Glass Passivated Die Construction
- 600W Peak Pulse Power Dissipation
- 180V – 220V Standoff Voltage
- Uni- and Bi-Directional Versions Available
- Excellent Clamping Capability
- Fast Response Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O



### Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band Except Bi-Directional
- Marking: Device Code
- Weight: 0.093 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 5**

| SMB/DO-214AA         |       |       |
|----------------------|-------|-------|
| Dim                  | Min   | Max   |
| A                    | 3.30  | 3.94  |
| B                    | 4.06  | 4.70  |
| C                    | 1.91  | 2.11  |
| D                    | 0.152 | 0.305 |
| E                    | 5.08  | 5.59  |
| F                    | 2.13  | 2.44  |
| G                    | 0.051 | 0.203 |
| H                    | 0.76  | 1.27  |
| All Dimensions in mm |       |       |

"C" Suffix Designates Bi-directional Devices  
 "A" Suffix Designates 5% Tolerance Devices  
 No Suffix Designates 10% Tolerance Devices

### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

| Characteristic   | Symbol         | Value       | Unit             |
|--|----------------|-------------|------------------|
| Peak Pulse Power Dissipation 10/1000 $\mu\text{s}$ Waveform (Note 1, 2) Figure 3                             | PPPM           | 600 Minimum | W                |
| Peak Pulse Current on 10/1000 $\mu\text{s}$ Waveform (Note 1) Figure 4                                       | IPPM           | See Table 1 | A                |
| Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method) (Note 2, 3) | IFSM           | 100         | A                |
| Operating and Storage Temperature Range  | $T_J, T_{STG}$ | -55 to +150 | $^\circ\text{C}$ |

- Note: 1. Non-repetitive current pulse per Figure 4 and derated above  $T_A = 25^\circ\text{C}$  per Figure 1.  
 2. Mounted on 5.0mm<sup>2</sup> (0.013mm thick) land area.  
 3. Measured on 8.3ms single half sine-wave or equivalent square wave, duty cycle = 4 pulses per minutes maximum.



Fig. 1 Pulse Derating Curve



Fig. 2 Typical Junction Capacitance



Fig. 3 Pulse Rating Curve

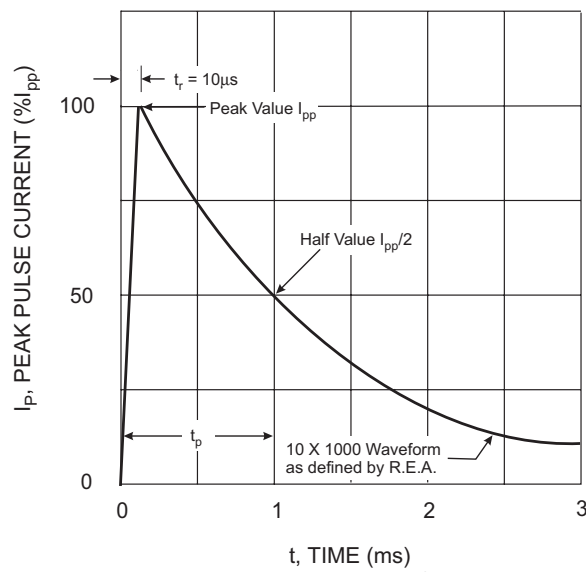


Fig. 4 Pulse Waveform

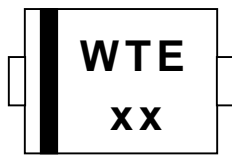
## UNI-DIRECTIONAL 600 WATT SURFACE MOUNT TVS

| UNI-DIRECTIONAL PART NO. | DEVICE MARKING CODE | REVERSE STAND-OFF VOLTAGE VRWM (V) | BREAKDOWN VOLTAGE VBR (V) MIN. @IT | BREAKDOWN VOLTAGE VBR (V) MAX. @IT | TEST CURRENT IT (mA) | MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V) | PEAK PULSE CURRENT Ipp (A) | REVERSE LEAKAGE @VRWM IR (uA) |
|--------------------------|---------------------|------------------------------------|------------------------------------|------------------------------------|----------------------|--------------------------------------|----------------------------|-------------------------------|
| P6SMBJ180                | PS                  | 180.00                             | 198.00                             | 253.80                             | 1                    | 322.0                                | 1.9                        | 1                             |
| P6SMBJ180A               | PT                  | 180.00                             | 198.00                             | 230.40                             | 1                    | 292.0                                | 2.1                        | 1                             |
| P6SMBJ190                | PU                  | 190.00                             | 209.00                             | 267.90                             | 1                    | 340.0                                | 1.8                        | 1                             |
| P6SMBJ190A               | PV                  | 190.00                             | 209.00                             | 243.20                             | 1                    | 308.0                                | 2.0                        | 1                             |
| P6SMBJ200                | PW                  | 200.00                             | 220.00                             | 282.00                             | 1                    | 358.0                                | 1.7                        | 1                             |
| P6SMBJ200A               | PX                  | 200.00                             | 220.00                             | 256.00                             | 1                    | 324.0                                | 1.9                        | 1                             |
| P6SMBJ210                | PY                  | 210.00                             | 231.00                             | 296.10                             | 1                    | 376.0                                | 1.6                        | 1                             |
| P6SMBJ210A               | PZ                  | 210.00                             | 231.00                             | 268.80                             | 1                    | 340.0                                | 1.8                        | 1                             |
| P6SMBJ220                | QD                  | 220.00                             | 242.00                             | 310.20                             | 1                    | 394.0                                | 1.5                        | 1                             |
| P6SMBJ220A               | QE                  | 220.00                             | 242.00                             | 281.60                             | 1                    | 356.0                                | 1.7                        | 1                             |

## BI-DIRECTIONAL 600 WATT SURFACE MOUNT TVS

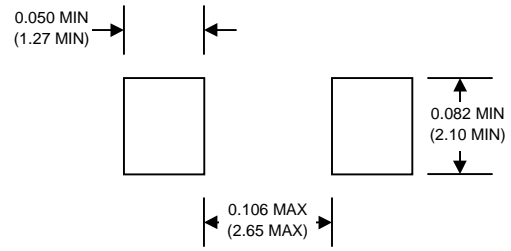
| BI-DIRECTIONAL PART NO. | DEVICE MARKING CODE | REVERSE STAND-OFF VOLTAGE VRWM (V) | BREAKDOWN VOLTAGE VBR (V) MIN. @IT | BREAKDOWN VOLTAGE VBR (V) MAX. @IT | TEST CURRENT IT (mA) | MAXIMUM CLAMPING VOLTAGE @Ipp Vc (V) | PEAK PULSE CURRENT Ipp (A) | REVERSE LEAKAGE @VRWM IR (uA) |
|-------------------------|---------------------|------------------------------------|------------------------------------|------------------------------------|----------------------|--------------------------------------|----------------------------|-------------------------------|
| P6SMBJ180C              | ES                  | 180.00                             | 198.00                             | 253.80                             | 1                    | 322.0                                | 1.9                        | 1                             |
| P6SMBJ180CA             | ET                  | 180.00                             | 198.00                             | 230.40                             | 1                    | 292.0                                | 2.1                        | 1                             |
| P6SMBJ190C              | EU                  | 190.00                             | 209.00                             | 267.90                             | 1                    | 340.0                                | 1.8                        | 1                             |
| P6SMBJ190CA             | EV                  | 190.00                             | 209.00                             | 243.20                             | 1                    | 308.0                                | 2.0                        | 1                             |
| P6SMBJ200C              | EW                  | 200.00                             | 220.00                             | 282.00                             | 1                    | 358.0                                | 1.7                        | 1                             |
| P6SMBJ200CA             | EX                  | 200.00                             | 220.00                             | 256.00                             | 1                    | 324.0                                | 1.9                        | 1                             |
| P6SMBJ210C              | EY                  | 210.00                             | 231.00                             | 296.10                             | 1                    | 376.0                                | 1.6                        | 1                             |
| P6SMBJ210CA             | EZ                  | 210.00                             | 231.00                             | 268.80                             | 1                    | 340.0                                | 1.8                        | 1                             |
| P6SMBJ220C              | FD                  | 220.00                             | 242.00                             | 310.20                             | 1                    | 394.0                                | 1.5                        | 1                             |
| P6SMBJ220CA             | FE                  | 220.00                             | 242.00                             | 281.60                             | 1                    | 356.0                                | 1.7                        | 1                             |

## MARKING INFORMATION



Cathode = Polarity Band Except Bi-Directional Types  
 WTE = Manufacturer's Logo  
 xx = Device Code, See Page 3

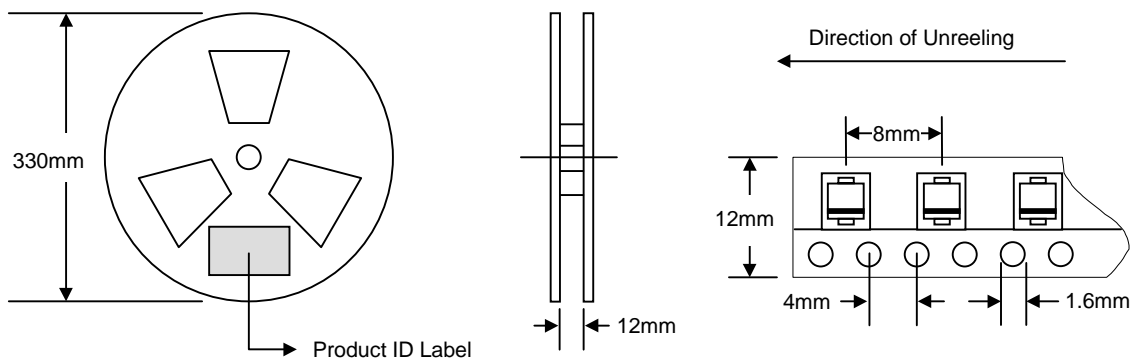
## RECOMMENDED FOOTPRINT



inches(mm)

## PACKAGING INFORMATION

### TAPE & REEL



| Reel Diameter (mm) | Quantity (PCS) | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|--------------------|----------------|-------------------------------|----------------|----------------------------|----------------|---------------------------|
| 330                | 3,000          | 340 x 337 x 45                | 6,000          | 370 x 370 x 420            | 48,000         | 14.0                      |

**Note:** 1. Paper reel, white or gray color.  
 2. Components are packed in accordance with EIA standard 481-1 and 481-2.

## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| P6SMBJxx-T3 | SMB          | 3000/Tape & Reel  |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version, add “-LF” suffix to part number above. For example, P6SMBJ180-T3-LF.**

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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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**Internet:** <http://www.wontop.com>

*We power your everyday.*