

## P6SMB6.8A-AU ~ P6SMB82CA-AU Series

### SURFACE MOUNT TRANSIENT VOLTAGE SUPPRESSOR

**Voltage**

**6.8~82 V**

**Power**

**600 W**

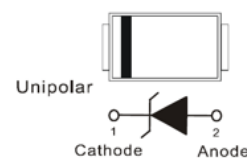
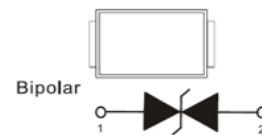
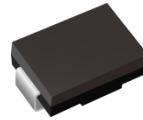
#### Features

- ISO10605(C=330 pF,R=330Ω): ± 30kV Air, ± 30kV Contact
- HBM  $\geq \pm 8$  kV & CDM  $\geq \pm 2$  kV
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### Mechanical Data

- Case: Molded plastic, SMB
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0032 ounces, 0.092 grams

**SMB**



### Maximum Ratings and Thermal Characteristics (T<sub>A</sub> = 25 °C unless otherwise noted)

| PARAMETER                                                           | SYMBOL                             | LIMIT       | UNITS |
|---------------------------------------------------------------------|------------------------------------|-------------|-------|
| Peak Pulse Power Dissipation(tp = 10 / 1000 us)                     | P <sub>PP</sub> <sup>(1) (2)</sup> | 600         | W     |
| Peak Forward Surge Current(8.3 ms single half sine-wave)            | I <sub>FSM</sub>                   | 100         | A     |
| Peak Pulse Current on tp = 10 / 1000 us waveform <sup>(Fig.2)</sup> | I <sub>PPM</sub> <sup>(1)</sup>    | See table 1 | A     |
| ISO10605(C = 330 pF, R = 330 Ω) (Air)                               | V <sub>ESD</sub>                   | ±30         | kV    |
| ISO10605(C = 330 pF, R = 330 Ω) (Contact)                           |                                    | ±30         |       |
| Typical Thermal Resistance Junction to Ambient                      | R <sub>θJA</sub> <sup>(3)</sup>    | 60          | °C/W  |
| Operating Junction Temperature Range                                | T <sub>J</sub>                     | -55~150     | °C    |
| Storage Temperature Range                                           | T <sub>STG</sub>                   | -55~150     | °C    |

## P6SMB6.8A-AU ~ P6SMB82CA-AU Series

### Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

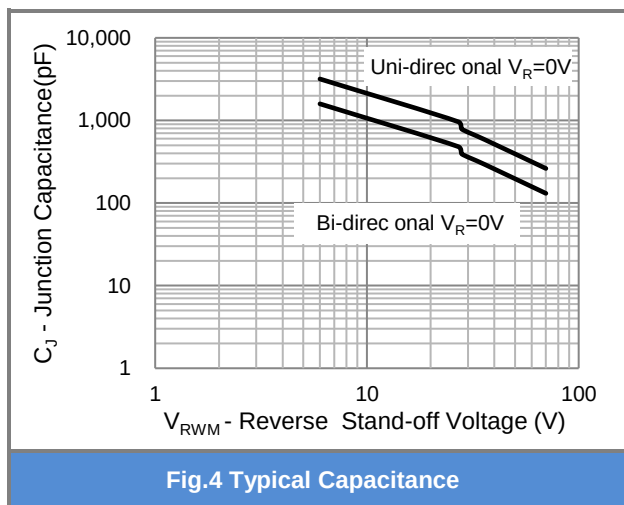
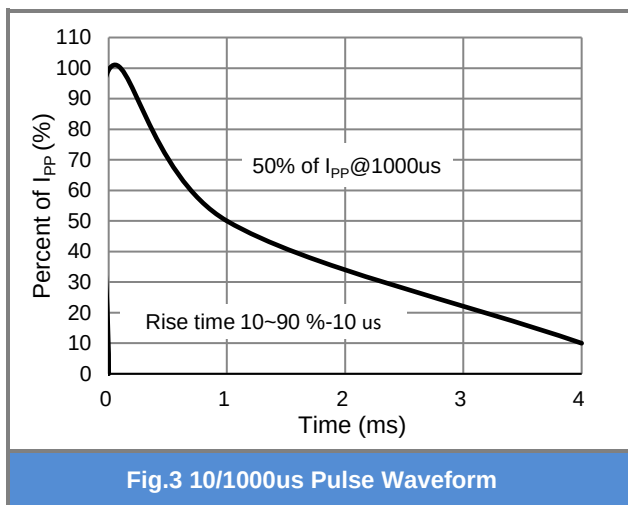
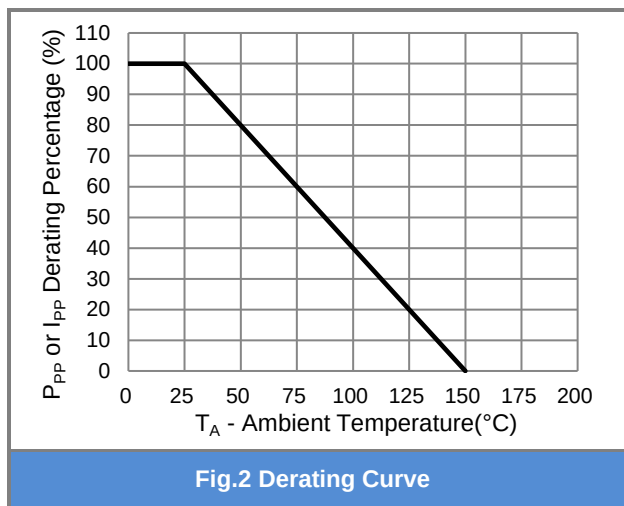
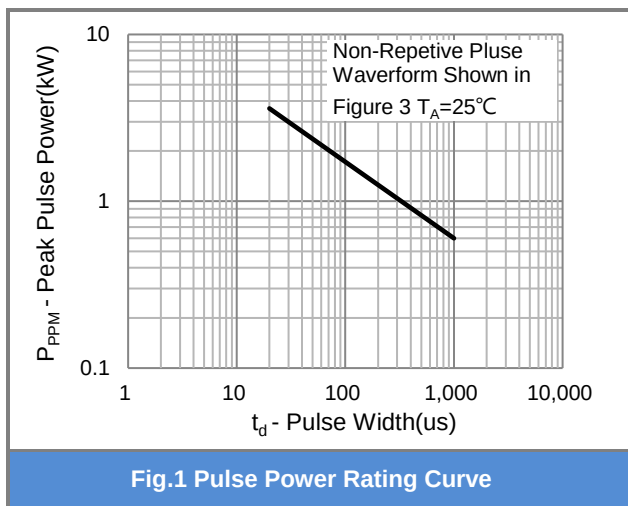
| Part Number                       |               | V <sub>RWM</sub> | V <sub>BR</sub> |      |                | I <sub>R</sub>    |      | V <sub>C@I<sub>PP</sub></sub> |      | Marking Code |     |
|-----------------------------------|---------------|------------------|-----------------|------|----------------|-------------------|------|-------------------------------|------|--------------|-----|
|                                   |               |                  | Min.            | Max. | I <sub>T</sub> | @V <sub>RWM</sub> | uA   |                               |      |              |     |
| UNI                               | BI            | V                | V               | V    | mA             | UNI               | BI   | V                             | A    | UNI          | BI  |
| 600W Transient Voltage Suppressor |               |                  |                 |      |                |                   |      |                               |      |              |     |
| P6SMB6.8A-AU                      | P6SMB6.8CA-AU | 5.8              | 6.45            | 7.14 | 10             | 1000              | 2000 | 10.5                          | 57   | EZB          | DZB |
| P6SMB7.5A-AU                      | P6SMB7.5CA-AU | 6.4              | 7.13            | 7.88 | 10             | 500               | 1000 | 11.3                          | 53   | EZD          | DZD |
| P6SMB8.2A-AU                      | P6SMB8.2CA-AU | 7.02             | 7.79            | 8.61 | 10             | 200               | 400  | 12.1                          | 50   | EZF          | DZF |
| P6SMB9.1A-AU                      | P6SMB9.1CA-AU | 7.78             | 8.65            | 9.5  | 1              | 50                | 100  | 13.4                          | 45   | EZH          | DZH |
| P6SMB10A-AU                       | P6SMB10CA-AU  | 8.55             | 9.5             | 10.5 | 1              | 10                | 20   | 14.5                          | 41   | EZK          | DZK |
| P6SMB11A-AU                       | P6SMB11CA-AU  | 9.4              | 10.5            | 11.6 | 1              | 5                 | 10   | 15.6                          | 38   | EZM          | DZM |
| P6SMB12A-AU                       | P6SMB12CA-AU  | 10.2             | 11.4            | 12.6 | 1              | 5                 | 5    | 16.7                          | 36   | EZP          | DZP |
| P6SMB13A-AU                       | P6SMB13CA-AU  | 11.1             | 12.4            | 13.7 | 1              | 1                 | 1    | 18.2                          | 33   | EZR          | DZR |
| P6SMB15A-AU                       | P6SMB15CA-AU  | 12.8             | 14.3            | 15.8 | 1              | 1                 | 1    | 21.2                          | 28   | EZT          | DZT |
| P6SMB16A-AU                       | P6SMB16CA-AU  | 13.6             | 15.2            | 16.8 | 1              | 1                 | 1    | 22.5                          | 27   | EZV          | DZV |
| P6SMB18A-AU                       | P6SMB18CA-AU  | 15.3             | 17.1            | 18.9 | 1              | 1                 | 1    | 25.2                          | 24   | EZX          | DZX |
| P6SMB20A-AU                       | P6SMB20CA-AU  | 17.1             | 19              | 21   | 1              | 1                 | 1    | 27.7                          | 22   | EZZ          | DZZ |
| P6SMB22A-AU                       | P6SMB22CA-AU  | 18.8             | 20.9            | 23.1 | 1              | 1                 | 1    | 30.6                          | 20   | EXB          | DXB |
| P6SMB24A-AU                       | P6SMB24CA-AU  | 20.5             | 22.8            | 25.2 | 1              | 1                 | 1    | 33.2                          | 18   | EXD          | DXD |
| P6SMB27A-AU                       | P6SMB27CA-AU  | 23.1             | 25.7            | 28.4 | 1              | 1                 | 1    | 37.5                          | 16   | EXF          | DXF |
| P6SMB30A-AU                       | P6SMB30CA-AU  | 25.6             | 28.5            | 31.5 | 1              | 1                 | 1    | 41.4                          | 14.4 | EXH          | DXH |
| P6SMB33A-AU                       | P6SMB33CA-AU  | 28.2             | 31.4            | 34.7 | 1              | 1                 | 1    | 45.7                          | 13.2 | EXK          | DXK |
| P6SMB36A-AU                       | P6SMB36CA-AU  | 30.8             | 34.2            | 37.8 | 1              | 1                 | 1    | 49.9                          | 12   | EXM          | DXM |
| P6SMB39A-AU                       | P6SMB39CA-AU  | 33.3             | 37.1            | 41   | 1              | 1                 | 1    | 53.9                          | 11.2 | EXP          | DXP |
| P6SMB43A-AU                       | P6SMB43CA-AU  | 36.8             | 40.9            | 45.2 | 1              | 1                 | 1    | 59.3                          | 10.1 | EXR          | DXR |
| P6SMB47A-AU                       | P6SMB47CA-AU  | 40.2             | 44.7            | 49.4 | 1              | 1                 | 1    | 64.8                          | 9.3  | EXT          | DXT |
| P6SMB51A-AU                       | P6SMB51CA-AU  | 43.6             | 48.5            | 53.6 | 1              | 1                 | 1    | 70.1                          | 8.6  | EXV          | DXV |
| P6SMB56A-AU                       | P6SMB56CA-AU  | 47.8             | 53.2            | 58.8 | 1              | 1                 | 1    | 77                            | 7.8  | EXX          | DXX |
| P6SMB62A-AU                       | P6SMB62CA-AU  | 53               | 58.9            | 65.1 | 1              | 1                 | 1    | 85                            | 7.1  | EXZ          | DXZ |
| P6SMB68A-AU                       | P6SMB68CA-AU  | 58.1             | 64.6            | 71.4 | 1              | 1                 | 1    | 92                            | 6.5  | EYB          | DYB |
| P6SMB75A-AU                       | P6SMB75CA-AU  | 64.1             | 71.3            | 78.8 | 1              | 1                 | 1    | 103                           | 5.8  | EYD          | DYD |
| P6SMB82A-AU                       | P6SMB82CA-AU  | 70.1             | 77.9            | 86.1 | 1              | 1                 | 1    | 113                           | 5.3  | EYF          | DYF |

Note:

1. Non-repetitive current pulse, per Fig.3 and derated above  $T_A=25^\circ\text{C}$  per Fig.2
2. Mounted on  $5\text{mm}^2$  copper pads to each terminal
3. Mounted on a FR4 PCB, single-sided copper, mini pad

## P6SMB6.8A-AU ~ P6SMB82CA-AU Series

### TYPICAL CHARACTERISTIC CURVES

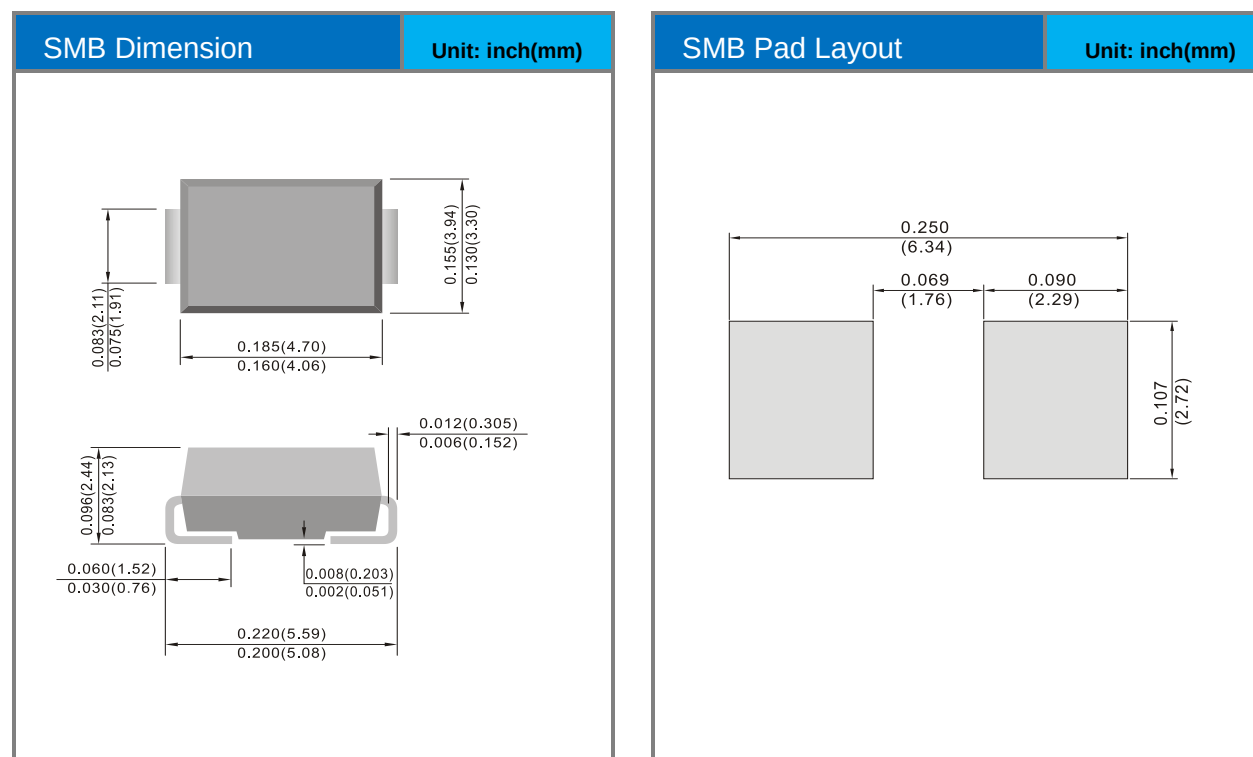


## P6SMB6.8A-AU ~ P6SMB82CA-AU Series

### Product and Packing Information

| Part No.     | Package Type | Packing Type      | Marking   |
|--------------|--------------|-------------------|-----------|
| P6SMBxxxx-AU | SMB          | 3K pcs / 13" reel | See Table |

### Packaging Information & Mounting Pad Layout



## **P6SMB6.8A-AU ~ P6SMB82CA-AU Series**

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