

**NEW** P6SMB6.8A  
THRU  
P6SMB200A

UNI-DIRECTIONAL  
GLASS PASSIVATED JUNCTION  
TRANSIENT VOLTAGE SUPPRESSOR  
600 WATTS, 6.8 THRU 200 VOLTS



SMB CASE

Specified by  
BREAKDOWN  
VOLTAGE

# MAXIMUM RATINGS (T<sub>A</sub>=25°C)

Peak Power Dissipation  
Peak Forward Surge Current (JEDEC Method)  
Operating and Storage  
Junction Temperature

**Central**<sup>TM</sup>  
Semiconductor Corp.

## DESCRIPTION

The CENTRAL SEMICONDUCTOR P6SMB6.8A Series types are Surface Mount Uni-Directional Glass Passivated Junction Transient Voltage Suppressors designed to protect voltage sensitive components from high voltage transients. **THIS DEVICE IS MANUFACTURED WITH A GLASS PASSIVATED CHIP FOR OPTIMUM RELIABILITY.**

Note: For Bi-directional devices, please refer to the P6SMB6.8CA Series data sheet.

## SYMBOL

## UNITS

|                                   |             |    |
|-----------------------------------|-------------|----|
| P <sub>PM</sub>                   | 600         | W  |
| I <sub>FSM</sub>                  | 100         | A  |
| T <sub>J</sub> , T <sub>stg</sub> | -65 to +150 | °C |

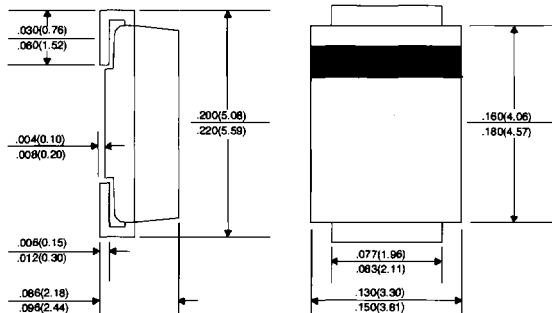
# ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C)

| TYPE NO.  | BREAKDOWN VOLTAGE |     |      |         | WORKING<br>PEAK<br>REVERSE<br>VOLTAGE | MAXIMUM<br>REVERSE<br>LEAKAGE<br>@ $V_{RWM}$ | MAXIMUM<br>REVERSE<br>SURGE<br>CURRENT | MAXIMUM<br>REVERSE<br>VOLTAGE<br>@ $I_{RSM}$ | MAXIMUM<br>TEMP.<br>COEFFICIENT<br>of $V_{BR}$ | MARKING<br>CODE |
|-----------|-------------------|-----|------|---------|---------------------------------------|----------------------------------------------|----------------------------------------|----------------------------------------------|------------------------------------------------|-----------------|
|           | $V_{BR}$          |     |      | $@ I_T$ |                                       |                                              |                                        |                                              |                                                |                 |
|           | VOLTS             |     |      |         |                                       |                                              |                                        |                                              |                                                |                 |
|           | MIN               | NOM | MAX  |         |                                       |                                              |                                        |                                              |                                                |                 |
| P6SMB6.8A | 6.45              | 6.8 | 7.14 | 10      | 5.8                                   | 1000                                         | 57                                     | 10.5                                         | 0.057                                          | C6V8A           |
| P6SMB7.5A | 7.13              | 7.5 | 7.88 | 10      | 6.4                                   | 500                                          | 53                                     | 11.3                                         | 0.061                                          | C7V5A           |
| P6SMB8.2A | 7.79              | 8.2 | 8.61 | 10      | 7.02                                  | 200                                          | 50                                     | 12.1                                         | 0.065                                          | C8V2A           |
| P6SMB9.1A | 8.65              | 9.1 | 9.55 | 1       | 7.78                                  | 50                                           | 45                                     | 13.4                                         | 0.068                                          | C9V1A           |
| P6SMB10A  | 9.5               | 10  | 10.5 | 1       | 8.55                                  | 10                                           | 41                                     | 14.5                                         | 0.073                                          | C10A            |
| P6SMB11A  | 10.5              | 11  | 11.6 | 1       | 9.4                                   | 5                                            | 38                                     | 15.6                                         | 0.075                                          | C11A            |
| P6SMB12A  | 11.4              | 12  | 12.6 | 1       | 10.2                                  | 5                                            | 36                                     | 16.7                                         | 0.078                                          | C12A            |
| P6SMB13A  | 12.4              | 13  | 13.7 | 1       | 11.1                                  | 5                                            | 33                                     | 18.2                                         | 0.081                                          | C13A            |
| P6SMB15A  | 14.3              | 15  | 15.8 | 1       | 12.8                                  | 5                                            | 28                                     | 21.2                                         | 0.084                                          | C15A            |
| P6SMB16A  | 15.2              | 16  | 16.8 | 1       | 13.6                                  | 5                                            | 27                                     | 22.5                                         | 0.086                                          | C16A            |
| P6SMB18A  | 17.1              | 18  | 18.9 | 1       | 15.3                                  | 5                                            | 24                                     | 25.2                                         | 0.088                                          | C18A            |
| P6SMB20A  | 19.0              | 20  | 21.0 | 1       | 17.1                                  | 5                                            | 22                                     | 27.7                                         | 0.090                                          | C20A            |

| TYPE NO.  | BREAKDOWN VOLTAGE |     |       |                  | WORKING<br>PEAK<br>REVERSE<br>VOLTAGE<br>V <sub>RWM</sub> | MAXIMUM<br>REVERSE<br>LEAKAGE<br>@ V <sub>RWM</sub><br>I <sub>R</sub> | MAXIMUM<br>REVERSE<br>SURGE<br>CURRENT<br>I <sub>RSM</sub> | MAXIMUM<br>REVERSE<br>VOLTAGE<br>@ I <sub>RSM</sub><br>V <sub>RSM</sub> | MAXIMUM<br>TEMP.<br>COEFFICIENT<br>of V <sub>BR</sub><br>%/°C | MARKING<br>CODE |
|-----------|-------------------|-----|-------|------------------|-----------------------------------------------------------|-----------------------------------------------------------------------|------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------------------------|-----------------|
|           | V <sub>BR</sub>   |     |       | @ I <sub>T</sub> |                                                           |                                                                       |                                                            |                                                                         |                                                               |                 |
|           |                   |     |       |                  |                                                           |                                                                       |                                                            |                                                                         |                                                               |                 |
|           | VOLTS             |     |       |                  |                                                           |                                                                       |                                                            |                                                                         |                                                               |                 |
|           | MIN               | NOM | MAX   | mA               | VOLTS                                                     | μA                                                                    | A                                                          | VOLTS                                                                   |                                                               |                 |
| P6SMB22A  | 20.9              | 22  | 23.1  | 1                | 18.8                                                      | 5                                                                     | 20                                                         | 30.6                                                                    | 0.092                                                         | C22A            |
| P6SMB24A  | 22.8              | 24  | 25.2  | 1                | 20.5                                                      | 5                                                                     | 18                                                         | 33.2                                                                    | 0.094                                                         | C24A            |
| P6SMB27A  | 25.7              | 27  | 28.4  | 1                | 23.1                                                      | 5                                                                     | 16                                                         | 37.5                                                                    | 0.096                                                         | C27A            |
| P6SMB30A  | 28.5              | 30  | 31.5  | 1                | 25.6                                                      | 5                                                                     | 14.4                                                       | 41.4                                                                    | 0.097                                                         | C30A            |
| P6SMB33A  | 31.4              | 33  | 34.7  | 1                | 28.2                                                      | 5                                                                     | 13.2                                                       | 45.7                                                                    | 0.098                                                         | C33A            |
| P6SMB36A  | 34.2              | 36  | 37.8  | 1                | 30.8                                                      | 5                                                                     | 12.0                                                       | 49.9                                                                    | 0.099                                                         | C36A            |
| P6SMB39A  | 37.1              | 39  | 41.0  | 1                | 33.3                                                      | 5                                                                     | 11.2                                                       | 53.9                                                                    | 0.100                                                         | C39A            |
| P6SMB43A  | 40.9              | 43  | 45.2  | 1                | 36.8                                                      | 5                                                                     | 10.1                                                       | 59.3                                                                    | 0.101                                                         | C43A            |
| P6SMB47A  | 44.7              | 47  | 49.4  | 1                | 40.2                                                      | 5                                                                     | 9.3                                                        | 64.8                                                                    | 0.101                                                         | C47A            |
| P6SMB51A  | 48.5              | 51  | 53.6  | 1                | 43.6                                                      | 5                                                                     | 8.6                                                        | 70.1                                                                    | 0.102                                                         | C51A            |
| P6SMB56A  | 53.2              | 56  | 58.8  | 1                | 47.8                                                      | 5                                                                     | 7.8                                                        | 77                                                                      | 0.103                                                         | C56A            |
| P6SMB62A  | 58.9              | 62  | 65.1  | 1                | 53.0                                                      | 5                                                                     | 7.1                                                        | 85                                                                      | 0.104                                                         | C62A            |
| P6SMB68A  | 64.6              | 68  | 71.4  | 1                | 58.1                                                      | 5                                                                     | 6.5                                                        | 92                                                                      | 0.104                                                         | C68A            |
| P6SMB75A  | 71.3              | 75  | 78.8  | 1                | 64.1                                                      | 5                                                                     | 5.8                                                        | 103                                                                     | 0.105                                                         | C75A            |
| P6SMB82A  | 77.9              | 82  | 86.1  | 1                | 70.1                                                      | 5                                                                     | 5.3                                                        | 113                                                                     | 0.105                                                         | C82A            |
| P6SMB91A  | 86.5              | 91  | 95.5  | 1                | 77.8                                                      | 5                                                                     | 4.8                                                        | 125                                                                     | 0.106                                                         | C91A            |
| P6SMB100A | 95.0              | 100 | 105   | 1                | 85.5                                                      | 5                                                                     | 4.4                                                        | 137                                                                     | 0.106                                                         | C100A           |
| P6SMB110A | 104.5             | 110 | 115.5 | 1                | 94.0                                                      | 5                                                                     | 4.0                                                        | 152                                                                     | 0.107                                                         | C110A           |
| P6SMB120A | 114               | 120 | 126   | 1                | 102                                                       | 5                                                                     | 3.6                                                        | 165                                                                     | 0.107                                                         | C120A           |
| P6SMB130A | 123.5             | 130 | 136.5 | 1                | 111                                                       | 5                                                                     | 3.3                                                        | 179                                                                     | 0.107                                                         | C130A           |
| P6SMB150A | 142.5             | 150 | 157.5 | 1                | 128                                                       | 5                                                                     | 2.9                                                        | 207                                                                     | 0.108                                                         | C150A           |
| P6SMB160A | 152               | 160 | 168   | 1                | 136                                                       | 5                                                                     | 2.7                                                        | 219                                                                     | 0.108                                                         | C160A           |
| P6SMB170A | 161.5             | 170 | 178.5 | 1                | 145                                                       | 5                                                                     | 2.6                                                        | 234                                                                     | 0.108                                                         | C170A           |
| P6SMB180A | 171               | 180 | 189   | 1                | 154                                                       | 5                                                                     | 2.4                                                        | 246                                                                     | 0.108                                                         | C180A           |
| P6SMB200A | 190               | 200 | 210   | 1                | 171                                                       | 5                                                                     | 2.2                                                        | 274                                                                     | 0.108                                                         | C200A           |

All dimensions in inches (mm).

TOP VIEW



DATA  
SHEET

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