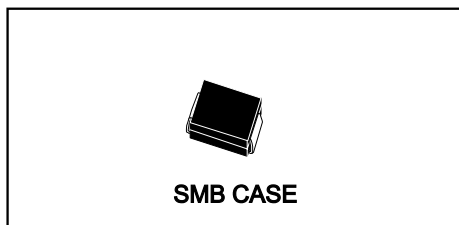


1SMB5.0A   
THRU  
1SMB170A

UNI-DIRECTIONAL  
GLASS PASSIVATED JUNCTION  
TRANSIENT VOLTAGE SUPPRESSOR  
600 WAT TS, 5.0 THRU 170 VOLTS



**Central**™  
Semiconductor Corp.

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 1SMB5.0A 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 1SMB5.0CA Series data sheet.

Specified by  
**STAND-OFF VOLTAGE**

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

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

## SYMBOL

P<sub>DM</sub> 600  
I<sub>FSM</sub> 100  
T<sub>J</sub>, T<sub>stg</sub> -65 to +150

## UNITS

W  
A  
°C

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

| TYPE NO. | REVERSE<br>STAND-OFF<br>VOLTAGE | BREAKDOWN<br>VOLTAGE |       |                 | MAXIMUM<br>REVERSE<br>LEAKAGE<br>@V <sub>RWM</sub> | MAXIMUM<br>CLAMPING<br>VOLTAGE<br>@I <sub>PPM</sub> | MAXIMUM<br>PEAK PULSE<br>CURRENT | MARKING<br>CODE |
|----------|---------------------------------|----------------------|-------|-----------------|----------------------------------------------------|-----------------------------------------------------|----------------------------------|-----------------|
|          |                                 | V <sub>BR</sub>      |       | @I <sub>T</sub> |                                                    |                                                     |                                  |                 |
|          | V <sub>RWM</sub>                | VOLTS                |       |                 | I <sub>R</sub>                                     | V <sub>C</sub>                                      | I <sub>PPM</sub>                 |                 |
|          | VOLTS                           | MIN                  | MAX   | mA              | μA                                                 | VOLTS                                               | A                                |                 |
| 1SMB5.0A | 5.0                             | 6.40                 | 7.25  | 10              | 800                                                | 9.2                                                 | 65.2                             | CKE             |
| 1SMB6.0A | 6.0                             | 6.67                 | 7.67  | 10              | 800                                                | 10.3                                                | 58.3                             | CKG             |
| 1SMB6.5A | 6.5                             | 7.22                 | 8.30  | 10              | 500                                                | 11.2                                                | 53.6                             | CKK             |
| 1SMB7.0A | 7.0                             | 7.78                 | 8.95  | 10              | 200                                                | 12.0                                                | 50.0                             | CKM             |
| 1SMB7.5A | 7.5                             | 8.33                 | 9.58  | 1.0             | 100                                                | 12.9                                                | 46.5                             | CKP             |
| 1SMB8.0A | 8.0                             | 8.89                 | 10.23 | 1.0             | 50                                                 | 13.6                                                | 44.1                             | CKR             |
| 1SMB8.5A | 8.5                             | 9.44                 | 10.82 | 1.0             | 10                                                 | 14.4                                                | 41.7                             | CKT             |
| 1SMB9.0A | 9.0                             | 10.0                 | 11.5  | 1.0             | 5.0                                                | 15.4                                                | 39.0                             | CKV             |
| 1SMB10A  | 10                              | 11.1                 | 12.8  | 1.0             | 5.0                                                | 17.0                                                | 35.3                             | CKX             |
| 1SMB11A  | 11                              | 12.2                 | 14.0  | 1.0             | 5.0                                                | 18.2                                                | 33.0                             | CKZ             |
| 1SMB12A  | 12                              | 13.3                 | 15.3  | 1.0             | 5.0                                                | 19.9                                                | 30.2                             | CLE             |
| 1SMB13A  | 13                              | 14.4                 | 16.5  | 1.0             | 5.0                                                | 21.5                                                | 27.9                             | CLG             |

| TYPE NO. |                           | BREAKDOWN VOLTAGE |       |                 | MAXIMUM REVERSE LEAKAGE<br>@V <sub>RWM</sub> | MAXIMUM CLAMPING VOLTAGE<br>@I <sub>PPM</sub> | MAXIMUM PEAK PULSE CURRENT | MARKING CODE |
|----------|---------------------------|-------------------|-------|-----------------|----------------------------------------------|-----------------------------------------------|----------------------------|--------------|
|          | REVERSE STAND-OFF VOLTAGE | V <sub>BR</sub>   |       | @I <sub>T</sub> |                                              |                                               |                            |              |
|          |                           | VOLTS             |       |                 |                                              |                                               |                            |              |
|          | V <sub>RWM</sub>          | VOLTS             | MIN   | MAX             | mA                                           | I <sub>R</sub>                                | V <sub>C</sub>             |              |
| 1SMB14A  | 14                        | 15.6              | 17.9  | 1.0             | 5.0                                          | 23.2                                          | 25.8                       | CLK          |
| 1SMB15A  | 15                        | 16.7              | 19.2  | 1.0             | 5.0                                          | 24.4                                          | 24.0                       | CLM          |
| 1SMB16A  | 16                        | 17.8              | 20.5  | 1.0             | 5.0                                          | 26.0                                          | 23.1                       | CLP          |
| 1SMB17A  | 17                        | 18.9              | 21.7  | 1.0             | 5.0                                          | 27.6                                          | 21.7                       | CLR          |
| 1SMB18A  | 18                        | 20.0              | 23.3  | 1.0             | 5.0                                          | 29.2                                          | 20.5                       | CLT          |
| 1SMB20A  | 20                        | 22.2              | 25.5  | 1.0             | 5.0                                          | 32.4                                          | 18.5                       | CLV          |
| 1SMB22A  | 22                        | 24.4              | 28.0  | 1.0             | 5.0                                          | 35.5                                          | 16.9                       | CLX          |
| 1SMB24A  | 24                        | 26.7              | 30.7  | 1.0             | 5.0                                          | 38.9                                          | 15.4                       | CLZ          |
| 1SMB26A  | 26                        | 28.9              | 33.2  | 1.0             | 5.0                                          | 42.1                                          | 14.2                       | CME          |
| 1SMB28A  | 28                        | 31.1              | 35.8  | 1.0             | 5.0                                          | 45.4                                          | 13.2                       | CMG          |
| 1SMB30A  | 30                        | 33.3              | 38.3  | 1.0             | 5.0                                          | 48.4                                          | 12.4                       | CMK          |
| 1SMB33A  | 33                        | 36.7              | 42.2  | 1.0             | 5.0                                          | 53.3                                          | 11.3                       | CMM          |
| 1SMB36A  | 36                        | 40.0              | 46.0  | 1.0             | 5.0                                          | 58.1                                          | 10.3                       | CMP          |
| 1SMB40A  | 40                        | 44.4              | 51.1  | 1.0             | 5.0                                          | 64.5                                          | 9.3                        | CMR          |
| 1SMB43A  | 43                        | 47.8              | 54.9  | 1.0             | 5.0                                          | 69.4                                          | 8.6                        | CMT          |
| 1SMB45A  | 45                        | 50.0              | 57.5  | 1.0             | 5.0                                          | 72.7                                          | 8.3                        | CMV          |
| 1SMB48A  | 48                        | 53.3              | 61.3  | 1.0             | 5.0                                          | 77.4                                          | 7.7                        | CMX          |
| 1SMB51A  | 51                        | 56.7              | 65.2  | 1.0             | 5.0                                          | 82.4                                          | 7.3                        | CMZ          |
| 1SMB54A  | 54                        | 60.0              | 69.0  | 1.0             | 5.0                                          | 87.1                                          | 6.9                        | CNE          |
| 1SMB58A  | 58                        | 64.4              | 74.1  | 1.0             | 5.0                                          | 93.6                                          | 6.4                        | CNG          |
| 1SMB60A  | 60                        | 66.7              | 76.7  | 1.0             | 5.0                                          | 96.8                                          | 6.2                        | CNK          |
| 1SMB64A  | 64                        | 71.1              | 81.8  | 1.0             | 5.0                                          | 103                                           | 5.8                        | CNM          |
| 1SMB70A  | 70                        | 77.8              | 89.5  | 1.0             | 5.0                                          | 113                                           | 5.3                        | CNP          |
| 1SMB75A  | 75                        | 83.3              | 95.8  | 1.0             | 5.0                                          | 121                                           | 4.9                        | CNR          |
| 1SMB78A  | 78                        | 86.7              | 99.7  | 1.0             | 5.0                                          | 126                                           | 4.7                        | CNT          |
| 1SMB85A  | 85                        | 94.4              | 108.2 | 1.0             | 5.0                                          | 137                                           | 4.4                        | CNV          |
| 1SMB90A  | 90                        | 100.0             | 115.5 | 1.0             | 5.0                                          | 146                                           | 4.1                        | CNX          |
| 1SMB100A | 100                       | 111.0             | 128.0 | 1.0             | 5.0                                          | 162                                           | 3.7                        | CNZ          |
| 1SMB110A | 110                       | 122.0             | 140.5 | 1.0             | 5.0                                          | 177                                           | 3.4                        | CPE          |
| 1SMB120A | 120                       | 133.0             | 153.0 | 1.0             | 5.0                                          | 193                                           | 3.1                        | CPG          |
| 1SMB130A | 130                       | 144.0             | 165.5 | 1.0             | 5.0                                          | 209                                           | 2.9                        | CPK          |
| 1SMB150A | 150                       | 167.0             | 192.5 | 1.0             | 5.0                                          | 243                                           | 2.5                        | CPM          |
| 1SMB160A | 160                       | 178.0             | 205.0 | 1.0             | 5.0                                          | 259                                           | 2.3                        | CPP          |
| 1SMB170A | 170                       | 189.0             | 217.5 | 1.0             | 5.0                                          | 275                                           | 2.2                        | CPR          |

All Dimensions in inches (mm).

