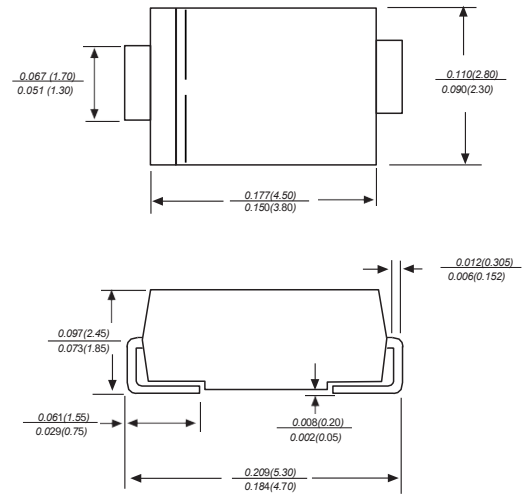


## SURFACE MOUNT ZENER DIODE

### Features

- ◆ Complete Voltage Range 3.3 to 240 Volts
- ◆ High peak reverse power dissipation
- ◆ High reliability
- ◆ Low leakage current

### DO-214AC/SMA

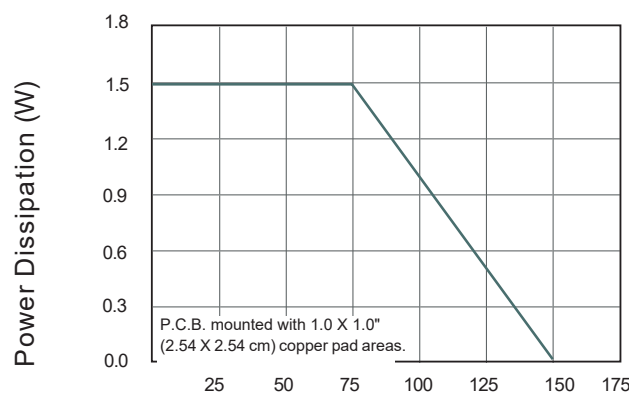


Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

| Parameter                                     | Symbol | Value         | Unit               |
|-----------------------------------------------|--------|---------------|--------------------|
| Power Dissipation at $T_L=75^{\circ}\text{C}$ | $P_D$  | 1.5           | W                  |
| Forward Voltage at $I_F = 200 \text{ mA}$     | $V_F$  | 1.5           | V                  |
| Junction Temperature Range                    | $T_J$  | - 55 to + 150 | $^{\circ}\text{C}$ |
| Storage Temperature Range                     | $T_S$  | - 55 to + 150 | $^{\circ}\text{C}$ |

Fig.1 Maximum Continuous Power Derating



$T_C$ , Case Temperature ( $^{\circ}\text{C}$ )  
The curve graph is for reference only



| Type<br>(note1) | Marking<br>(note1) | Zener Voltage Range (note2)           |         |         |                    | Dynamic<br>Impedance                  | Reverse Current |                   | Admissible<br>Zener Current |
|-----------------|--------------------|---------------------------------------|---------|---------|--------------------|---------------------------------------|-----------------|-------------------|-----------------------------|
|                 |                    | V <sub>ZT</sub> (at I <sub>ZT</sub> ) |         |         | at I <sub>ZT</sub> | Z <sub>zt</sub> (at I <sub>ZT</sub> ) | I <sub>R</sub>  | at V <sub>R</sub> |                             |
|                 |                    | Min (V)                               | Nom (V) | Max (V) | (mA)               | Max (Ω)                               | Max (μA)        | (V)               | I <sub>ZM</sub> (mA)        |
| 1SMA5913B       | 913B               | 3.13                                  | 3.3     | 3.47    | 113.6              | 10                                    | 100             | 1                 | 454                         |
| 1SMA5914B       | 914B               | 3.42                                  | 3.6     | 3.78    | 104.2              | 9.0                                   | 75              | 1                 | 416                         |
| 1SMA5915B       | 915B               | 3.70                                  | 3.9     | 4.10    | 96.1               | 7.5                                   | 25              | 1                 | 384                         |
| 1SMA5916B       | 916B               | 4.08                                  | 4.3     | 4.52    | 87.2               | 6.0                                   | 5               | 1                 | 348                         |
| 1SMA5917B       | 917B               | 4.46                                  | 4.7     | 4.94    | 79.8               | 5.0                                   | 5               | 1.5               | 319                         |
| 1SMA5918B       | 918B               | 4.84                                  | 5.1     | 5.36    | 73.5               | 4.0                                   | 5               | 2                 | 294                         |
| 1SMA5919B       | 919B               | 5.32                                  | 5.6     | 5.88    | 66.9               | 2.0                                   | 5               | 3                 | 267                         |
| 1SMA5920B       | 920B               | 5.89                                  | 6.2     | 6.51    | 60.5               | 2.0                                   | 5               | 4                 | 241                         |
| 1SMA5921B       | 921B               | 6.46                                  | 6.8     | 7.14    | 55                 | 2.5                                   | 5               | 5.2               | 220                         |
| 1SMA5922B       | 922B               | 7.12                                  | 7.5     | 7.88    | 50                 | 3.0                                   | 5               | 6                 | 200                         |
| 1SMA5923B       | 923B               | 7.79                                  | 8.2     | 8.61    | 45.7               | 3.5                                   | 5               | 6.5               | 182                         |
| 1SMA5924B       | 924B               | 8.60                                  | 9.1     | 9.56    | 41.2               | 4.0                                   | 5               | 7                 | 164                         |
| 1SMA5925B       | 925B               | 9.50                                  | 10      | 10.5    | 37.5               | 4.5                                   | 5               | 8                 | 150                         |
| 1SMA5926B       | 926B               | 10.4                                  | 11      | 11.6    | 34                 | 5.5                                   | 1               | 8.4               | 136                         |
| 1SMA5927B       | 927B               | 11.4                                  | 12      | 12.6    | 31.2               | 6.5                                   | 1               | 9                 | 125                         |
| 1SMA5928B       | 928B               | 12.35                                 | 13      | 14.1    | 28.8               | 7.0                                   | 1               | 9.9               | 115                         |
| 1SMA5929B       | 929B               | 13.8                                  | 15      | 15.8    | 25                 | 9.0                                   | 1               | 11.4              | 100                         |
| 1SMA5930B       | 930B               | 15.2                                  | 16      | 16.8    | 23.4               | 10                                    | 1               | 12.2              | 93                          |
| 1SMA5931B       | 931B               | 16.8                                  | 18      | 19.2    | 21                 | 12                                    | 1               | 13.7              | 83                          |
| 1SMA5932B       | 932B               | 19.0                                  | 20      | 21.2    | 19                 | 14                                    | 1               | 15.2              | 75                          |
| 1SMA5933B       | 933B               | 20.8                                  | 22      | 23.3    | 17                 | 18                                    | 1               | 16.7              | 68                          |
| 1SMA5934B       | 934B               | 22.8                                  | 24      | 25.2    | 16                 | 19                                    | 1               | 18.2              | 62                          |
| 1SMA5935B       | 935B               | 25.3                                  | 27      | 28.9    | 14                 | 23                                    | 1               | 20.6              | 55                          |
| 1SMA5936B       | 936B               | 28.2                                  | 30      | 32.0    | 12.5               | 26                                    | 1               | 23                | 50                          |
| 1SMA5937B       | 937B               | 31.3                                  | 33      | 34.9    | 11.4               | 33                                    | 1               | 25                | 45                          |
| 1SMA5938B       | 938B               | 34.2                                  | 36      | 37.9    | 10.4               | 38                                    | 1               | 27                | 41                          |
| 1SMA5939B       | 939B               | 37.2                                  | 39      | 41.5    | 9.6                | 45                                    | 1               | 30                | 38                          |
| 1SMA5940B       | 940B               | 40.9                                  | 43      | 45.6    | 8.7                | 53                                    | 1               | 33                | 34                          |
| 1SMA5941B       | 941B               | 44.9                                  | 47      | 49.8    | 8.0                | 67                                    | 1               | 36                | 31                          |
| 1SMA5942B       | 942B               | 48.6                                  | 51      | 54.0    | 7.3                | 70                                    | 1               | 39                | 29                          |
| 1SMA5943B       | 943B               | 53.6                                  | 56      | 58.8    | 6.7                | 86                                    | 1               | 42                | 26                          |
| 1SMA5944B       | 944B               | 58.9                                  | 62      | 65.6    | 6.0                | 100                                   | 1               | 47                | 24                          |
| 1SMA5945B       | 945B               | 64.6                                  | 68      | 71.7    | 5.5                | 120                                   | 1               | 52                | 22                          |
| 1SMA5946B       | 946B               | 71.2                                  | 75      | 78.8    | 5.0                | 140                                   | 1               | 57                | 20                          |
| 1SMA5947B       | 947B               | 77.9                                  | 82      | 87.0    | 4.6                | 160                                   | 1               | 62                | 18                          |
| 1SMA5948B       | 948B               | 86.0                                  | 91      | 96.0    | 4.1                | 200                                   | 1               | 69                | 16                          |
| 1SMA5949B       | 949B               | 95.0                                  | 100     | 105     | 3.7                | 250                                   | 1               | 76                | 15                          |
| 1SMA5950B       | 950B               | 104                                   | 110     | 116     | 3.4                | 300                                   | 1               | 84                | 13                          |
| 1SMA5951B       | 951B               | 114                                   | 120     | 127     | 3.1                | 380                                   | 1               | 91                | 12                          |
| 1SMA5952B       | 952B               | 125                                   | 130     | 142     | 2.9                | 450                                   | 1               | 100               | 11                          |
| 1SMA5953B       | 953B               | 140                                   | 150     | 157     | 2.5                | 600                                   | 1               | 114               | 10                          |
| 1SMA5954B       | 954B               | 152                                   | 160     | 168     | 2.3                | 700                                   | 1               | 121.6             | 9.0                         |
| 1SMA5955B       | 955B               | 168                                   | 180     | 189     | 2.1                | 900                                   | 1               | 136.8             | 8.0                         |
| 1SMA5956B       | 956B               | 189                                   | 200     | 211     | 1.9                | 1200                                  | 1               | 152               | 7.0                         |
| 1SMA5957B       | 957B               | 228                                   | 240     | 252     | 1.5                | 1600                                  | 1               | 182.4             | 6.0                         |

(1) Suffix "A" indicates ±10% tolerance, Suffix "B" indicates ±5% tolerance