

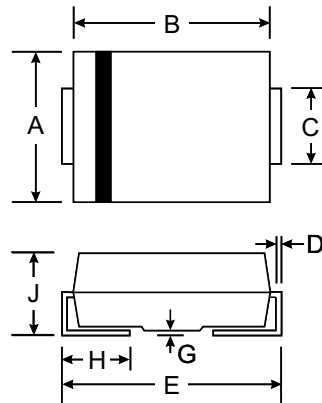
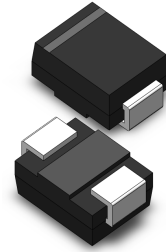
**VOLTAGE RANGE: 3.6 - 200V**  
**POWER: 2.0Watts**

### Features

- Complete Voltage Range 3.6 to 200 Volts
- High peak reverse power dissipation
- High reliability
- Low leakage current

### Mechanical Data

- Case: SMB/DO-214AA, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: 0.093 grams (approx.)



| SMB(DO-214AA)        |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 3.30 | 3.94 |
| B                    | 4.06 | 4.70 |
| C                    | 1.91 | 2.21 |
| D                    | 0.15 | 0.31 |
| E                    | 5.00 | 5.59 |
| G                    | 0.10 | 0.20 |
| H                    | 0.76 | 1.52 |
| J                    | 2.00 | 2.62 |
| All Dimensions in mm |      |      |

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

| Rating   | Symbol          | Value         | Unit             |
|--|-----------------|---------------|------------------|
| DC Power Dissipation at $T_L = 75^\circ\text{C}$ (Note1)   | $P_D$           | 2.0           | Watts            |
| Maximum Forward Voltage at $I_F = 200\text{ mA}$           | $V_F$           | 1.2           | Volts            |
| Maximum Thermal Resistance Junction to Ambient Air (Note2) | $R_{\theta JA}$ | 60            | K / W            |
| Junction Temperature Range                                 | $T_J$           | - 55 to + 175 | $^\circ\text{C}$ |
| Storage Temperature Range                                  | $T_S$           | - 55 to + 175 | $^\circ\text{C}$ |

**Note :**

- (1)  $T_L$  = Lead temperature at 3/8 " (9.5mm) from body
- (2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.



## ELECTRICAL CHARACTERISTICS Rating at = 25 °C ambient temperature unless otherwise specified

| TYPE     | Nominal Zener Voltage |      | Maximum Zener Impedance |           |      | Maximum Reverse Leakage Current |       | Maximum DC Zener Current |
|----------|-----------------------|------|-------------------------|-----------|------|---------------------------------|-------|--------------------------|
|          | Vz @ IzT              | IzT  | ZzT @ IzT               | Zzk @ IzK | IzK  | IR @ VR                         |       | IzM                      |
|          | (V)                   | (mA) | (Ω)                     | (Ω)       | (mA) | (μA)                            | (V)   | (mA)                     |
| Z2SMB3V6 | 3.6                   | 139  | 5.0                     | 400       | 1.0  | 80                              | 1.0   | 504                      |
| Z2SMB3V9 | 3.9                   | 128  | 5.0                     | 400       | 1.0  | 30                              | 1.0   | 468                      |
| Z2SMB4V3 | 4.3                   | 116  | 4.5                     | 400       | 1.0  | 20                              | 1.0   | 434                      |
| Z2SMB4V7 | 4.7                   | 106  | 4.5                     | 550       | 1.0  | 5.0                             | 1.0   | 386                      |
| Z2SMB5V1 | 5.1                   | 98.0 | 3.5                     | 600       | 1.0  | 5.0                             | 1.0   | 356                      |
| Z2SMB5V6 | 5.6                   | 89.5 | 2.5                     | 500       | 1.0  | 5.0                             | 2.0   | 324                      |
| Z2SMB6V2 | 6.2                   | 80.5 | 1.5                     | 700       | 1.0  | 5.0                             | 3.0   | 292                      |
| Z2SMB6V8 | 6.8                   | 73.5 | 2.0                     | 700       | 1.0  | 5.0                             | 4.0   | 266                      |
| Z2SMB7V5 | 7.5                   | 66.5 | 2.0                     | 700       | 0.5  | 50                              | 5.0   | 242                      |
| Z2SMB8V2 | 8.2                   | 61.0 | 2.3                     | 700       | 0.5  | 50                              | 6.0   | 220                      |
| Z2SMB9V1 | 9.1                   | 55.0 | 2.5                     | 700       | 0.5  | 50                              | 7.0   | 200                      |
| Z2SMB10  | 10                    | 50.0 | 3.5                     | 700       | 0.25 | 50                              | 7.6   | 182                      |
| Z2SMB11  | 11                    | 45.5 | 4.0                     | 700       | 0.25 | 50                              | 8.4   | 166                      |
| Z2SMB12  | 12                    | 41.5 | 4.5                     | 700       | 0.25 | 1.0                             | 9.1   | 152                      |
| Z2SMB13  | 13                    | 38.5 | 5.0                     | 700       | 0.25 | 0.5                             | 9.9   | 138                      |
| Z2SMB14  | 14                    | 35.7 | 5.5                     | 700       | 0.25 | 0.5                             | 10.6  | 130                      |
| Z2SMB15  | 15                    | 33.4 | 7.0                     | 700       | 0.25 | 0.5                             | 11.4  | 122                      |
| Z2SMB16  | 16                    | 31.2 | 8.0                     | 700       | 0.25 | 0.5                             | 12.2  | 114                      |
| Z2SMB17  | 17                    | 29.4 | 9.0                     | 750       | 0.25 | 0.5                             | 13.0  | 107                      |
| Z2SMB18  | 18                    | 27.8 | 10                      | 750       | 0.25 | 0.5                             | 13.7  | 100                      |
| Z2SMB19  | 19                    | 26.3 | 11                      | 750       | 0.25 | 0.5                             | 14.4  | 95                       |
| Z2SMB20  | 20                    | 25.0 | 11                      | 750       | 0.25 | 0.5                             | 15.2  | 90                       |
| Z2SMB22  | 22                    | 22.8 | 12                      | 750       | 0.25 | 0.5                             | 16.7  | 82                       |
| Z2SMB24  | 24                    | 20.8 | 13                      | 750       | 0.25 | 0.5                             | 18.2  | 76                       |
| Z2SMB27  | 27                    | 18.5 | 18                      | 750       | 0.25 | 0.5                             | 20.6  | 68                       |
| Z2SMB30  | 30                    | 16.6 | 20                      | 1000      | 0.25 | 0.5                             | 22.5  | 60                       |
| Z2SMB33  | 33                    | 15.1 | 23                      | 1000      | 0.25 | 0.5                             | 25.1  | 55                       |
| Z2SMB36  | 36                    | 13.9 | 25                      | 1000      | 0.25 | 0.5                             | 27.4  | 50                       |
| Z2SMB39  | 39                    | 12.8 | 30                      | 1000      | 0.25 | 0.5                             | 29.7  | 47                       |
| Z2SMB43  | 43                    | 11.6 | 35                      | 1500      | 0.25 | 0.5                             | 32.7  | 43                       |
| Z2SMB47  | 47                    | 10.6 | 40                      | 1500      | 0.25 | 0.5                             | 35.8  | 39                       |
| Z2SMB51  | 51                    | 9.8  | 48                      | 1500      | 0.25 | 0.5                             | 38.8  | 36                       |
| Z2SMB56  | 56                    | 9.0  | 55                      | 2000      | 0.25 | 0.5                             | 42.6  | 32                       |
| Z2SMB62  | 62                    | 8.1  | 60                      | 2000      | 0.25 | 0.5                             | 47.1  | 29                       |
| Z2SMB68  | 68                    | 7.4  | 75                      | 2000      | 0.25 | 0.5                             | 51.7  | 27                       |
| Z2SMB75  | 75                    | 6.7  | 90                      | 2000      | 0.25 | 0.5                             | 56.0  | 24                       |
| Z2SMB82  | 82                    | 6.1  | 100                     | 3000      | 0.25 | 0.5                             | 62.2  | 22                       |
| Z2SMB91  | 91                    | 5.5  | 125                     | 3000      | 0.25 | 0.5                             | 69.2  | 20                       |
| Z2SMB100 | 100                   | 5.0  | 175                     | 3000      | 0.25 | 0.5                             | 76.0  | 18                       |
| Z2SMB110 | 110                   | 4.5  | 250                     | 4000      | 0.25 | 0.5                             | 83.6  | 17                       |
| Z2SMB120 | 120                   | 4.2  | 325                     | 4500      | 0.25 | 0.5                             | 91.2  | 15                       |
| Z2SMB130 | 130                   | 3.8  | 400                     | 5000      | 0.25 | 0.5                             | 98.8  | 14                       |
| Z2SMB140 | 140                   | 3.6  | 500                     | 5500      | 0.25 | 0.5                             | 106.4 | 13                       |
| Z2SMB150 | 150                   | 3.3  | 575                     | 6000      | 0.25 | 0.5                             | 114.0 | 12                       |
| Z2SMB160 | 160                   | 3.1  | 650                     | 6500      | 0.25 | 0.5                             | 121.6 | 11                       |
| Z2SMB170 | 170                   | 2.9  | 675                     | 7000      | 0.25 | 0.5                             | 130.4 | 11                       |
| Z2SMB180 | 180                   | 2.8  | 725                     | 7000      | 0.25 | 0.5                             | 136.8 | 10                       |
| Z2SMB190 | 190                   | 2.6  | 825                     | 8000      | 0.25 | 0.5                             | 144.8 | 10                       |
| Z2SMB200 | 200                   | 2.5  | 900                     | 8000      | 0.25 | 0.5                             | 152.0 | 9.0                      |