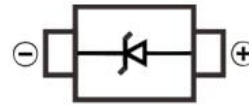


SMB Surface Mounted Zener Diode 表面贴装稳压二极管

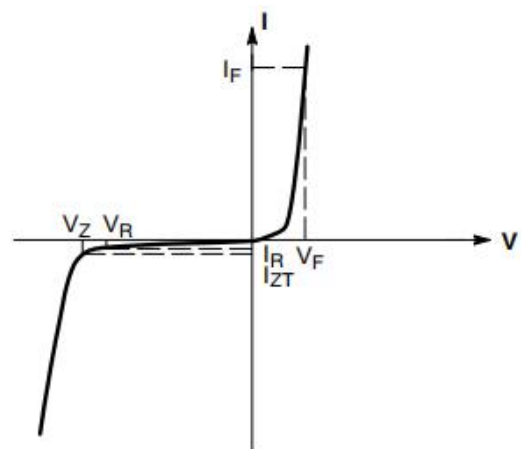
■SMB(DO-214AA) Internal Configuration 内部结构



■Features 特点

| Characteristic 特性参数 | Symbol 符号 | Max 最大值 | Unit 单位 |
|---|-----------------------------|---|---------------------------|
| Power dissipation 耗散功率 | $P_D(T_a=25^\circ\text{C})$ | 550 | mW |
| Power dissipation 耗散功率 | $P_D(T_L=75^\circ\text{C})$ | 2000 | mW |
| Forward Voltage 正向电压 | $V_F(@ I_F=200\text{mA})$ | 1.2 | V |
| Reverse Voltage 反向电压 | V_Z | 3.3-200 | V |
| Thermal Resistance J-L 结到管脚热阻 | $R_{\theta JL}$ | 25 | $^\circ\text{C}/\text{W}$ |
| Thermal Resistance J-A 结到环境热阻 | $R_{\theta JA}$ | 226 | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature 结温和储藏温度 | T_J, T_{stg} | 150 $^\circ\text{C}$, -55to+150 $^\circ\text{C}$ | |

| ELECTRICAL CHARACTERISTICS | |
|----------------------------|-------------------------------------|
| SYMBOL | PARAMETER |
| V_Z | Reverse Zener voltage at I_{ZT} |
| I_{ZT} | Reverse current |
| Z_{ZT} | Maximum Zener impedance at I_{ZT} |
| I_{ZK} | Reverse current |
| Z_{ZK} | Maximum Zener impedance at I_{ZK} |
| I_R | Reverse leakage current at V_R |
| V_R | Reverse voltage |
| I_F | Forward current |
| V_F | Forward voltage at I_F |
| I_{ZM} | Maximum DC Zener current |



■Electrical Characteristics 电特性

($T_A=25^\circ\text{C}$ unless otherwise noted 如无特殊说明, 温度为 25 $^\circ\text{C}$)

| Type Number | V _Z (V)@I _{ZT} | | | I _{ZT} (mA) | Z _{ZT} (Ω) @I _{ZT} | I _R (μA) @V _R | V _R (V) | I _{ZRM} (mA) | Marking |
|-------------|------------------------------------|------|------|----------------------|--------------------------------------|-------------------------------------|--------------------|-----------------------|---------|
| | Nom. | Min. | Max. | | | | | | |
| SMB5913B | 3.3 | 3.10 | 3.50 | 75 | 10 | 100 | 1 | 285 | 913B |
| SMB5914B | 3.6 | 3.40 | 3.80 | 69 | 10 | 100 | 1 | 263 | 914B |
| SMB5915B | 3.9 | 3.70 | 4.10 | 64 | 9.0 | 50 | 1 | 243 | 915B |
| SMB5916B | 4.3 | 4.06 | 4.56 | 58 | 9.0 | 25 | 1 | 219 | 916B |
| SMB5917B | 4.7 | 4.50 | 4.93 | 53 | 8.0 | 10 | 1 | 203 | 917B |
| SMB5918B | 5.1 | 4.84 | 5.36 | 49 | 7.0 | 10 | 1 | 186 | 918B |
| SMB5919B | 5.6 | 5.32 | 5.92 | 45 | 5.0 | 10 | 2 | 170 | 919B |
| SMB5920B | 6.2 | 5.86 | 6.51 | 41 | 2.0 | 10 | 3 | 154 | 920B |
| SMB5921B | 6.8 | 6.46 | 7.18 | 37 | 3.5 | 10 | 4 | 140 | 921B |
| SMB5922B | 7.5 | 7.12 | 7.88 | 34 | 4.0 | 10 | 5 | 127 | 922B |
| SMB5923B | 8.2 | 7.79 | 8.67 | 31 | 4.5 | 10 | 6 | 116 | 923B |
| SMB5924B | 9.1 | 8.60 | 9.59 | 28 | 5.0 | 10 | 7 | 104 | 924B |
| SMB5925B | 10 | 9.50 | 10.5 | 25 | 7.0 | 10 | 7 | 95 | 925B |
| SMB5926B | 11 | 10.4 | 11.6 | 23 | 8.0 | 5 | 8 | 86 | 926B |
| SMB5927B | 12 | 11.4 | 12.6 | 21 | 9.0 | 5 | 9 | 79 | 927B |
| SMB5928B | 13 | 12.4 | 14.1 | 19 | 10 | 5 | 10 | 71 | 928B |
| SMB5929B | 15 | 13.8 | 15.8 | 17 | 14 | 5 | 11 | 63 | 929B |
| SMB5930B | 16 | 15.2 | 17.1 | 16 | 16 | 5 | 12 | 58 | 930B |
| SMB5931B | 18 | 16.8 | 19.2 | 14 | 20 | 5 | 13 | 52 | 931B |
| SMB5932B | 20 | 19.0 | 21.2 | 13 | 22 | 5 | 15 | 47 | 932B |
| SMB5933B | 22 | 20.8 | 23.3 | 12 | 23 | 5 | 17 | 43 | 933B |
| SMB5934B | 24 | 22.8 | 26.0 | 11 | 25 | 5 | 18 | 38 | 934B |
| SMB5935B | 27 | 25.3 | 28.9 | 9.5 | 35 | 5 | 21 | 35 | 935B |
| SMB5936B | 30 | 28.2 | 32.0 | 8.5 | 40 | 5 | 23 | 31 | 936B |
| SMB5937B | 33 | 31.3 | 34.9 | 7.5 | 45 | 5 | 25 | 28 | 937B |
| SMB5938B | 36 | 34.2 | 37.9 | 7.0 | 50 | 5 | 27 | 26 | 938B |
| SMB5939B | 39 | 37.2 | 41.5 | 6.5 | 60 | 5 | 30 | 24 | 939B |
| SMB5940B | 43 | 40.9 | 45.6 | 6.0 | 70 | 1 | 32 | 22 | 940B |
| SMB5941B | 47 | 44.9 | 49.8 | 5.5 | 80 | 1 | 35 | 20 | 941B |
| SMB5942B | 51 | 48.6 | 54.0 | 5.0 | 95 | 1 | 38 | 18 | 942B |
| SMB5943B | 56 | 53.6 | 58.8 | 4.5 | 110 | 1 | 42 | 17 | 943B |
| SMB5944B | 62 | 58.9 | 65.6 | 4.0 | 125 | 1 | 47 | 15 | 944B |
| SMB5945B | 68 | 64.6 | 71.7 | 3.7 | 150 | 1 | 52 | 14 | 945B |
| SMB5946B | 75 | 71.2 | 78.8 | 3.3 | 175 | 1 | 56 | 12 | 946B |
| SMB5947B | 82 | 77.9 | 87.0 | 3.0 | 200 | 1 | 62 | 11 | 947B |
| SMB5948B | 91 | 86.0 | 96.0 | 2.8 | 250 | 1 | 69 | 10 | 948B |
| SMB5949B | 100 | 95.0 | 105 | 2.5 | 350 | 1 | 76 | 9.5 | 949B |
| SMB5950B | 110 | 104 | 116 | 2.3 | 450 | 1 | 84 | 8.6 | 950B |
| SMB5951B | 120 | 114 | 127 | 2.0 | 550 | 1 | 91 | 7.8 | 951B |
| SMB5952B | 135 | 125 | 142 | 1.9 | 700 | 1 | 100 | 7.0 | 952B |
| SMB5953B | 150 | 140 | 157 | 1.7 | 900 | 1 | 110 | 6.3 | 953B |
| SMB5954B | 165 | 155 | 172 | 1.6 | 1000 | 1 | 120 | 5.8 | 954B |
| SMB5955B | 180 | 170 | 191 | 1.4 | 1100 | 1 | 135 | 5.2 | 955B |
| SMB5956B | 200 | 189 | 211 | 1.2 | 1200 | 1 | 150 | 4.7 | 956B |

■ Typical Characteristic Curve 典型特性曲线

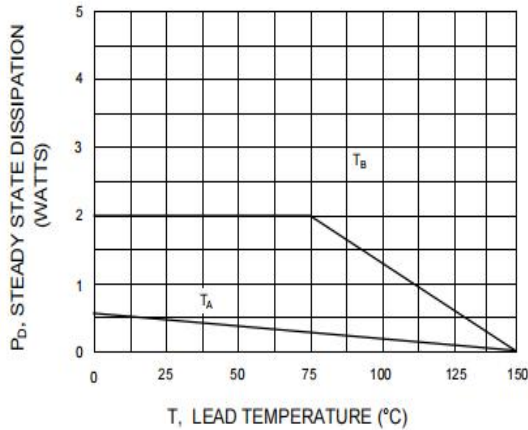


Figure 1: Power Derating Curve

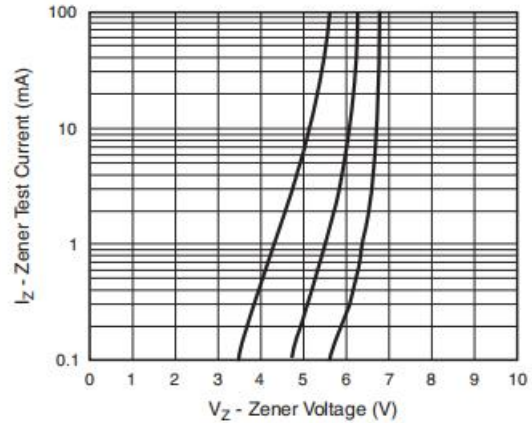


Figure 2: Zener Breakdown Characteristics

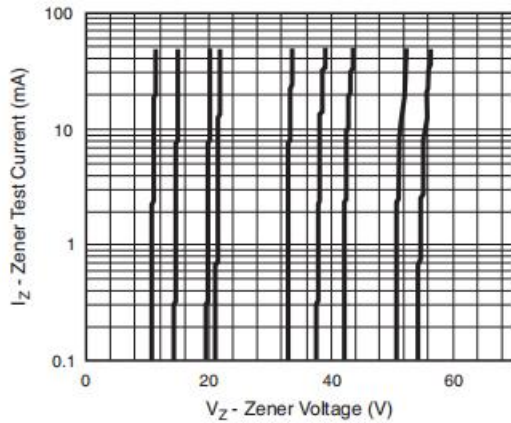


Figure 3: Zener Breakdown Characteristics

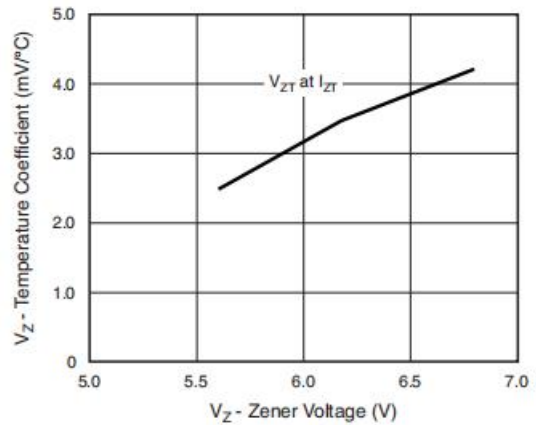


Figure 4: Temperature Coefficient

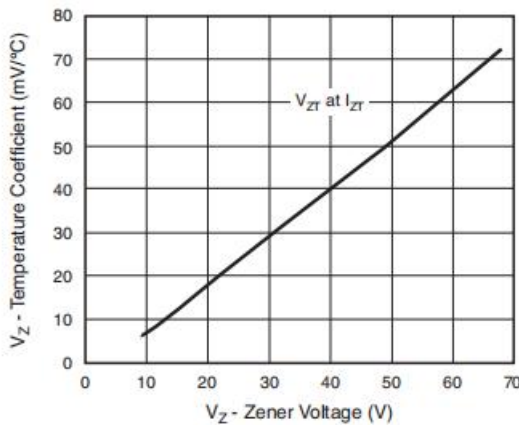


Figure 5: Temperature Coefficient

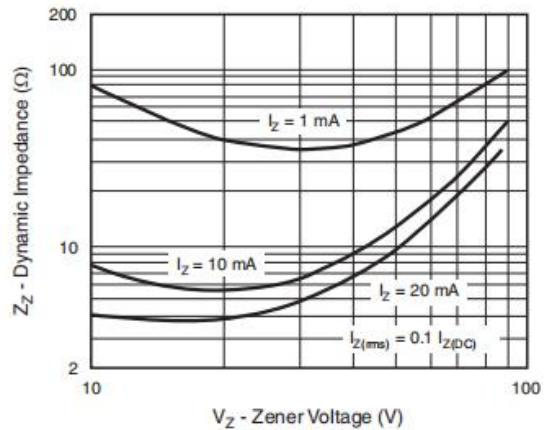
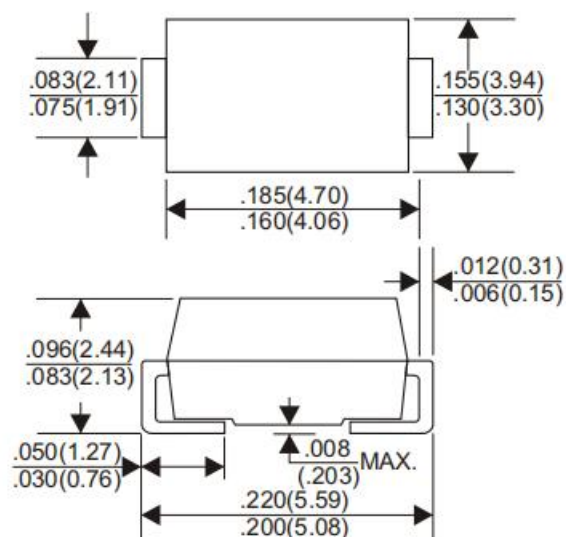


Figure 6: Zener Impedance

■Dimension 外形封装尺寸

DO-214AA(SMB)



Dimensions in inches and (millimeters)