

SMB SURFACE MOUNT ZENER DIODES

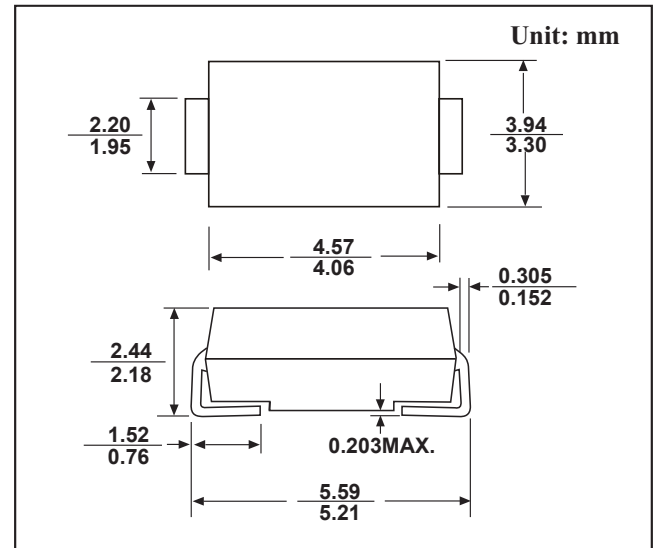
ZENER VOLTAGE RANGE: 3.3 ---200V PEAK PULSE POWER:3000mW

FEATURES

- Low Reverse Leakage
- Low Zener Impedance
- High Stability and High Reliability

MECHANICAL DATA

- Case: SMB
- Polarity: Color band denotes cathode end
- Mounting Position: Any



MAXIMUM RATINGS AND CHARACTERISTICS

Ratings at 25 C ambient temperature unless otherwise specified

| Parameters | SYMBOLS | VALUE | UNITS |
|---|----------------|--------------|-------|
| Power Dissipation | P_D | 3000 | mW |
| Forward Voltage @ I_F | V_F | 1.5 | V |
| Operating and Storage Temperature Range | T_J, T_{STG} | -55 to + 150 | °C |

Electrical Specification ($T_A=25^\circ\text{C}$ unless otherwise specified)

| Type | V_Z V | I_{ZT} mA | Z_{ZT} | Z_{ZK} | I_{ZK} mA | I_{RM} μA | V_R V | $I_{ZM} @ 50^\circ\text{C}$ mA |
|-----------|------------|----------------|----------------------------|----------------------|----------------|---------------------------|------------|-----------------------------------|
| | | | ($I=I_{ZT}$) Ω | Z_{Kl} Ω | | | | |
| SMBJ5913B | 3.3 | 113.6 | 10.0 | 1.0 | 500 | 100 | 1.0 | 454 |
| SMBJ5914B | 3.6 | 104.2 | 9.0 | 1.0 | 500 | 75 | 1.0 | 416 |
| SMBJ5915B | 3.9 | 96.1 | 7.5 | 1.0 | 500 | 25 | 1.0 | 384 |
| SMBJ5916B | 4.3 | 87.2 | 6.0 | 1.0 | 500 | 5.0 | 1.0 | 348 |
| SMBJ5917B | 4.7 | 79.8 | 5.0 | 1.0 | 500 | 5.0 | 1.5 | 319 |
| SMBJ5918B | 5.1 | 73.5 | 4.0 | 1.0 | 350 | 5.0 | 2.0 | 294 |
| SMBJ5919B | 5.6 | 66.9 | 2.0 | 1.0 | 250 | 5.0 | 3.0 | 267 |
| SMBJ5920B | 6.2 | 60.5 | 2.0 | 1.0 | 200 | 5.0 | 4.0 | 241 |
| SMBJ5921B | 6.8 | 55.1 | 2.5 | 1.0 | 200 | 5.0 | 5.2 | 220 |

| Type | V _Z | I _{ZT} | Z _{ZT} | Z _{ZK} | I _{ZK} | I _{RM} | V _R | I _{ZM} @50°C |
|-----------|----------------|-----------------|----------------------|-----------------|-----------------|-----------------|----------------|-----------------------|
| | | | (I=I _{ZT}) | I _{ZK} | | | | |
| | V | mA | Ω | Ω | mA | μA | V | mA |
| SMBJ5922B | 7.5 | 50.0 | 3.0 | 0.5 | 400 | 5.0 | 6.0 | 200 |
| SMBJ5923B | 8.2 | 45.7 | 3.5 | 0.5 | 400 | 5.0 | 6.5 | 182 |
| SMBJ5924B | 9.1 | 41.2 | 4.0 | 0.5 | 500 | 5.0 | 7.0 | 164 |
| SMBJ5925B | 10 | 37.5 | 4.5 | 0.25 | 500 | 5.0 | 8.0 | 150 |
| SMBJ5926B | 11 | 34.1 | 5.5 | 0.25 | 550 | 1.0 | 8.4 | 136 |
| SMBJ5927B | 12 | 31.2 | 6.5 | 0.25 | 550 | 1.0 | 9.1 | 125 |
| SMBJ5928B | 13 | 28.8 | 7.0 | 0.25 | 550 | 1.0 | 9.9 | 115 |
| SMBJ5929B | 15 | 25.0 | 9.0 | 0.25 | 600 | 1.0 | 11.4 | 100 |
| SMBJ5930B | 16 | 23.4 | 10.0 | 0.25 | 600 | 1.0 | 12.2 | 93 |
| SMBJ5931B | 18 | 20.8 | 12.0 | 0.25 | 650 | 1.0 | 13.7 | 83 |
| SMBJ5932B | 20 | 18.7 | 14.0 | 0.25 | 650 | 1.0 | 15.2 | 75 |
| SMBJ5933B | 22 | 17.0 | 17.5 | 0.25 | 650 | 1.0 | 16.7 | 68 |
| SMBJ5934B | 24 | 15.6 | 19 | 0.25 | 700 | 1.0 | 18.2 | 62 |
| SMBJ5935B | 27 | 13.9 | 23 | 0.25 | 700 | 1.0 | 20.6 | 55 |
| SMBJ5936B | 30 | 12.5 | 28 | 0.25 | 750 | 1.0 | 22.8 | 50 |
| SMBJ5937B | 33 | 11.4 | 33 | 0.25 | 800 | 1.0 | 25.1 | 45 |
| SMBJ5938B | 36 | 10.4 | 38 | 0.25 | 850 | 1.0 | 27.4 | 41 |
| SMBJ5939B | 39 | 9.6 | 45 | 0.25 | 900 | 1.0 | 29.7 | 38 |
| SMBJ5940B | 43 | 8.7 | 53 | 0.25 | 950 | 1.0 | 32.7 | 34 |
| SMBJ5941B | 47 | 8.0 | 67 | 0.25 | 1000 | 1.0 | 35.8 | 31 |
| SMBJ5942B | 51 | 7.3 | 70 | 0.25 | 1100 | 1.0 | 38.8 | 29 |
| SMBJ5943B | 56 | 6.7 | 86 | 0.25 | 130 | 1.0 | 42.6 | 26 |
| SMBJ5944B | 62 | 6.0 | 100 | 0.25 | 1500 | 1.0 | 47.1 | 24 |
| SMBJ5945B | 68 | 5.5 | 120 | 0.25 | 1700 | 1.0 | 51.2 | 22 |
| SMBJ5946B | 75 | 5.0 | 140 | 0.25 | 2000 | 1.0 | 56.0 | 20 |
| SMBJ5947B | 82 | 4.6 | 160 | 0.25 | 2500 | 1.0 | 62.2 | 18 |
| SMBJ5948B | 91 | 4.1 | 200 | 0.25 | 3000 | 1.0 | 69.2 | 16 |
| SMBJ5949B | 100 | 3.7 | 250 | 0.25 | 3100 | 1.0 | 76.0 | 15 |
| SMBJ5950B | 110 | 3.4 | 300 | 0.25 | 4000 | 1.0 | 83.6 | 13 |
| SMBJ5951B | 120 | 3.1 | 380 | 0.25 | 4500 | 1.0 | 91.2 | 12 |
| SMBJ5952B | 130 | 2.9 | 450 | 0.25 | 5000 | 1.0 | 98.8 | 11 |

| Type | V _Z | I _{ZT} | Z _{ZT} | Z _{ZK} | I _{ZK} | I _{RM} | V _R | I _{ZM} @50°C |
|-----------|----------------|-----------------|----------------------|-----------------|-----------------|-----------------|----------------|-----------------------|
| | V | mA | (I=I _{ZT}) | I _{ZK} | | | | |
| | Ω | Ω | mA | μA | V | mA | | |
| SMBJ5953B | 150 | 2.5 | 600 | 0.25 | 6000 | 1.0 | 114.0 | 10 |
| SMBJ5954B | 160 | 2.3 | 700 | 0.25 | 6500 | 1.0 | 121.6 | 9 |
| SMBJ5955B | 180 | 2.1 | 900 | 0.25 | 7000 | 1.0 | 136.8 | 8 |
| SMBJ5956B | 200 | 1.9 | 1200 | 0.25 | 8000 | 1.0 | 152.0 | 7 |