

SMZ25 Series

SURFACE MOUNT SILICON ZENER DIODES

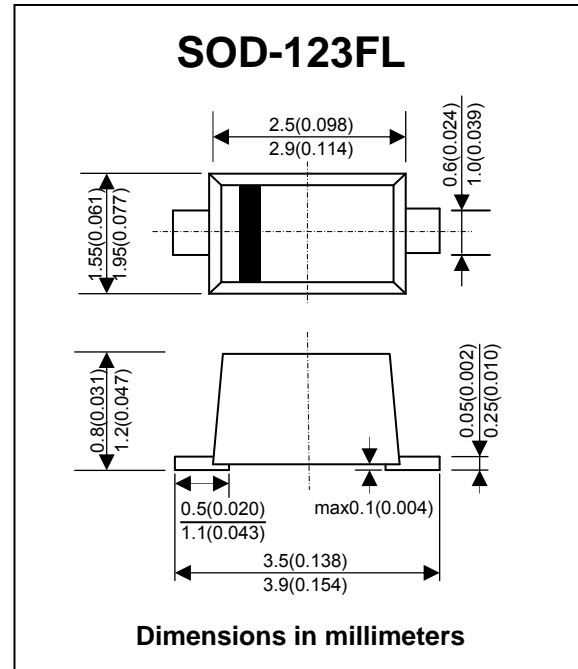
V_Z : 3.0 - 200 Volts
P_D : 1.3 Watts

FEATURES :

- * Complete Voltage Range 3.0 to 200 Volts
- * High peak reverse power dissipation
- * High reliability
- * Low leakage current
- * **Pb Free / RoHS Compliant**

MECHANICAL DATA :

- * Case: JEDEC SOD-123FL, molded plastic over passivated chip
- * Terminals: Solder Plated, solderable per method 208 guaranteed
- * Polarity: Color band denotes cathode end
- * Mounting position : Any
- * Weight: 0.02 gram (Approximate)



MAXIMUM RATINGS

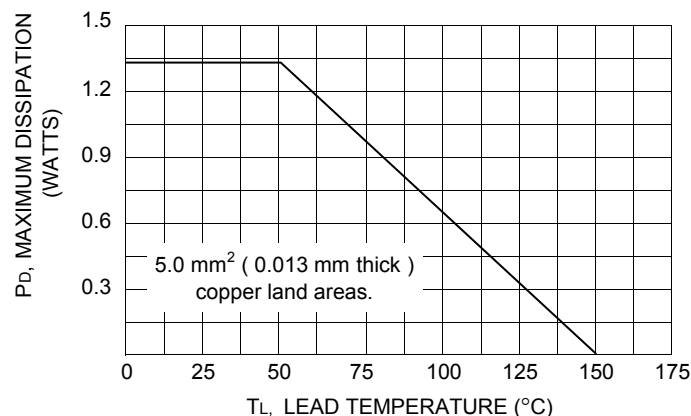
Rating at 25 °C ambient temperature unless otherwise specified.

| Rating | Symbol | Value | Unit |
|--|----------------|---------------|-------|
| DC Power Dissipation at T _L = 50 °C (Note1) | P _D | 1.3 | Watts |
| Maximum Forward Voltage at I _F = 200 mA | V _F | 1.2 | Volts |
| Junction Temperature Range | T _J | - 55 to + 150 | °C |
| Storage Temperature Range | T _s | - 55 to + 150 | °C |

Note :

(1) T_L = Lead temperature at 5.0 mm² (0.013 mm thick) copper land areas.

Fig. 1 POWER TEMPERATURE DERATING CURVE



ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

| Type No. | Marking | Nominal Zener Voltage | | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|----------|---------|-----------------------|----------|-------------------------|-------------------|----------|---------------------------------|----------|--------------------------|
| | | $V_Z @ I_{ZT}$ | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $Z_{ZK} @ I_{ZK}$ | I_{ZK} | $I_R @ V_R$ | I_{ZM} | |
| | | (V) | (mA) | (Ω) | (Ω) | (mA) | (μ A) | | (V) |
| SMZ253A | 6A | 3.0 | 80 | 20 | 400 | 1.0 | 100 | 1.0 | 340 |
| SMZ253D | 6B | 3.3 | 80 | 20 | 400 | 1.0 | 40 | 1.0 | 320 |
| SMZ253G | 6C | 3.6 | 70 | 20 | 500 | 1.0 | 20 | 1.0 | 290 |
| SMZ253J | 6D | 3.9 | 60 | 15 | 500 | 1.0 | 10 | 1.0 | 280 |
| SMZ254D | 6E | 4.3 | 50 | 13 | 500 | 1.0 | 3.0 | 1.0 | 250 |
| SMZ254H | 6F | 4.7 | 45 | 13 | 500 | 1.0 | 3.0 | 1.0 | 215 |
| SMZ255B | 6H | 5.1 | 45 | 10 | 500 | 1.0 | 1.0 | 1.5 | 200 |
| SMZ255G | 6J | 5.6 | 45 | 7.0 | 400 | 1.0 | 1.0 | 2.0 | 190 |
| SMZ256C | 6K | 6.2 | 35 | 4.0 | 300 | 1.0 | 1.0 | 3.0 | 170 |
| SMZ256I | 6M | 6.8 | 35 | 3.5 | 300 | 1.0 | 50 | 4.0 | 155 |
| SMZ257F | 6N | 7.5 | 35 | 3.0 | 200 | 0.5 | 50 | 4.5 | 140 |
| SMZ258C | 6P | 8.2 | 25 | 5.0 | 200 | 0.5 | 50 | 6.2 | 130 |
| SMZ259B | 6R | 9.1 | 25 | 5.0 | 200 | 0.5 | 50 | 6.8 | 120 |
| SMZ2510 | 6X | 10 | 25 | 7.0 | 200 | 0.5 | 50 | 7.5 | 105 |
| SMZ2511 | 6Y | 11 | 20 | 8.0 | 300 | 0.5 | 50 | 8.2 | 97 |
| SMZ2512 | 6Z | 12 | 20 | 9.0 | 350 | 0.5 | 0.5 | 9.1 | 88 |
| SMZ2513 | 7A | 13 | 20 | 10 | 400 | 0.5 | 0.5 | 10 | 79 |
| SMZ2515 | 7B | 15 | 15 | 15 | 500 | 0.5 | 0.5 | 11 | 71 |
| SMZ2516 | 7C | 16 | 15 | 15 | 500 | 0.5 | 0.5 | 12 | 66 |
| SMZ2518 | 7D | 18 | 15 | 20 | 500 | 0.5 | 0.5 | 13 | 62 |
| SMZ2519 | 7E | 19 | 15 | 20 | 550 | 0.5 | 0.5 | 14 | 58 |
| SMZ2520 | 7F | 20 | 10 | 24 | 600 | 0.5 | 0.5 | 15 | 56 |
| SMZ2522 | 7H | 22 | 10 | 25 | 600 | 0.5 | 0.5 | 16 | 52 |
| SMZ2524 | 7J | 24 | 10 | 25 | 600 | 0.5 | 0.5 | 18 | 47 |
| SMZ2527 | 7K | 27 | 8.0 | 30 | 750 | 0.25 | 0.5 | 20 | 41 |
| SMZ2530 | 7M | 30 | 8.0 | 30 | 1000 | 0.25 | 0.5 | 22 | 36 |
| SMZ2533 | 7N | 33 | 8.0 | 35 | 1000 | 0.25 | 0.5 | 24 | 33 |
| SMZ2536 | 7P | 36 | 8.0 | 40 | 1000 | 0.25 | 0.5 | 27 | 30 |
| SMZ2539 | 7R | 39 | 6.0 | 50 | 1000 | 0.25 | 0.5 | 30 | 28 |
| SMZ2543 | 7X | 43 | 6.0 | 50 | 1000 | 0.25 | 0.5 | 33 | 26 |
| SMZ2547 | 7Y | 47 | 4.0 | 90 | 1500 | 0.25 | 0.5 | 36 | 23 |
| SMZ2551 | 7Z | 51 | 4.0 | 115 | 1500 | 0.25 | 0.5 | 39 | 21 |
| SMZ2556 | 8A | 56 | 4.0 | 120 | 2000 | 0.25 | 0.5 | 43 | 19 |
| SMZ2562 | 8B | 62 | 4.0 | 125 | 2000 | 0.25 | 0.5 | 47 | 16 |
| SMZ2568 | 8C | 68 | 4.0 | 130 | 2000 | 0.25 | 0.5 | 51 | 15 |
| SMZ2575 | 8D | 75 | 4.0 | 135 | 2000 | 0.25 | 0.5 | 56 | 14 |
| SMZ2582 | 8E | 82 | 2.7 | 200 | 3000 | 0.25 | 0.5 | 62 | 12 |
| SMZ2591 | 8F | 91 | 2.7 | 250 | 3000 | 0.25 | 0.5 | 68 | 10 |
| SMZ25B0 | 8H | 100 | 2.7 | 350 | 3000 | 0.25 | 0.5 | 75 | 9.4 |
| SMZ25B1 | 8J | 110 | 2.7 | 450 | 4000 | 0.25 | 0.5 | 82 | 8.6 |
| SMZ25B2 | 8K | 120 | 2.0 | 550 | 4500 | 0.25 | 0.5 | 91 | 7.8 |
| SMZ25B3 | 8M | 130 | 2.0 | 700 | 5000 | 0.25 | 0.5 | 100 | 7.0 |
| SMZ25B5 | 8N | 150 | 2.0 | 1000 | 6000 | 0.25 | 0.5 | 110 | 6.4 |
| SMZ25B6 | 8P | 160 | 1.5 | 1100 | 6500 | 0.25 | 0.5 | 120 | 5.8 |
| SMZ25B8 | 8R | 180 | 1.5 | 1200 | 7000 | 0.25 | 0.5 | 130 | 5.2 |
| SMZ25D0 | 8X | 200 | 1.5 | 1900 | 9990 | 0.25 | 0.5 | 150 | 4.7 |

Note :

- (1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5.0\%$.