# SMZ25 Series

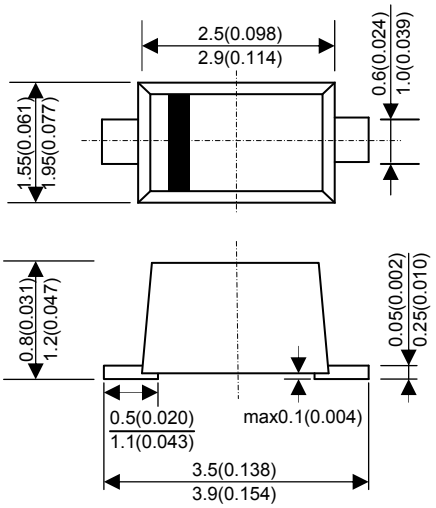
# SURFACE MOUNT SILICON ZENER DIODES

## $V_Z$ : 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)

### SOD-123FL




**Dimensions in millimeters**

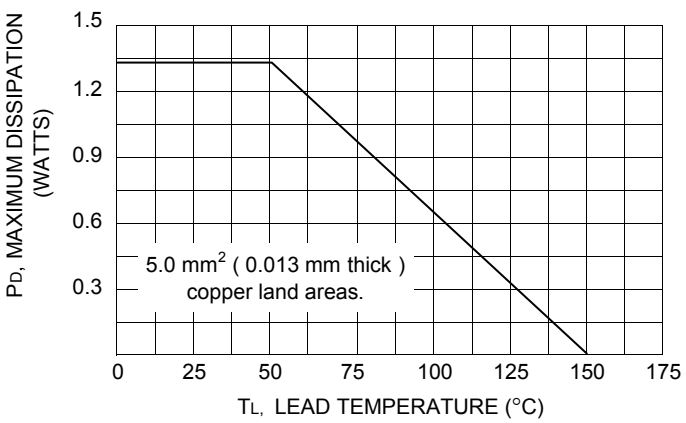
### MAXIMUM RATINGS
Rating at 25 °C ambient temperature unless otherwise specified.

| 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 | Ts | - 55 to + 150 | °C |

**Note :**

(1) $T_L$ = Lead temperature at 5.0 $mm^2$ ( 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) | (μA) | (V) | (mA) |
| **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 ± 5.0%.