

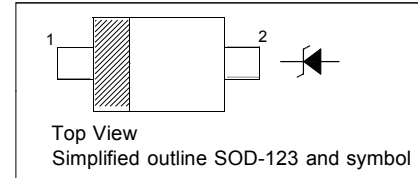
### LMSZ5221B-LMSZ5259B ZENER DIODE

#### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |

#### FEATURES

- Planar Die Construction
- Ultra-Small Surface Mount Package
- General purpose, Medium Current
- Ideally Suited for Automated Assembly Processes



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

| Characteristic                                 | Symbol          | Value     | Unit                        |
|--|-----------------|-----------|-----------------------------|
| Forward Voltage (Note 2) @ $I_F = 10\text{mA}$ | $V_F$           | 0.9       | V                           |
| Power Dissipation(Note 1)                      | $P_d$           | 350       | mW                          |
| Thermal Resistance, Junction to Ambient Air    | $R_{\theta JA}$ | 357       | $^{\circ}\text{C}/\text{W}$ |
| Operating and Storage Temperature Range        | $T_j, T_{STG}$  | -65~ +150 | $^{\circ}\text{C}$          |

Notes:1. Device mounted on ceramic PCB; 7.6 mm x 9.4 mm x 0.87 mm with pad areas 25 mm<sup>2</sup>.

2. Tested with pulses,  $T_p \leq 1.0\text{ms}$ .

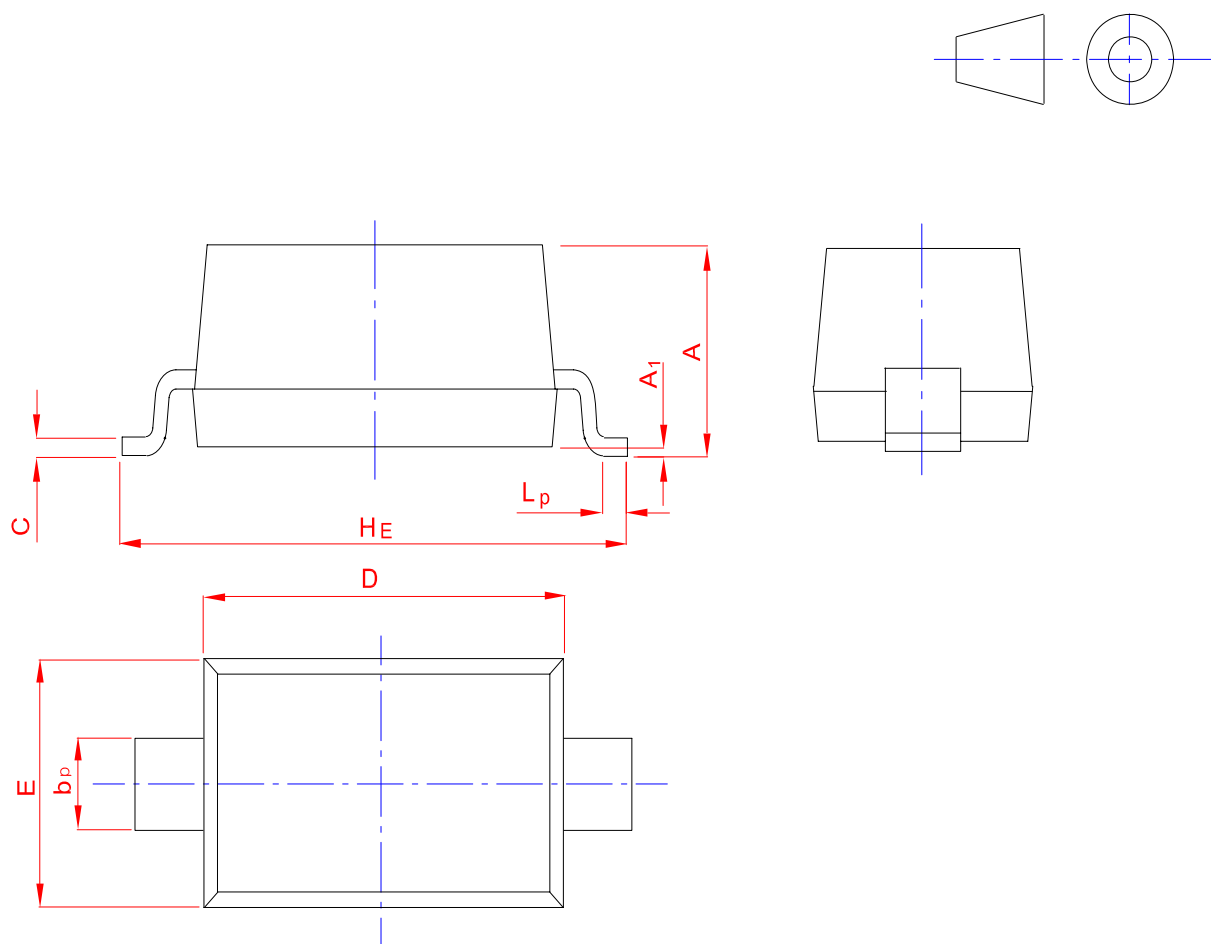
**Electrical Characteristics( $T_a= 25^{\circ}\text{C}$  unless otherwise specified )**

| Type Number | Code | Zener Voltage Range (Note 2) |        |        |          | Maximum Zener Impedance (Note 4) |                 |          | Maximum Reverse Current |       |
|-------------|------|------------------------------|--------|--------|----------|----------------------------------|-----------------|----------|-------------------------|-------|
|             |      | $V_Z@I_{ZT}$                 |        |        | $I_{ZT}$ | $Z_{ZT}@I_{ZT}$                  | $Z_{ZK}@I_{ZK}$ | $I_{ZK}$ | $I_R$                   | $V_R$ |
|             |      | Nom(V)                       | Min(V) | Max(V) | mA       | $\Omega$                         |                 | mA       | $\mu\text{A}$           | V     |
| LMSZ5221B   | C1   | 2.4                          | 2.28   | 2.52   | 20       | 30                               | 1200            | 0.25     | 100                     | 1.0   |
| LMSZ5223B   | C3   | 2.7                          | 2.57   | 2.84   | 20       | 30                               | 1300            | 0.25     | 75                      | 1.0   |
| LMSZ5225B   | C5   | 3.0                          | 2.85   | 3.15   | 20       | 30                               | 1600            | 0.25     | 50                      | 1.0   |
| LMSZ5226B   | G1   | 3.3                          | 3.14   | 3.47   | 20       | 28                               | 1600            | 0.25     | 25                      | 1.0   |
| LMSZ5227B   | G2   | 3.6                          | 3.42   | 3.78   | 20       | 24                               | 1700            | 0.25     | 15                      | 1.0   |
| LMSZ5228B   | G3   | 3.9                          | 3.71   | 4.10   | 20       | 23                               | 1900            | 0.25     | 10                      | 1.0   |
| LMSZ5229B   | G4   | 4.3                          | 4.09   | 4.52   | 20       | 22                               | 2000            | 0.25     | 5                       | 1.0   |
| LMSZ5230B   | G5   | 4.7                          | 4.47   | 4.94   | 20       | 19                               | 1900            | 0.25     | 5                       | 2.0   |
| LMSZ5231B   | E1   | 5.1                          | 4.85   | 5.36   | 20       | 17                               | 1600            | 0.25     | 5                       | 2.0   |
| LMSZ5232B   | E2   | 5.6                          | 5.32   | 5.88   | 20       | 11                               | 1600            | 0.25     | 5                       | 3.0   |
| LMSZ5233B   | E3   | 6.0                          | 5.70   | 6.3    | 20       | 7                                | 1600            | 0.25     | 5                       | 3.5   |
| LMSZ5234B   | E4   | 6.2                          | 5.89   | 6.51   | 20       | 7                                | 1000            | 0.25     | 5                       | 4.0   |
| LMSZ5235B   | E5   | 6.8                          | 6.46   | 7.14   | 20       | 5                                | 750             | 0.25     | 3                       | 5.0   |
| LMSZ5236B   | F1   | 7.5                          | 7.13   | 7.88   | 20       | 6                                | 500             | 0.25     | 3                       | 6.0   |
| LMSZ5237B   | F2   | 8.2                          | 7.79   | 8.61   | 20       | 8                                | 500             | 0.25     | 3                       | 6.5   |
| LMSZ5238B   | F3   | 8.7                          | 8.27   | 9.14   | 20       | 8                                | 600             | 0.25     | 3                       | 6.5   |
| LMSZ5239B   | F4   | 9.1                          | 8.65   | 9.56   | 20       | 10                               | 600             | 0.25     | 3                       | 7.0   |
| LMSZ5240B   | F5   | 10                           | 9.50   | 10.50  | 20       | 17                               | 600             | 0.25     | 3                       | 8.0   |
| LMSZ5241B   | H1   | 11                           | 10.45  | 11.55  | 20       | 22                               | 600             | 0.25     | 2.0                     | 8.4   |
| LMSZ5242B   | H2   | 12                           | 11.40  | 12.60  | 20       | 30                               | 600             | 0.25     | 1.0                     | 9.1   |
| LMSZ5243B   | H3   | 13                           | 12.35  | 13.65  | 9.5      | 13                               | 600             | 0.25     | 0.5                     | 9.9   |
| LMSZ5244B   | H4   | 14                           | 13.30  | 14.70  | 9.0      | 15                               | 600             | 0.25     | 0.1                     | 10    |
| LMSZ5245B   | H5   | 15                           | 14.25  | 15.75  | 8.5      | 16                               | 600             | 0.25     | 0.1                     | 11    |
| LMSZ5246B   | J1   | 16                           | 15.20  | 16.80  | 7.8      | 17                               | 600             | 0.25     | 0.1                     | 12    |
| LMSZ5248B   | J3   | 18                           | 17.10  | 18.90  | 7.0      | 21                               | 600             | 0.25     | 0.1                     | 14    |
| LMSZ5250B   | J5   | 20                           | 19.00  | 21.00  | 6.2      | 25                               | 600             | 0.25     | 0.1                     | 15    |
| LMSZ5251B   | K1   | 22                           | 20.90  | 23.10  | 5.6      | 29                               | 600             | 0.25     | 0.1                     | 17    |
| LMSZ5252B   | K2   | 24                           | 22.80  | 25.20  | 5.2      | 33                               | 600             | 0.25     | 0.1                     | 18    |
| LMSZ5253B   | K3   | 25                           | 23.75  | 26.25  | 5.0      | 35                               | 600             | 0.25     | 0.1                     | 19    |
| LMSZ5254B   | K4   | 27                           | 25.65  | 28.35  | 5.0      | 41                               | 600             | 0.25     | 0.1                     | 21    |
| LMSZ5255B   | K5   | 28                           | 26.60  | 29.40  | 4.5      | 44                               | 600             | 0.25     | 0.1                     | 21    |
| LMSZ5256B   | M1   | 30                           | 28.50  | 31.50  | 4.2      | 49                               | 600             | 0.25     | 0.1                     | 23    |
| LMSZ5257B   | M2   | 33                           | 31.35  | 34.65  | 3.8      | 58                               | 700             | 0.25     | 0.1                     | 25    |
| LMSZ5258B   | M3   | 36                           | 34.20  | 37.80  | 3.4      | 70                               | 700             | 0.25     | 0.1                     | 27    |
| LMSZ5259B   | M4   | 39                           | 37.05  | 40.95  | 3.2      | 80                               | 800             | 0.25     | 0.1                     | 30    |

PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



| UNIT | A    | bp   | C     | D    | E    | HE   | A <sub>1</sub> | L <sub>p</sub> |
|------|------|------|-------|------|------|------|----------------|----------------|
| mm   | 1.20 | 0.60 | 0.135 | 2.75 | 1.65 | 3.85 | 0.10           | 0.50           |
|      | 0.90 | 0.50 | 0.100 | 2.55 | 1.55 | 3.55 | 0.01           | 0.20           |