



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

1N5221B  
THRU  
1N5261B

**TECHNICAL SPECIFICATIONS OF GLASS SILICON ZENER DIODES**

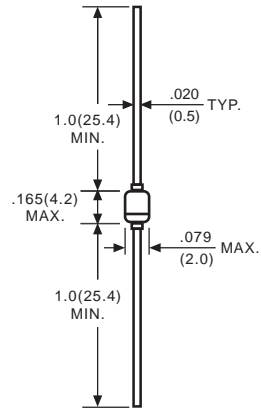
**FEATURES**

- \* Voltage Range: 2.4V to 47V
- \* Double slug type construction

**MECHANICAL DATA**

- \* Case: Glass sealed case Micro Melf
- \* Terminals: Solder plated, solderable per MIL-STD-750, Method 2026 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.05 grams Approx.

DO-35



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

|   | SYMBOL           | VALUE                        | UNITS                         |
|---|------------------|------------------------------|-------------------------------|
| Zener Current see Table "Characterisitics"    |                  |                              |                               |
| Power Dissipation at Tamb=25°C                | P <sub>tot</sub> | 500 <sup>(1)</sup>           | mW                            |
| Junction Temperature                          | T <sub>j</sub>   | 175                          | °C                            |
| Storage Temperature Range                     | T <sub>stg</sub> | -55 to + 175                 | °C                            |
| Thermal Resistance<br>Junction to Ambient Air | R <sub>thA</sub> | -<br>-<br>0.3 <sup>(1)</sup> | K/mW<br>Typ.<br>Min.<br>Max.  |
| Forward Voltage<br>at I <sub>F</sub> =100mA   | V <sub>F</sub>   | -<br>-<br>1                  | Volts<br>Typ.<br>Min.<br>Max. |

1)Valid Provided that leads are kept at ambient temperature at a distance of 10 mm from case.

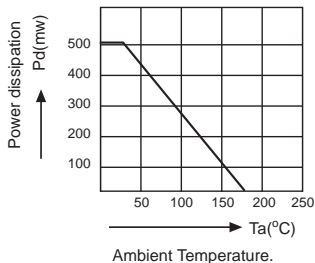
NOTE: Suffix "B" indicates Zener Voltage Tolerance ± 5%

# RATING AND CHARACTERISTIC CURVES (1N5221B THRU 1N5261B)

| TYPE    | Nominal Zener Voltage<br>$V_Z @ I_{ZT}$ | Zener Test Current<br>$I_{ZT}$ | Maximum Zener Impedance |                   | $I_{ZK}$ | Maximum Reverse Leakage Current |       |
|---------|---|--------------------------------|-------------------------|-------------------|----------|---------------------------------|-------|
|         |   |                                | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ |          | $I_R @ V_R$                     |       |
|         |   |                                | Ohms                    | Ohms              |          | $\mu A$                         | Volts |
| 1N5221B | 2.4                                     | 20                             | 30                      | 1200              | 0.25     | 100                             | 1.0   |
| 1N5222B | 2.5                                     | 20                             | 30                      | 1250              | 0.25     | 100                             | 1.0   |
| 1N5223B | 2.7                                     | 20                             | 30                      | 1300              | 0.25     | 75                              | 1.0   |
| 1N5224B | 2.8                                     | 20                             | 30                      | 1400              | 0.25     | 75                              | 1.0   |
| 1N5225B | 3.0                                     | 20                             | 30                      | 1600              | 0.25     | 50                              | 1.0   |
| 1N5226B | 3.3                                     | 20                             | 28                      | 1600              | 0.25     | 25                              | 1.0   |
| 1N5227B | 3.6                                     | 20                             | 24                      | 1700              | 0.25     | 15                              | 1.0   |
| 1N5228B | 3.9                                     | 20                             | 23                      | 1900              | 0.25     | 10                              | 1.0   |
| 1N5229B | 4.3                                     | 20                             | 22                      | 2000              | 0.25     | 5                               | 1.0   |
| 1N5230B | 4.7                                     | 20                             | 19                      | 1900              | 0.25     | 5                               | 2.0   |
| 1N5231B | 5.1                                     | 20                             | 17                      | 1600              | 0.25     | 5                               | 2.0   |
| 1N5232B | 5.6                                     | 20                             | 11                      | 1600              | 0.25     | 5                               | 3.0   |
| 1N5233B | 6.0                                     | 20                             | 9                       | 1600              | 0.25     | 5                               | 3.5   |
| 1N5234B | 6.2                                     | 20                             | 7                       | 1000              | 0.25     | 5                               | 4.0   |
| 1N5235B | 6.8                                     | 20                             | 5                       | 750               | 0.25     | 3                               | 5.0   |
| 1N5236B | 7.5                                     | 20                             | 6                       | 500               | 0.25     | 3                               | 6.0   |
| 1N5237B | 8.2                                     | 20                             | 8                       | 500               | 0.25     | 3                               | 6.0   |
| 1N5238B | 8.7                                     | 20                             | 9                       | 600               | 0.25     | 3                               | 6.5   |
| 1N5239B | 9.1                                     | 20                             | 10                      | 600               | 0.25     | 3                               | 6.5   |
| 1N5240B | 10                                      | 20                             | 17                      | 600               | 0.25     | 3                               | 8.0   |
| 1N5241B | 11                                      | 20                             | 22                      | 600               | 0.25     | 3                               | 8.4   |
| 1N5242B | 12                                      | 20                             | 30                      | 600               | 0.25     | 2                               | 9.1   |
| 1N5243B | 13                                      | 9.5                            | 13                      | 600               | 0.25     | 1                               | 9.9   |
| 1N5244B | 14                                      | 9.0                            | 14                      | 600               | 0.25     | 0.5                             | 10    |
| 1N5245B | 15                                      | 8.5                            | 16                      | 600               | 0.25     | 0.1                             | 11    |
| 1N5246B | 16                                      | 7.8                            | 17                      | 600               | 0.25     | 0.1                             | 12    |
| 1N5247B | 17                                      | 7.4                            | 19                      | 600               | 0.25     | 0.1                             | 13    |
| 1N5248B | 18                                      | 7.0                            | 21                      | 600               | 0.25     | 0.1                             | 14    |
| 1N5249B | 19                                      | 6.6                            | 23                      | 600               | 0.25     | 0.1                             | 14    |
| 1N5250B | 20                                      | 6.2                            | 25                      | 600               | 0.25     | 0.1                             | 15    |
| 1N5251B | 22                                      | 5.6                            | 29                      | 600               | 0.25     | 0.1                             | 17    |
| 1N5252B | 24                                      | 5.2                            | 33                      | 600               | 0.25     | 0.1                             | 18    |
| 1N5253B | 25                                      | 5.0                            | 36                      | 600               | 0.25     | 0.1                             | 19    |
| 1N5254B | 27                                      | 4.6                            | 41                      | 600               | 0.25     | 0.1                             | 21    |
| 1N5255B | 28                                      | 4.5                            | 44                      | 600               | 0.25     | 0.1                             | 21    |
| 1N5256B | 30                                      | 4.2                            | 49                      | 600               | 0.25     | 0.1                             | 23    |
| 1N5257B | 33                                      | 3.8                            | 58                      | 700               | 0.25     | 0.1                             | 25    |
| 1N5258B | 36                                      | 3.4                            | 70                      | 700               | 0.25     | 0.1                             | 27    |
| 1N5259B | 39                                      | 3.2                            | 80                      | 800               | 0.25     | 0.1                             | 30    |
| 1N5260B | 43                                      | 3.0                            | 93                      | 900               | 0.25     | 0.1                             | 33    |
| 1N5261B | 47                                      | 2.7                            | 150                     | 1000              | 0.25     | 0.1                             | 36    |

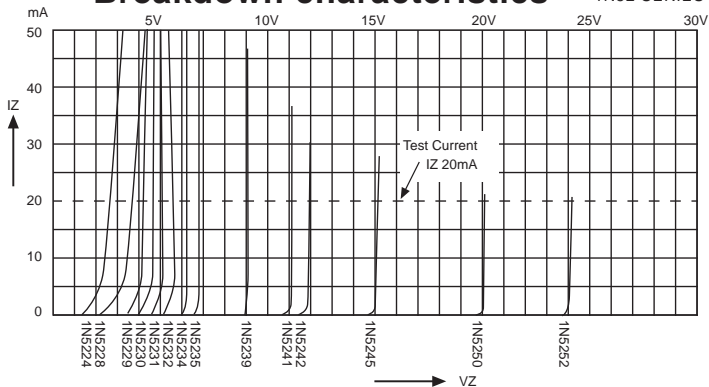
NOTE: Standard Zener Voltage Tolerance  $\pm 5\%$

changes in the power dissipation due to the ambient temperature.



## Breakdown characteristics

1N52 SERIES



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