



**FRONTIER
ELECTRONICS CO., LTD.**

500mW ZENER DIODE

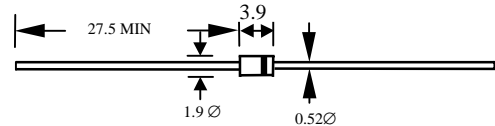
**1N5221B
THRU
1N5257B**

FEATURES

- LOW COST
- SMALL SIZE
- GLASS SEALED

MECHANICAL DATA

- CASE : GLASS CASE
- TERMINALS : AXIAL LEADS, SOLDERABLE PER MIL-STD -202, METHOD 208
- POLARITY : COLOR BAND DENOTES CATHODE
- MOUNTING POSITION : ANY
- WEIGHT : 0.13 GRAMS



DO-35
(GLASS CASE)

DIMENSIONS IN INCHES AND (MILLIMETERS)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS
 RATINGS AT 25°C AMBIENT TEMPERATURE UNLESS OTHERWISE SPECIFIED
 STORAGE AND OPERATING TEMPERATURE RANGE -55 TO + 175°C

ELECTRICAL CHARACTERISTICS (TA=25°C UNLESS OTHERWISE NOTED) VF=1.2V MAX, IF = 200mA FOR ALL TYPES

| JEDEC TYPE NO | NOMINAL ZENER VOLTAGE V _Z @ I _{ZT} * | TEST CURRENT I _{ZT} | MAXIMUM ZENER IMPEDANCE | | TYPICAL TEMPERATURE COEFFICIENT | MAXIMUM REVERSE LEAKAGE CURRENT | | MAXIMUM REGULATOR CURRENT I _{ZM} |
|---------------|--|------------------------------|-----------------------------------|--|---------------------------------|---------------------------------|-----------------------|---|
| | | | Z _{ZT} @ I _{ZT} | Z _{ZK} AT I _{ZK} =0.25mA | | IR | TEST VOLTAGE SUFFIX B | |
| | VOLTS | mA | OHMS | OHMS | % / °C | µA | VOLTAGE | mA |
| 1N5221B | 2.4 | 20 | 30 | 1200 | -0.085 | 100 | 1.0 | 191 |
| 1N5222B | 2.5 | 20 | 30 | 1250 | -0.085 | 100 | 1.0 | 182 |
| 1N5223B | 2.7 | 20 | 30 | 1300 | -0.080 | 75 | 1.0 | 168 |
| 1N5224B | 2.8 | 20 | 30 | 1400 | -0.080 | 75 | 1.0 | 162 |
| 1N5225B | 3.0 | 20 | 29 | 1600 | -0.075 | 50 | 1.0 | 151 |
| 1N5226B | 3.3 | 20 | 28 | 1600 | -0.070 | 25 | 1.0 | 138 |
| 1N5227B | 3.6 | 20 | 24 | 1700 | -0.065 | 15 | 1.0 | 126 |
| 1N5228B | 3.9 | 20 | 23 | 1900 | -0.060 | 10 | 1.0 | 115 |
| 1N5229B | 4.3 | 20 | 22 | 2000 | +0.055 | 5 | 1.0 | 106 |
| 1N5230B | 4.7 | 20 | 19 | 1900 | ±0.030 | 5 | 2.0 | 97 |
| 1N5231B | 5.1 | 20 | 17 | 1600 | ±0.030 | 5 | 2.0 | 89 |
| 1N5232B | 5.6 | 20 | 11 | 1600 | +0.038 | 5 | 3.0 | 81 |
| 1N5233B | 6.0 | 20 | 7 | 1600 | +0.038 | 5 | 3.5 | 76 |
| 1N5234B | 6.2 | 20 | 7 | 1000 | +0.045 | 5 | 4.0 | 73 |
| 1N5235B | 6.8 | 20 | 5 | 750 | +0.050 | 3 | 5.0 | 67 |
| 1N5236B | 7.5 | 20 | 6 | 500 | +0.058 | 3 | 6.0 | 61 |
| 1N5237B | 8.2 | 20 | 8 | 500 | +0.062 | 3 | 6.5 | 55 |
| 1N5238B | 8.7 | 20 | 8 | 600 | +0.065 | 3 | 6.5 | 52 |
| 1N5239B | 9.1 | 20 | 10 | 600 | +0.068 | 3 | 7.0 | 50 |
| 1N5240B | 10 | 20 | 17 | 600 | +0.075 | 3 | 8.0 | 45 |
| 1N5241B | 11 | 20 | 22 | 600 | +0.076 | 2 | 8.4 | 41 |
| 1N5242B | 12 | 20 | 30 | 600 | +0.077 | 1 | 9.1 | 38 |
| 1N5243B | 13 | 9.5 | 13 | 600 | +0.079 | 0.5 | 9.9 | 35 |
| 1N5244B | 14 | 9.0 | 15 | 600 | +0.082 | 0.1 | 10 | 32 |
| 1N5245B | 15 | 8.5 | 16 | 600 | +0.082 | 0.1 | 11 | 30 |
| 1N5246B | 16 | 7.8 | 17 | 600 | +0.083 | 0.1 | 12 | 28 |
| 1N5247B | 17 | 7.4 | 19 | 600 | +0.084 | 0.1 | 13 | 27 |
| 1N5248B | 18 | 7.0 | 21 | 600 | +0.085 | 0.1 | 14 | 25 |
| 1N5249B | 19 | 6.6 | 23 | 600 | +0.086 | 0.1 | 14 | 24 |
| 1N5250B | 20 | 6.2 | 25 | 600 | +0.086 | 0.1 | 15 | 23 |
| 1N5251B | 22 | 5.6 | 29 | 600 | +0.087 | 0.1 | 17 | 21.2 |
| 1N5252B | 24 | 5.2 | 33 | 600 | +0.087 | 0.1 | 18 | 19.1 |
| 1N5253B | 25 | 5.0 | 35 | 600 | +0.089 | 0.1 | 19 | 18.2 |
| 1N5254B | 27 | 4.6 | 41 | 600 | +0.090 | 0.1 | 21 | 16.8 |
| 1N5255B | 28 | 4.5 | 44 | 600 | +0.091 | 0.1 | 21 | 16.2 |
| 1N5256B | 30 | 4.2 | 49 | 600 | +0.091 | 0.1 | 23 | 15.1 |
| 1N5257B | 33 | 3.8 | 58 | 700 | +0.092 | 0.1 | 25 | 13.8 |

NOTE: SUFFIX "B" FOR ±5% ★MEASURD WITH PULSE T_P=40ms

RATINGS AND CHARACTERISTIC CURVES 1N5221B THRU 1N5257B

FIG.1- BREAKDOWN CHARACTERISTICS

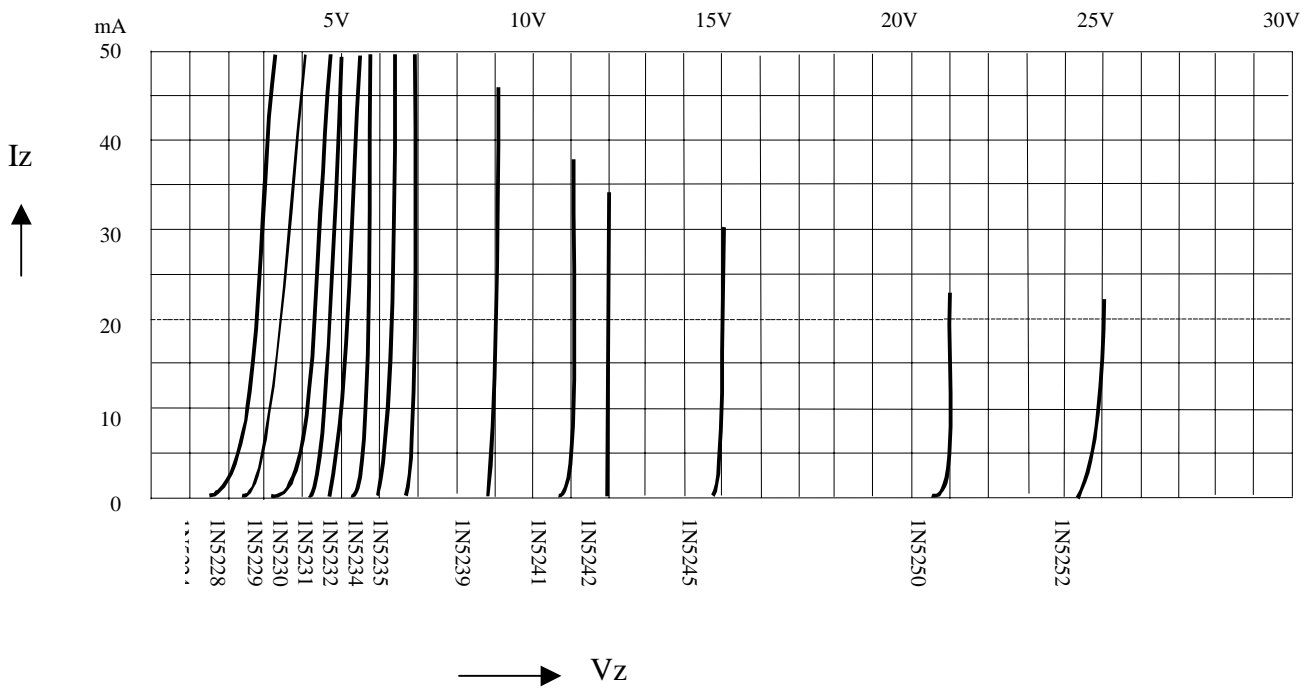


FIG.2- POWER ,TEMPERATURE DERATING CURVE

