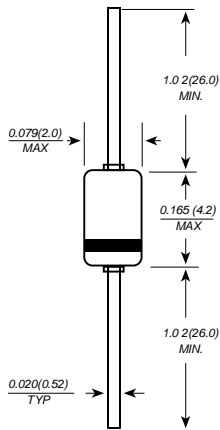


Data Sheet 2593 Rev. -

1N52-SERIES
ZENER DIODES

Zener Voltage :2.4-56V Peak Pulse Power :500mW

DO-35(GLASS)



Dimensions in inches and (millimeters)

FEATURE

- ◆ Low zener impedance
- ◆ Low regulation factor
- ◆ Glass passivated junction
- ◆ High temperature soldering guaranteed:
260°C/10S/9.5mm lead length at 5 lbs tension

MECHANICAL DATA

Case: JEDEC DO-35(GLASS) molded glass body

Terminals: Plated axial leads, solderable per MIL-STD 750, method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.05 ounce,0.14 grams

Datasheet Directory

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| | SYMBOLS | VALUE | UNITS |
|---|------------------|--------------|-------|
| Zener Current see Table Characteristics | | | |
| Power Dissipation at Tamb=25°C(Note 1) | P _{tot} | 500 | mW |
| Junction Temperature | T _j | 200 | °C |
| Storage Temperature Range | T _{STG} | -65 to + 200 | °C |
| Thermal resistance junction ambient(Note 1) | R _{θJA} | 0.3 | K/mW |
| Forward voltage at I _F =200mA | V _F | 1.1 | V |

Note 1: Valid provided that leads at a distance of 10mm from case are kept at ambient temperature

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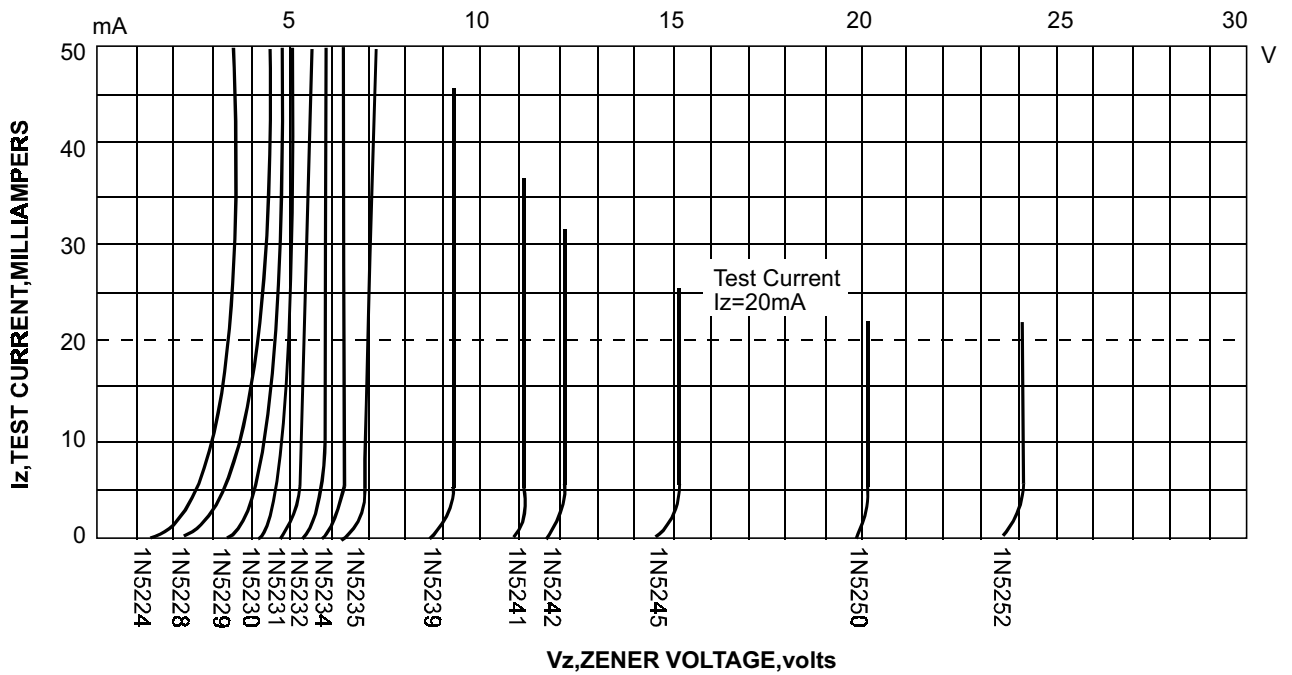
ELECTRICAL CHARACTERISTICS (at TA=25°C unless otherwise noted)

| Device Type | Nominal Zener Voltage Vz@IzT (Volts) | Test Current IzT (mA) | Maximum Zener Impedance | | Maximum Reverse Leakage Current | | Typical Temperature Coefficient (%/°C) | Maximum Regulator Current IzM (mA) |
|-------------|--------------------------------------|-----------------------|-------------------------|----------------|---------------------------------|-------|--|------------------------------------|
| | | | ZzT@IzT | Zzk@Izk=0.25mA | IR | @VR | | |
| | | | Ohms | Ohms | μA | Volts | | |
| 1N5221B | 2.4 | 20 | 30 | 1200 | 100 | 1.0 | -0.085 | 191 |
| 1N5222B | 2.5 | 20 | 30 | 1250 | 100 | 1.0 | -0.085 | 182 |
| 1N5223B | 2.7 | 20 | 30 | 1300 | 75 | 1.0 | -0.080 | 168 |
| 1N5224B | 2.8 | 20 | 30 | 1400 | 75 | 1.0 | -0.080 | 162 |
| 1N5225B | 3.0 | 20 | 29 | 1600 | 50 | 1.0 | -0.075 | 151 |
| 1N5226B | 3.3 | 20 | 28 | 1600 | 25 | 1.0 | -0.070 | 138 |
| 1N5227B | 3.6 | 20 | 24 | 1700 | 15 | 1.0 | -0.065 | 126 |
| 1N5228B | 3.9 | 20 | 23 | 1900 | 10 | 1.0 | -0.060 | 115 |
| 1N5229B | 4.3 | 20 | 22 | 2000 | 5.0 | 1.0 | ±0.055 | 106 |
| 1N5230B | 4.7 | 20 | 19 | 1900 | 5.0 | 2.0 | ±0.030 | 97 |
| 1N5231B | 5.1 | 20 | 17 | 1600 | 5.0 | 2.0 | ±0.030 | 89 |
| 1N5232B | 5.6 | 20 | 11 | 1600 | 5.0 | 3.0 | +0.038 | 81 |
| 1N5233B | 6.0 | 20 | 7 | 1600 | 5.0 | 3.5 | +0.038 | 76 |
| 1N5234B | 6.2 | 20 | 7 | 1000 | 5.0 | 4.0 | +0.045 | 73 |
| 1N5235B | 6.8 | 20 | 5 | 750 | 3.0 | 5.0 | +0.050 | 67 |
| 1N5236B | 7.5 | 20 | 6 | 500 | 3.0 | 6.0 | +0.058 | 61 |
| 1N5237B | 8.2 | 20 | 8 | 500 | 3.0 | 6.5 | +0.062 | 55 |
| 1N5238B | 8.7 | 20 | 8 | 600 | 3.0 | 6.5 | +0.065 | 52 |
| 1N5239B | 9.1 | 20 | 10 | 600 | 3.0 | 7.0 | +0.068 | 50 |
| 1N5240B | 10 | 20 | 17 | 600 | 3.0 | 8.0 | +0.075 | 45 |
| 1N5241B | 11 | 20 | 22 | 600 | 2.0 | 8.4 | +0.076 | 41 |
| 1N5242B | 12 | 20 | 30 | 600 | 1.0 | 9.1 | +0.077 | 38 |
| 1N5243B | 13 | 9.5 | 13 | 600 | 0.5 | 9.9 | +0.079 | 35 |
| 1N5244B | 14 | 9.0 | 15 | 600 | 0.1 | 10 | +0.082 | 32 |
| 1N5245B | 15 | 8.5 | 16 | 600 | 0.1 | 11 | +0.082 | 30 |
| 1N5246B | 16 | 7.8 | 17 | 600 | 0.1 | 12 | +0.083 | 28 |
| 1N5247B | 17 | 7.4 | 19 | 600 | 0.1 | 13 | +0.084 | 27 |
| 1N5248B | 18 | 7.0 | 21 | 600 | 0.1 | 14 | +0.085 | 25 |
| 1N5249B | 19 | 6.6 | 23 | 600 | 0.1 | 14 | +0.085 | 24 |
| 1N5250B | 20 | 6.2 | 25 | 600 | 0.1 | 15 | +0.086 | 23 |
| 1N5251B | 22 | 5.6 | 29 | 600 | 0.1 | 17 | +0.087 | 21.2 |
| 1N5252B | 24 | 5.2 | 33 | 600 | 0.1 | 18 | +0.088 | 19.1 |
| 1N5253B | 25 | 5.0 | 35 | 600 | 0.1 | 19 | +0.089 | 18.2 |
| 1N5254B | 27 | 4.6 | 41 | 600 | 0.1 | 21 | +0.090 | 16.8 |
| 1N5255B | 28 | 4.5 | 44 | 600 | 0.1 | 21 | +0.091 | 16.2 |
| 1N5256B | 30 | 4.2 | 49 | 600 | 0.1 | 23 | +0.091 | 15.1 |
| 1N5257B | 33 | 3.8 | 58 | 700 | 0.1 | 25 | +0.092 | 13.8 |
| 1N5258B | 36 | 3.4 | 70 | 700 | 0.1 | 27 | +0.093 | 12.6 |
| 1N5259B | 39 | 3.2 | 80 | 800 | 0.1 | 30 | +0.094 | 11.5 |
| 1N5260B | 43 | 3.0 | 93 | 900 | 0.1 | 33 | +0.095 | 10.6 |
| 1N5261B | 47 | 2.7 | 150 | 1000 | 0.1 | 36 | +0.095 | 9.7 |
| 1N5262B | 51 | 2.5 | 125 | 1100 | 0.1 | 39 | +0.096 | 8.9 |
| 1N5263B | 56 | 2.2 | 150 | 1300 | 0.1 | 43 | +0.096 | 8.1 |

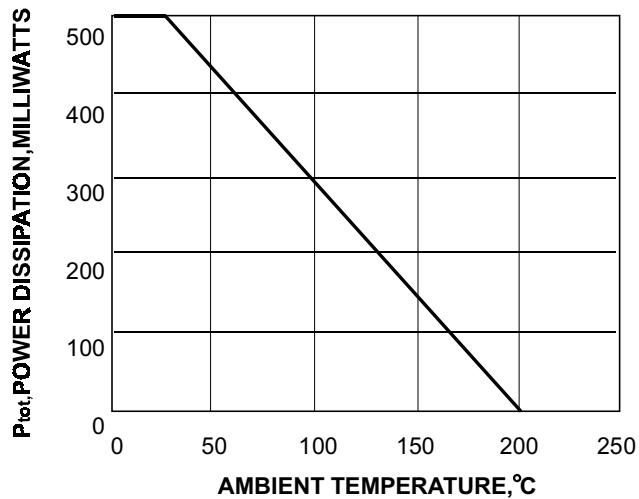
Note 1: Suffix "B" indicate ±5% tolerance

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RATINGS AND CHARACTERISTIC CURVES 1N52 SERIES
Breakdown characteristics



Admissible power dissipation versus ambient temperature
 Valid provided that leads are kept at ambient temperature at a distance of 10mm from case



TECHNICAL DATA

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