



Micro Commercial Components
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**1N5221B
 THRU
 1N5267B**

Features

- Wide Voltage Range Available
- Glass Package
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Marking : Cathode band and type number
- Lead Free Finish/Rohs Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)
- Moisture Sensitivity: Level 1

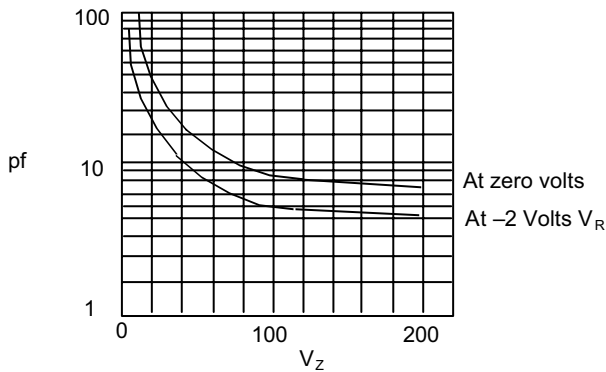
Maximum Ratings

- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- 500 mWatt DC Power Dissipation
- Power Derating: 4.0mW/°C above 50°C
- Forward Voltage @ 200mA: 1.1 Volts

**500 mW
 Zener Diode
 2.4 to 75 Volts**

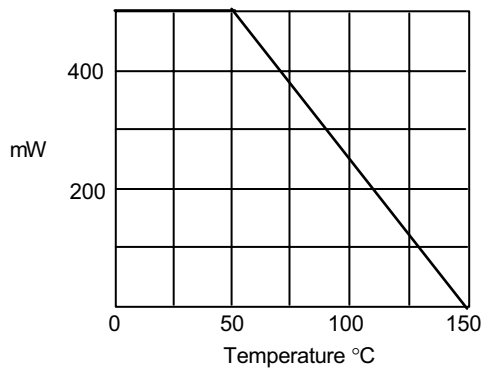
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Figure 1 - Typical Capacitance

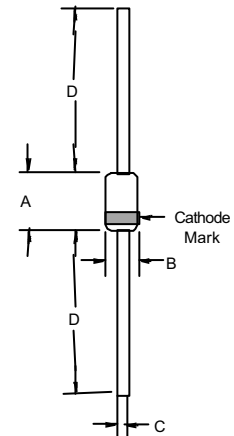


Typical Capacitance (pf) – versus – Zener voltage (V_Z)

Figure 2 - Derating Curve



Power Dissipation (mW) - Versus - Temperature °C



| DIMENSIONS | | | | | |
|------------|--------|------|-------|------|------|
| DIM | INCHES | | MM | | NOTE |
| | MIN | MAX | MIN | MAX | |
| A | --- | .166 | --- | 4.2 | |
| B | --- | .079 | --- | 2.00 | |
| C | --- | .020 | --- | .52 | |
| D | 1.000 | --- | 25.40 | --- | |

Note: 1. Lead in Glass Exemption Applied, see EU Directive Annex 7(C)-I.

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ELECTRICAL CHARACTERISTICS @25°C

| MCC PART NUMBER | NOMINAL ZENER VOLTAGE V_Z @ I_{ZT} VOLTS | TEST CURRENT I_{ZT} mA | MAXIMUM ZENER IMPEDANCE 'B' SUFFIX ONLY | | MAXIMUM REVERSE LEAKAGE CURRENT I_R @ V_R | | MAX. ZENER VOLTAGE TEMP COEFFICIENT 'B' SUFFIX ONLY % / °C |
|-----------------|---|-----------------------------|--|------------------------------|--|-------|---|
| | | | Z_{ZT} @ I_{ZT} | Z_{ZK} @ $I_{ZK} = 0.25mA$ | μA | VOLTS | |
| | | | OHMS | OHMS | | | |
| 1N5221B | 2.4 | 20 | 30 | 1200 | 100 | 1.0 | -0.085 |
| 1N5222B | 2.5 | 20 | 30 | 1250 | 100 | 1.0 | -0.085 |
| 1N5223B | 2.7 | 20 | 30 | 1300 | 75 | 1.0 | -0.080 |
| 1N5224B | 2.8 | 20 | 30 | 1400 | 75 | 1.0 | -0.080 |
| 1N5225B | 3.0 | 20 | 29 | 1600 | 50 | 1.0 | -0.075 |
| 1N5226B | 3.3 | 20 | 28 | 1600 | 25 | 1.0 | -0.070 |
| 1N5227B | 3.6 | 20 | 24 | 1700 | 15 | 1.0 | -0.065 |
| 1N5228B | 3.9 | 20 | 23 | 1900 | 10 | 1.0 | -0.060 |
| 1N5229B | 4.3 | 20 | 22 | 2000 | 5.0 | 1.0 | ± 0.055 |
| 1N5230B | 4.7 | 20 | 19 | 1900 | 5.0 | 2.0 | ± 0.030 |
| 1N5231B | 5.1 | 20 | 17 | 1600 | 5.0 | 2.0 | ± 0.030 |
| 1N5232B | 5.6 | 20 | 11 | 1600 | 5.0 | 3.0 | +0.038 |
| 1N5233B | 6.0 | 20 | 7.0 | 1600 | 5.0 | 3.5 | +0.038 |
| 1N5234B | 6.2 | 20 | 7.0 | 1000 | 5.0 | 4.0 | +0.045 |
| 1N5235B | 6.8 | 20 | 5.0 | 750 | 3.0 | 5.0 | +0.050 |
| 1N5236B | 7.5 | 20 | 6.0 | 500 | 3.0 | 6.0 | +0.058 |
| 1N5237B | 8.2 | 20 | 8.0 | 500 | 3.0 | 6.5 | +0.062 |
| 1N5238B | 8.7 | 20 | 8.0 | 600 | 3.0 | 6.5 | +0.065 |
| 1N5239B | 9.1 | 20 | 10 | 600 | 3.0 | 7.0 | +0.068 |
| 1N5240B | 10 | 20 | 17 | 600 | 3.0 | 8.0 | +0.075 |
| 1N5241B | 11 | 20 | 22 | 600 | 2.0 | 8.4 | +0.076 |
| 1N5242B | 12 | 20 | 30 | 600 | 1.0 | 9.1 | +0.077 |
| 1N5243B | 13 | 9.5 | 13 | 600 | 0.5 | 9.9 | +0.079 |
| 1N5244B | 14 | 9.0 | 15 | 600 | 0.1 | 10 | +0.082 |
| 1N5245B | 15 | 8.5 | 16 | 600 | 0.1 | 11 | +0.082 |
| 1N5246B | 16 | 7.8 | 17 | 600 | 0.1 | 12 | +0.083 |
| 1N5247B | 17 | 7.4 | 19 | 600 | 0.1 | 13 | +0.084 |
| 1N5248B | 18 | 7.0 | 21 | 600 | 0.1 | 14 | +0.085 |
| 1N5249B | 19 | 6.6 | 23 | 600 | 0.1 | 14 | +0.086 |
| 1N5250B | 20 | 6.2 | 25 | 600 | 0.1 | 15 | +0.086 |
| 1N5251B | 22 | 5.6 | 29 | 600 | 0.1 | 17 | +0.087 |
| 1N5252B | 24 | 5.2 | 33 | 600 | 0.1 | 18 | +0.088 |
| 1N5253B | 25 | 5.0 | 35 | 600 | 0.1 | 19 | +0.089 |
| 1N5254B | 27 | 4.6 | 41 | 600 | 0.1 | 21 | +0.090 |
| 1N5255B | 28 | 4.5 | 44 | 600 | 0.1 | 21 | +0.091 |
| 1N5256B | 30 | 4.2 | 49 | 600 | 0.1 | 23 | +0.091 |
| 1N5257B | 33 | 3.8 | 58 | 700 | 0.1 | 25 | +0.092 |
| 1N5258B | 36 | 3.4 | 70 | 700 | 0.1 | 27 | +0.093 |
| 1N5259B | 39 | 3.2 | 80 | 800 | 0.1 | 30 | +0.094 |
| 1N5260B | 43 | 3.0 | 93 | 900 | 0.1 | 33 | +0.095 |
| 1N5261B | 47 | 2.7 | 105 | 1000 | 0.1 | 36 | +0.095 |
| 1N5262B | 51 | 2.5 | 125 | 1100 | 0.1 | 39 | +0.096 |
| 1N5263B | 56 | 2.2 | 150 | 1300 | 0.1 | 43 | +0.096 |
| 1N5264B | 60 | 2.1 | 170 | 1400 | 0.1 | 46 | +0.097 |
| 1N5265B | 62 | 2.0 | 185 | 1400 | 0.1 | 47 | +0.097 |
| 1N5266B | 68 | 1.8 | 230 | 1600 | 0.1 | 52 | +0.097 |
| 1N5267B | 75 | 1.7 | 270 | 1700 | 0.1 | 56 | +0.098 |

NOTE 1: suffix "B" = 5% tolerance on nominal Zener voltage, suffix "C" signifies 2%.

NOTE 2: The electrical characteristics are measured after allowing the device to stabilize for 20 seconds.

NOTE 3: Temperature coefficient (α_{VZ}). Test conditions for temperature coefficient are as follows:

- $I_{ZT} = 7.5mA$, $T_1 = 25^\circ C$, $T_2 = 125^\circ C$ (1N5221 thru 1N5242)
- $I_{ZT} = \text{Rated } I_{ZT}$, $T_1 = 25^\circ C$, $T_2 = 125^\circ C$ (1N5243 thru 1N5267)

Device to be temperature stabilized with current applied prior to reading breakdown voltage at the specified ambient temperature.

1N5221B thru 1N5267B

Figure 1
Zener Voltage versus Zener Current – $V_z = 1$ thru 16 Volts

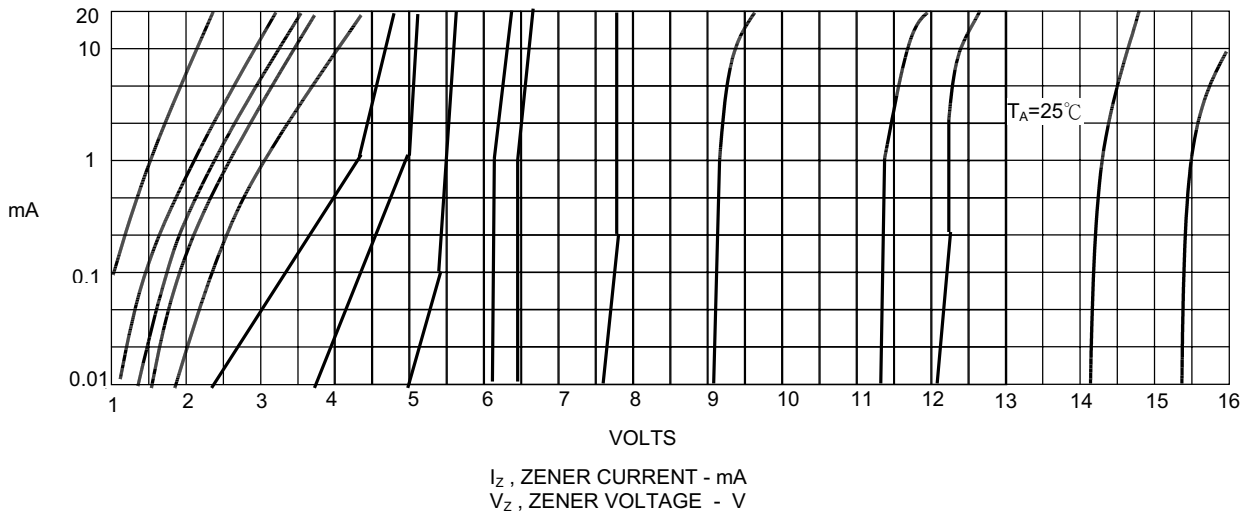
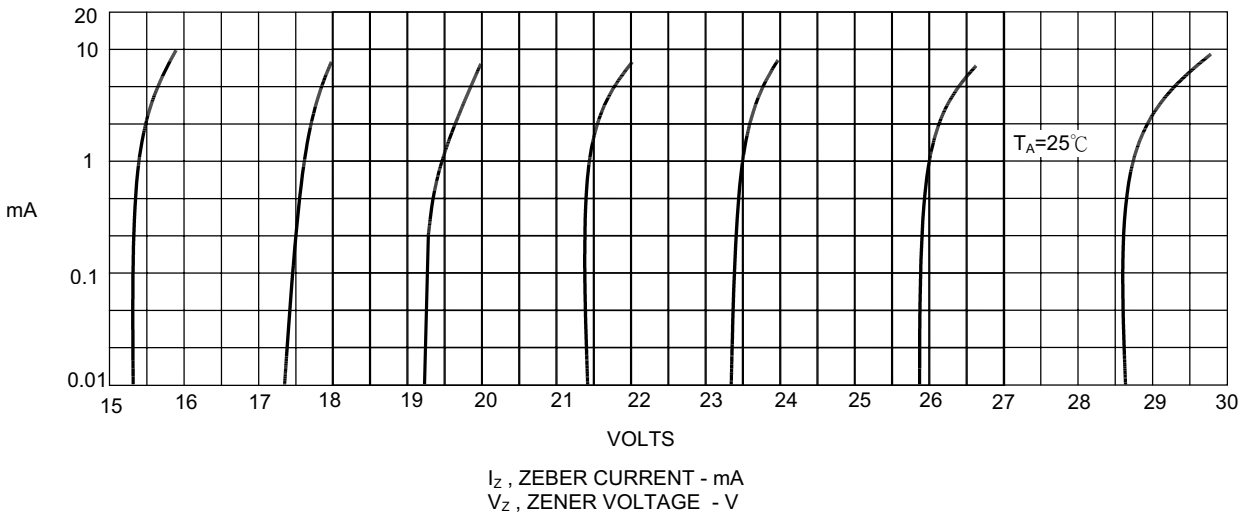


Figure 2
Zener Voltage versus Zener Current – $V_z = 15$ thru 30 Volts



1N5221B thru 1N5267B

Figure 3
Zener Voltage versus Zener Current – $V_z = 30$ thru 75 Volts

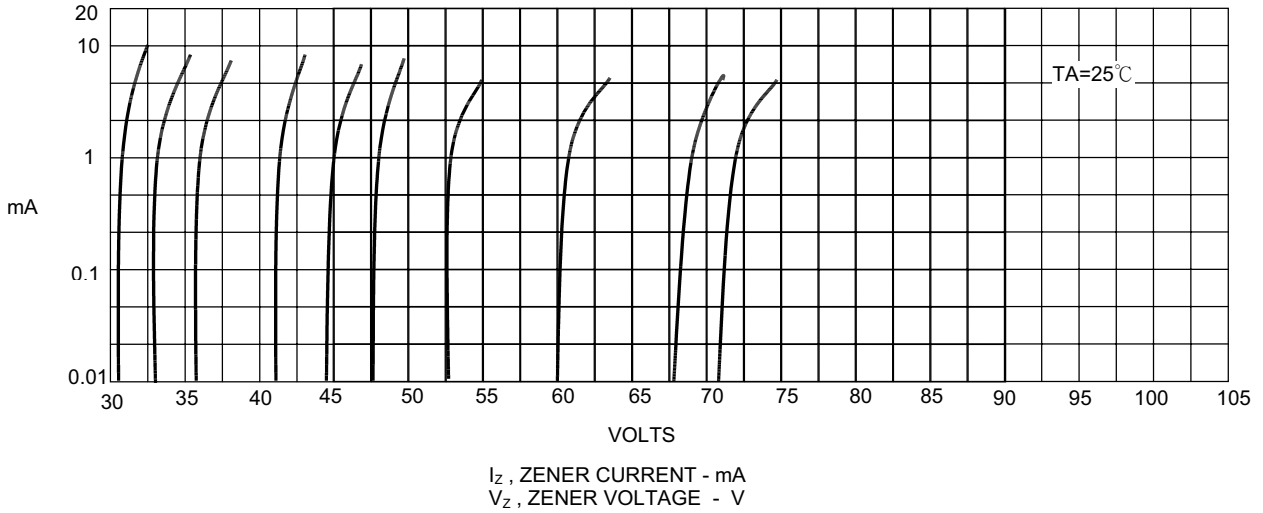
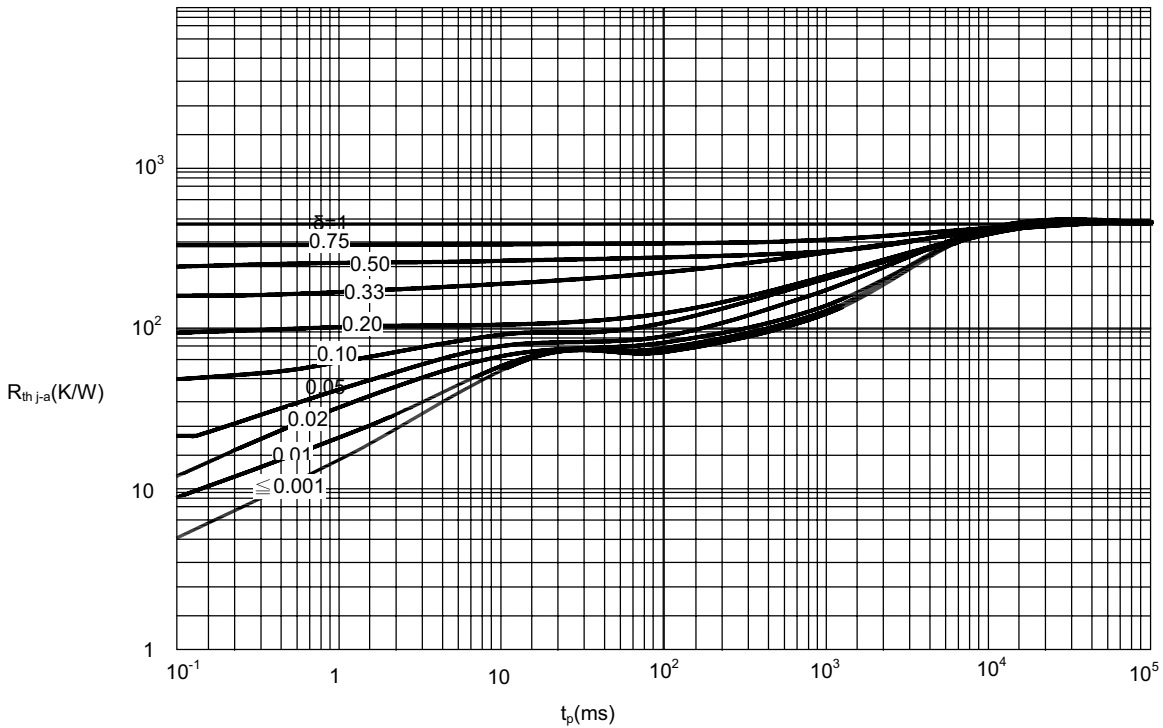


Figure 4
Thermal resistance from junction to ambient as a function of pulse duration





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Ordering Information :

| Device | Packing |
|----------------|------------------------------|
| Part Number-TP | Tape&Reel: 10Kpcs/Reel |
| Part Number-AP | Ammo Packing: 5Kpcs/Ammo Box |
| Part Number-BP | Bulk: 100Kpcs/Carton |

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