



Micro Commercial Components

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# 1N5913B THRU 1N5942B

## Features

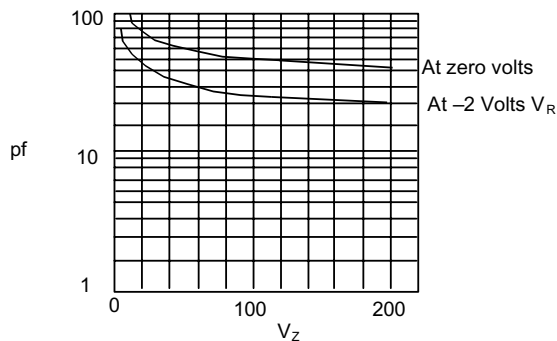
- Wide Voltage Range Available
- Glass Package
- High Temp Soldering: 260°C for 10 Seconds At Terminals
- Marking : Cathode band and type number
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix designates Compliant. See ordering information)

## 1.5 Watt Zener Diode 3.3 to 51 Volts

## Maximum Ratings

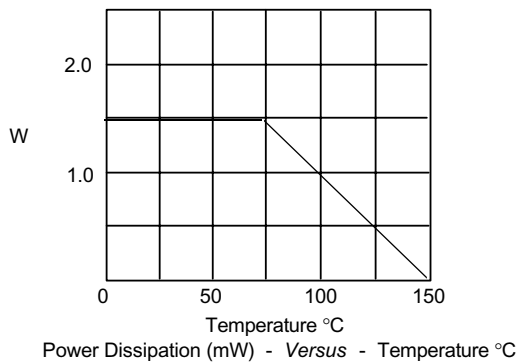
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- 1.5 Watt DC Power Dissipation
- Power Derating: 12 mW/°C above 75°C
- Forward Voltage @ 200mA: 1.2 Volts

Figure 1 - Typical Capacitance



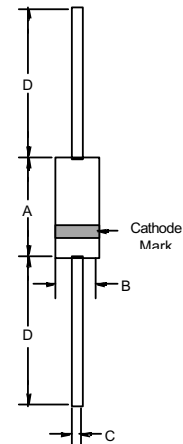
Typical Capacitance (pf) – versus – Zener voltage ( $V_z$ )

Figure 2 - Derating Curve



Power Dissipation (mW) - Versus - Temperature °C

## DO-41G



| DIM | INCHES |      | MM    |      | NOTE |
|-----|--------|------|-------|------|------|
|     | MIN    | MAX  | MIN   | MAX  |      |
| A   | .166   | .205 | 4.10  | 5.20 |      |
| B   | .080   | .107 | 2.00  | 2.70 |      |
| C   | .028   | .034 | .70   | .90  |      |
| D   | 1.000  | ---  | 25.40 | ---  |      |

Note: 1. Lead in Glass Solder Exemption Applied, see EU Directive Annex 5.

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# 1N5913B thru 1N5942B



## ELECTRICAL CHARACTERISTICS @25°C

| MCC PART NUMBER | ZENER VOLTAGE $V_Z$ | TEST CURRENT $I_{ZT}$ | MAXIMUM DYNAMIC IMPEDANCE $Z_{ZT}$ @ $I_{ZT}$ | KNEE CURRENT $I_{ZK}$ | KNEE IMPEDANCE $Z_{ZK}$ | MAXIMUM REVERSE CURRENT $I_R$ | REVERSE VOLTAGE $V_R$ | MAXIMUM DC CURRENT $I_{ZM}$ |
|-----------------|---------------------|-----------------------|---|-----------------------|-------------------------|-------------------------------|-----------------------|-----------------------------|
|                 | VOLTS               | mA                    | OHMS  | mA                    | OHMS                    | $\mu$ A                       | VOLTS                 | mA                          |
| 1N5913B         | 3.3                 | 113.6                 | 10  | 1.0                   | 500                     | 100                           | 1.0                   | 454                         |
| 1N5914B         | 3.6                 | 104.2                 | 9.0   | 1.0                   | 500                     | 75                            | 1.0                   | 416                         |
| 1N5915B         | 3.9                 | 96.1                  | 7.5   | 1.0                   | 500                     | 25                            | 1.0                   | 384                         |
| 1N5916B         | 4.3                 | 87.2                  | 6.0   | 1.0                   | 500                     | 5.0                           | 1.0                   | 348                         |
| 1N5917B         | 4.7                 | 79.8                  | 5.0   | 1.0                   | 500                     | 5.0                           | 1.5                   | 319                         |
| 1N5918B         | 5.1                 | 73.5                  | 4.0   | 1.0                   | 350                     | 5.0                           | 2.0                   | 294                         |
| 1N5919B         | 5.6                 | 66.9                  | 2.0   | 1.0                   | 250                     | 5.0                           | 3.0                   | 267                         |
| 1N5920B         | 6.2                 | 60.5                  | 2.0   | 1.0                   | 200                     | 5.0                           | 4.0                   | 241                         |
| 1N5921B         | 6.8                 | 55.1                  | 2.5   | 1.0                   | 200                     | 5.0                           | 5.2                   | 220                         |
| 1N5922B         | 7.5                 | 50                    | 3.0   | 0.5                   | 400                     | 5.0                           | 6.0                   | 200                         |
| 1N5923B         | 8.2                 | 45.7                  | 3.5   | 0.5                   | 400                     | 5.0                           | 6.5                   | 182                         |
| 1N5924B         | 9.1                 | 41.2                  | 4.0   | 0.5                   | 500                     | 5.0                           | 7.0                   | 164                         |
| 1N5925B         | 10                  | 37.5                  | 4.5   | 0.25                  | 500                     | 5.0                           | 8.0                   | 150                         |
| 1N5926B         | 11                  | 34.1                  | 5.5   | 0.25                  | 550                     | 1.0                           | 8.4                   | 125                         |
| 1N5927B         | 12                  | 31.2                  | 6.5   | 0.25                  | 550                     | 1.0                           | 9.1                   | 125                         |
| 1N5928B         | 13                  | 28.8                  | 7.0   | 0.25                  | 550                     | 1.0                           | 9.9                   | 115                         |
| 1N5929B         | 15                  | 25                    | 9.0   | 0.25                  | 600                     | 1.0                           | 11.4                  | 100                         |
| 1N5930B         | 16                  | 23.4                  | 10  | 0.25                  | 600                     | 1.0                           | 12.2                  | 93                          |
| 1N5931B         | 18                  | 20.8                  | 12  | 0.25                  | 650                     | 1.0                           | 13.7                  | 83                          |
| 1N5932B         | 20                  | 18.7                  | 14  | 0.25                  | 650                     | 1.0                           | 15.2                  | 75                          |
| 1N5933B         | 22                  | 17                    | 17.5  | 0.25                  | 650                     | 1.0                           | 16.7                  | 68                          |
| 1N5934B         | 24                  | 15.6                  | 19  | 0.25                  | 700                     | 1.0                           | 18.2                  | 62                          |
| 1N5935B         | 27                  | 13.9                  | 23  | 0.25                  | 700                     | 1.0                           | 20.6                  | 55                          |
| 1N5936B         | 30                  | 12.5                  | 28  | 0.25                  | 750                     | 1.0                           | 22.8                  | 50                          |
| 1N5937B         | 33                  | 11.4                  | 33  | 0.25                  | 800                     | 1.0                           | 25.1                  | 45                          |
| 1N5938B         | 36                  | 10.4                  | 38  | 0.25                  | 850                     | 1.0                           | 27.4                  | 41                          |
| 1N5939B         | 39                  | 9.6                   | 45  | 0.25                  | 900                     | 1.0                           | 29.7                  | 38                          |
| 1N5940B         | 43                  | 8.7                   | 53  | 0.25                  | 950                     | 1.0                           | 32.7                  | 34                          |
| 1N5941B         | 47                  | 8.0                   | 67  | 0.25                  | 1000                    | 1.0                           | 35.8                  | 31                          |
| 1N5942B         | 51                  | 7.3                   | 70  | 0.25                  | 1100                    | 1.0                           | 38.8                  | 29                          |

- Note**
- 1: No suffix indicates a 20% tolerance on nominal  $V_Z$ , Suffix A denotes a 10% tolerance, B denotes a 5% tolerance, C denotes a 2%.
  - 2: Zener voltage ( $V_Z$ ) measured at  $T_L = 30^\circ\text{C}$ . Voltage measurement to be performed 20 seconds after application of DC current.
  - 3: The Zener impedance is derived from the 60 Hz ac voltage, which results when an ac current having an rms value equal to 10% of the DC Zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed on  $I_{ZT}$  or  $I_{ZK}$ .



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## Ordering Information

| Device           | Packing                      |
|------------------|------------------------------|
| (Part Number)-TP | Tape&Reel; 5Kpcs/Reel        |
| (Part Number)-AP | Ammo Packing;2.5Kpcs/AmmoBox |
| (Part Number)-BP | Bulk;1Kpcs/Box               |

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