

# 1N5913B THRU 1N5942B

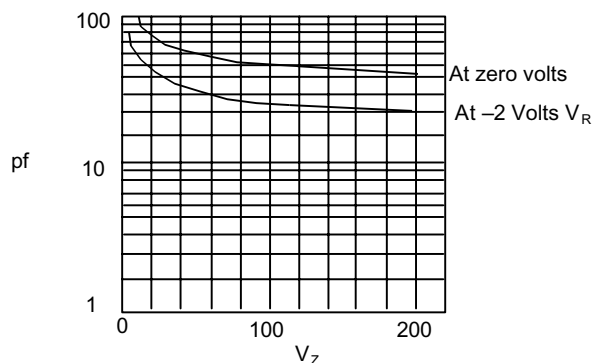
## Features

- 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)
- Moisture Sensitivity Level 1

## Maximum Ratings

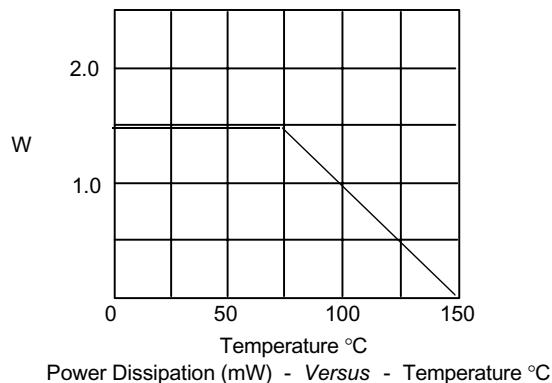
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- 1.5 Watt DC Power Dissipation
- Power Derating: 12 mW/°C above 75°C
- Forward Voltage @ 200mA: 1.2 Volts

Figure 1 - Typical Capacitance



Typical Capacitance (pf) – versus – Zener voltage (V<sub>Z</sub>)

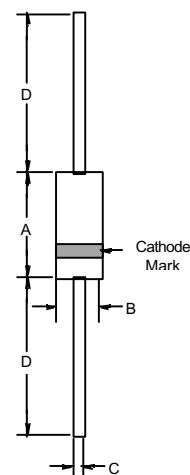
Figure 2 - Derating Curve



Power Dissipation (mW) - Versus - Temperature °C

## 1.5 Watt Zener Diode 3.3 to 51 Volts

### DO-41G



| DIMENSIONS |        |       |       |      |          |
|------------|--------|-------|-------|------|----------|
| DIM        | INCHES |       | MM    |      | NOTE     |
|            | MIN    | MAX   | MIN   | MAX  |          |
| A          | ----   | 0.177 | ----  | 4.50 |          |
| B          | ----   | 0.110 | ----  | 2.80 | Diameter |
| C          | 0.026  | 0.034 | 0.70  | 0.90 | Diameter |
| D          | 1.000  | ----  | 25.40 | ---- |          |

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

# 1N5913B thru 1N5942B

## ELECTRICAL CHARACTERISTICS @25°C

| MCC<br>PART<br>NUMBER | ZENER<br>VOLTAGE<br>$V_Z$ | TEST<br>CURRENT<br>$I_{ZT}$ | MAXIMUM<br>DYNAMIC<br>IMPEDANCE $Z_{ZT}$<br>@ $I_{ZT}$ | KNEE<br>CURRENT<br>$I_{ZK}$ | KNEE<br>IMPEDANCE $Z_{ZK}$ | MAXIMUM<br>REVERSE<br>CURRENT<br>$I_R$ | REVERSE<br>VOLTAGE<br>$V_R$ | MAXIMUM<br>DC CURRENT<br>$I_{ZM}$ |
|-----------------------|---------------------------|-----------------------------|--------------------------------------------------------|-----------------------------|----------------------------|----------------------------------------|-----------------------------|-----------------------------------|
|                       | 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: Suffix B indicates a 5% tolerance on nominal  $V_Z$ , Suffix C denotes a 2% tolerance.

2: Zener voltage( $V_Z$ ) measured at  $T_L = 30^\circ C$ . 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  $I_{ZK}$ .



Micro Commercial Components

## Ordering Information :

| Device         | Packing                        |
|----------------|--------------------------------|
| Part Number-TP | Tape&Reel: 5Kpcs/Reel          |
| Part Number-AP | Ammo Packing: 2.5Kpcs/Ammo Box |
| Part Number-BP | Bulk: 50Kpcs/Carton            |

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