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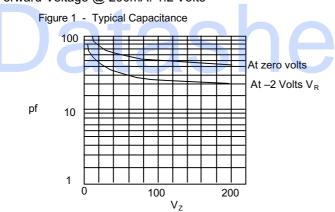
# 1N5913B THRU 1N5942B

## **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)
- Moisture Sensitivity Level 1

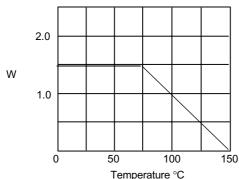
## **Maximum Ratings**

- 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



Typical Capacitance (pf) - versus - Zener voltage (Vz)

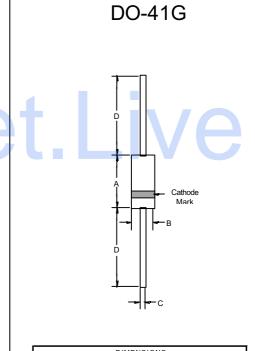
Figure 2 - Derating Curve



Power Dissipation (mW) - Versus - Temperature °C

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

# 1.5 Watt Zener Diode 3.3 to 51 Volts





## 1N5913B thru 1N5942B



### **ELECTRICAL CHARACTERISTICS @25°C**

| MCC<br>PART<br>NUMBER | ZENER<br>VOLTAGE<br>V <sub>Z</sub> | TEST<br>CURRENT<br>I <sub>ZT</sub> | MAXIMUM<br>DYNAMIC<br>IMPEDANCE Z <sub>ZT</sub><br>@ I <sub>ZT</sub> | KNEE<br>CURRENT<br>I <sub>ZK</sub> | KNEE<br>IMPEDANCE Z <sub>ZK</sub> | MAXIMUM<br>REVERSE<br>CURRENT<br>I <sub>R</sub> | REVERSE<br>VOLTAGE<br>V <sub>R</sub> | MAXIMUM<br>DC CURRENT<br>I <sub>ZM</sub> |
|-----------------------|------------------------------------|------------------------------------|--|------------------------------------|-----------------------------------|---|--------------------------------------|--|
|                       | VOLTS                              | mA                                 | OHMS   | mA                                 | OHMS                              | μΑ  | 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<sub>Z</sub>, Suffix A denotes a 10% tolerance, B denotes a 5% tolerance, C denotes a 2%.

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