**1N5913B THRU 1N5956B**

**SILICON ZENER DIODE**
**1.5 WATT, 3.3 THRU 200 VOLTS**



**DO-41 CASE**

Central Semiconductor Corp.

www.centralsemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR 1N5913B series silicon Zener diode is a high quality voltage regulator designed for use in automotive, industrial, commercial, entertainment and computer applications.

**MARKING: FULL PART NUMBER**

| **MAXIMUM RATINGS:** | **SYMBOL** | | **UNITS** |
|---|---|---|---|
| Power Dissipation ($T_L$=75°C) | $P_D$ | 1.5 | W |
| Operating and Storage Temperature | $T_J$, $T_{stg}$ | -65 to +200 | °C |
| $V_Z$ Tolerance: Part number with “B” suffix | | ±5 | % |
| $V_Z$ Tolerance: Part number with “C” suffix | | ±2 | % |
| $V_Z$ Tolerance: Part number with “D” suffix | | ±1 | % |

**ELECTRICAL CHARACTERISTICS:** ($T_L$=30°C) $V_F$=1.5V MAX @ $I_F$=200mA (for all types)

| TYPE | ZENER VOLTAGE $V_Z$ @ $I_{ZT}$ | | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM DC CURRENT |
|---|---|---|---|---|---|---|---|---|---|---|
| | MIN | NOM | MAX | $I_{ZT}$ | $Z_{ZT}$ @ $I_{ZT}$ | $Z_{ZK}$ @ $I_{ZK}$ | | $I_R$ @ $V_R$ | | $I_{ZM}$ |
| | V | V | V | mA | Ω | Ω | mA | μA | V | mA |
| 1N5913B | 3.135 | 3.3 | 3.465 | 113.6 | 10 | 500 | 1.0 | 100 | 1.0 | 454 |
| 1N5914B | 3.420 | 3.6 | 3.780 | 104.2 | 9.0 | 500 | 1.0 | 75 | 1.0 | 416 |
| 1N5915B | 3.705 | 3.9 | 4.095 | 96.1 | 7.5 | 500 | 1.0 | 25 | 1.0 | 384 |
| 1N5916B | 4.085 | 4.3 | 4.515 | 87.2 | 6.0 | 500 | 1.0 | 5.0 | 1.0 | 348 |
| 1N5917B | 4.465 | 4.7 | 4.935 | 79.8 | 5.0 | 500 | 1.0 | 5.0 | 1.5 | 319 |
| 1N5918B | 4.845 | 5.1 | 5.355 | 73.5 | 4.0 | 350 | 1.0 | 5.0 | 2.0 | 294 |
| 1N5919B | 5.320 | 5.6 | 5.880 | 66.9 | 2.0 | 250 | 1.0 | 5.0 | 3.0 | 267 |
| 1N5920B | 5.890 | 6.2 | 6.510 | 60.5 | 2.0 | 200 | 1.0 | 5.0 | 4.0 | 241 |
| 1N5921B | 6.460 | 6.8 | 7.140 | 55.1 | 3.0 | 200 | 1.0 | 5.0 | 5.2 | 220 |
| 1N5922B | 7.130 | 7.5 | 7.880 | 50 | 3.0 | 400 | 0.5 | 5.0 | 6.0 | 200 |
| 1N5923B | 7.790 | 8.2 | 8.610 | 45.7 | 4.0 | 400 | 0.5 | 5.0 | 6.5 | 182 |
| 1N5924B | 8.650 | 9.1 | 9.560 | 41.2 | 4.0 | 500 | 0.5 | 5.0 | 7.0 | 164 |
| 1N5925B | 9.500 | 10 | 10.50 | 37.5 | 5.0 | 500 | 0.25 | 5.0 | 8.0 | 150 |
| 1N5926B | 10.45 | 11 | 11.55 | 34.1 | 6.0 | 550 | 0.25 | 1.0 | 8.4 | 136 |
| 1N5927B | 11.40 | 12 | 12.60 | 31.2 | 7.0 | 550 | 0.25 | 1.0 | 9.1 | 125 |
| 1N5928B | 12.35 | 13 | 13.65 | 28.8 | 7.0 | 550 | 0.25 | 1.0 | 9.9 | 115 |
| 1N5929B | 14.25 | 15 | 15.75 | 25 | 9.0 | 600 | 0.25 | 1.0 | 11.4 | 100 |
| 1N5930B | 15.20 | 16 | 16.80 | 23.4 | 10 | 600 | 0.25 | 1.0 | 12.2 | 93 |
| 1N5931B | 17.10 | 18 | 18.90 | 20.8 | 12 | 650 | 0.25 | 1.0 | 13.7 | 83 |
| 1N5932B | 19.00 | 20 | 21.00 | 18.7 | 14 | 650 | 0.25 | 1.0 | 15.2 | 75 |
| 1N5933B | 20.90 | 22 | 23.10 | 17 | 18 | 650 | 0.25 | 1.0 | 16.7 | 68 |

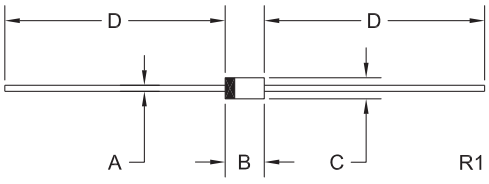
**1N5913B THRU 1N5956B**

**SILICON ZENER DIODE**
**1.5 WATT, 3.3 THRU 200 VOLTS**

**ELECTRICAL CHARACTERISTICS - Continued:** ($T_L$=30°C) $V_F$=1.5V MAX @ $I_F$=200mA (for all types)

| TYPE | ZENER VOLTAGE $V_Z$ @ $I_{ZT}$ | | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | | | MAXIMUM REVERSE CURRENT | | MAXIMUM DC CURRENT |
|---|---|---|---|---|---|---|---|---|---|---|
| | MIN | NOM | MAX | $I_{ZT}$ | $Z_{ZT}$ @ $I_{ZT}$ | $Z_{ZK}$ @ $I_{ZK}$ | | $I_R$ @ $V_R$ | | $I_{ZM}$ |
| | V | V | V | mA | Ω | Ω | mA | μA | V | mA |
| 1N5934B | 22.80 | 24 | 25.20 | 15.6 | 19 | 700 | 0.25 | 1.0 | 18.2 | 62 |
| 1N5935B | 25.65 | 27 | 28.35 | 13.9 | 23 | 700 | 0.25 | 1.0 | 20.6 | 55 |
| 1N5936B | 28.50 | 30 | 31.50 | 12.5 | 26 | 750 | 0.25 | 1.0 | 22.8 | 50 |
| 1N5937B | 31.35 | 33 | 34.65 | 11.4 | 33 | 800 | 0.25 | 1.0 | 25.1 | 45 |
| 1N5938B | 34.20 | 36 | 37.80 | 10.4 | 38 | 850 | 0.25 | 1.0 | 27.4 | 41 |
| 1N5939B | 37.05 | 39 | 40.95 | 9.6 | 45 | 900 | 0.25 | 1.0 | 29.7 | 38 |
| 1N5940B | 40.85 | 43 | 45.15 | 8.7 | 53 | 950 | 0.25 | 1.0 | 32.7 | 34 |
| 1N5941B | 44.65 | 47 | 49.35 | 8.0 | 67 | 1000 | 0.25 | 1.0 | 35.8 | 31 |
| 1N5942B | 48.45 | 51 | 53.55 | 7.3 | 70 | 1100 | 0.25 | 1.0 | 38.8 | 29 |
| 1N5943B | 53.20 | 56 | 58.80 | 6.7 | 86 | 1300 | 0.25 | 1.0 | 42.6 | 26 |
| 1N5944B | 58.90 | 62 | 65.10 | 6.0 | 100 | 1500 | 0.25 | 1.0 | 47.1 | 24 |
| 1N5945B | 64.60 | 68 | 71.40 | 5.5 | 120 | 1700 | 0.25 | 1.0 | 51.2 | 22 |
| 1N5946B | 71.25 | 75 | 78.75 | 5.0 | 140 | 2000 | 0.25 | 1.0 | 56.0 | 20 |
| 1N5947B | 77.90 | 82 | 86.10 | 4.6 | 160 | 2500 | 0.25 | 1.0 | 62.2 | 18 |
| 1N5948B | 86.45 | 91 | 95.55 | 4.1 | 200 | 3000 | 0.25 | 1.0 | 69.2 | 16 |
| 1N5949B | 95.00 | 100 | 105.0 | 3.7 | 250 | 3100 | 0.25 | 1.0 | 76.0 | 15 |
| 1N5950B | 104.5 | 110 | 115.5 | 3.4 | 300 | 4000 | 0.25 | 1.0 | 83.6 | 13 |
| 1N5951B | 114.0 | 120 | 126.0 | 3.1 | 380 | 4500 | 0.25 | 1.0 | 91.2 | 12 |
| 1N5952B | 123.5 | 130 | 136.5 | 2.9 | 450 | 5000 | 0.25 | 1.0 | 98.8 | 11 |
| 1N5953B | 142.5 | 150 | 157.5 | 2.5 | 600 | 6000 | 0.25 | 1.0 | 114.0 | 10 |
| 1N5954B | 152.0 | 160 | 168.0 | 2.3 | 700 | 6500 | 0.25 | 1.0 | 121.6 | 9.0 |
| 1N5955B | 171.0 | 180 | 189.0 | 2.1 | 900 | 7000 | 0.25 | 1.0 | 136.8 | 8.0 |
| 1N5956B | 190.0 | 200 | 210.0 | 1.9 | 1200 | 8000 | 0.25 | 1.0 | 152.0 | 7.0 |

## DO-41 CASE - MECHANICAL OUTLINE




| DIMENSIONS | | | | |
|---|---|---|---|---|
| | INCHES | | MILLIMETERS | |
| SYMBOL | MIN | MAX | MIN | MAX |
| A | 0.028 | 0.034 | 0.71 | 0.86 |
| B | 0.160 | 0.205 | 4.06 | 5.21 |
| C | 0.080 | 0.107 | 2.03 | 2.72 |
| D | 1.000 | - | 25.40 | - |

DO-41 (REV: R1)

R3 (8-March 2012)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES

### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

### CONTACT US

**Corporate Headquarters & Customer Support Team**

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www.centralsemi.com/wwreps

**Worldwide Distributors:**
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For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: www.centralsemi.com/terms

http://www.centralsemi.com

# Product End of Life Notification

| | |
|---|---|
| **PDN ID:** | PDN01154 |
| **Notification Date:** | 5/11/20 |
| **Last Buy Date:** | 11/11/20 |
| **Last Shipment Date** | 5/11/21 |

Summary:The 1N5917B zener diode series is discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

| Central Part Number | Replacement |
|---|---|
| 1N5917B BK | N/A, Stock Only |
| 1N5917B TR | N/A, Stock Only |
| 1N5918B BK | N/A, Stock Only |
| 1N5918B TR | N/A, Stock Only |
| 1N5919B BK | N/A, Stock Only |
| 1N5919B TR | N/A, Stock Only |
| 1N5920B BK | N/A, Stock Only |
| 1N5920B TR | N/A, Stock Only |
| 1N5921B BK | N/A, Stock Only |
| 1N5921B TR | N/A, Stock Only |
| 1N5922B BK | N/A, Stock Only |
| 1N5922B TR | N/A, Stock Only |
| 1N5923B BK | N/A, Stock Only |
| 1N5923B TR | N/A, Stock Only |
| 1N5924B BK | N/A, Stock Only |
| 1N5924B TR | N/A, Stock Only |
| 1N5925B BK | N/A, Stock Only |
| 1N5925B TR | N/A, Stock Only |
| 1N5926B BK | N/A, Stock Only |
| 1N5926B TR | N/A, Stock Only |
| 1N5927B BK | N/A, Stock Only |
| 1N5927B TR | N/A, Stock Only |
| 1N5928B BK | N/A, Stock Only |
| 1N5928B TR | N/A, Stock Only |
| 1N5929B BK | N/A, Stock Only |
| 1N5929B TR | N/A, Stock Only |
| 1N5930B BK | N/A, Stock Only |
| 1N5930B TR | N/A, Stock Only |
| 1N5931B BK | N/A, Stock Only |
| 1N5931B TR | N/A, Stock Only |
| 1N5932B BK | N/A, Stock Only |
| 1N5932B TR | N/A, Stock Only |
| 1N5933B BK | N/A, Stock Only |
| 1N5933B TR | N/A, Stock Only |
| 1N5934B BK | N/A, Stock Only |
| 1N5934B TR | N/A, Stock Only |
| 1N5935B BK | N/A, Stock Only |
| 1N5935B TR | N/A, Stock Only |

*** CONTINUED ***

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.

http://www.centralsemi.com

# Product End of Life Notification

| | |
|---|---|
| **PDN ID:** | PDN01154 |
| **Notification Date:** | 5/11/20 |
| **Last Buy Date:** | 11/11/20 |
| **Last Shipment Date** | 5/11/21 |

*** CONTINUED FROM PRIOR PAGE ***

| Central Part Number | Replacement |
|---|---|
| 1N5936B BK | N/A, Stock Only |
| 1N5936B TR | N/A, Stock Only |
| 1N5937B BK | N/A, Stock Only |
| 1N5937B TR | N/A, Stock Only |
| 1N5938B BK | N/A, Stock Only |
| 1N5938B TR | N/A, Stock Only |
| 1N5939B BK | N/A, Stock Only |
| 1N5939B TR | N/A, Stock Only |
| 1N5940B BK | N/A, Stock Only |
| 1N5940B TR | N/A, Stock Only |
| 1N5941B BK | N/A, Stock Only |
| 1N5941B TR | N/A, Stock Only |
| 1N5942B BK | N/A, Stock Only |
| 1N5942B TR | N/A, Stock Only |
| 1N5943B BK | N/A, Stock Only |
| 1N5943B TR | N/A, Stock Only |
| 1N5944B TR | N/A, Stock Only |
| 1N5945B BK | N/A, Stock Only |
| 1N5945B TR | N/A, Stock Only |
| 1N5946B BK | N/A, Stock Only |
| 1N5946B TR | N/A, Stock Only |
| 1N5947B TR | N/A, Stock Only |
| 1N5948B BK | N/A, Stock Only |
| 1N5948B TR | N/A, Stock Only |
| 1N5949B BK | N/A, Stock Only |
| 1N5949B TR | N/A, Stock Only |
| 1N5950B BK | N/A, Stock Only |
| 1N5950B TR | N/A, Stock Only |
| 1N5951B BK | N/A, Stock Only |
| 1N5951B TR | N/A, Stock Only |
| 1N5952B BK | N/A, Stock Only |
| 1N5952B TR | N/A, Stock Only |
| 1N5953B BK | N/A, Stock Only |
| 1N5953B TR | N/A, Stock Only |
| 1N5954B BK | N/A, Stock Only |
| 1N5954B TR | N/A, Stock Only |
| 1N5955B BK | N/A, Stock Only |
| 1N5955B TR | N/A, Stock Only |
| 1N5956B BK | N/A, Stock Only |
| 1N5956B TR | N/A, Stock Only |

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to engineering@centralsemi.com.

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http://www.centralsemi.com

# Product End of Life Notification

| | |
|---|---|
| **PDN ID:** | PDN01174 |
| **Notification Date:** | 3/31/21 |
| **Last Buy Date:** | 9/30/21 |
| **Last Shipment Date** | 3/31/22 |

Summary:The following axial lead Zener diodes are discontinued and now classified as of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by other manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's ongoing Product Management Process. Any replacement products are noted below. The effective date for placing last purchase orders will be six (6) months from the date of this notice and twelve (12) months from the notice date for final shipments, and minimum order quantities may apply. The last purchase and shipment dates may be extended if inventory is available.

*** All Plating types (PBFREE,TIN/LEAD) for each item listed are included in this notice.**

| Central Part Number | Replacement |
|---|---|
| 1N5930C BK | N/A |
| 1N5986B BK | N/A |
| 1N5993B TR | N/A |
| 1N5993C BK | N/A |
| 1N5993C TR | N/A |
| 1N5993D BK | N/A |
| 1N5994B TR | N/A |

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to engineering@centralsemi.com.

DISCLAIMER: This End of Life (EOL) notification is in accordance with JEDEC standard JESD48 - Product Discontinuance. Central Semiconductor Corp. will make every effort to offer life-time buy (LTB) opportunities and/or offer replacement devices to existing customers for discontinued devices, however, one or both may not be possible for all devices. Please contact your local Central Semiconductor sales representative for LTB opportunities/additional information.

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# Product End of Life Notification

| | |
|---|---|
| **PDN ID:** | PDN01048 |
| **Notification Date:** | 8/19/16 |
| **Last Buy Date:** | 2/19/17 |
| **Last Shipment Date** | 8/19/17 |

Summary:The 1N5913B through 1N5916B, 1.5 watt Zener diodes in the DO-41 case, are discontinued and now classified as End of Life (EOL).

Although Central Semiconductor Corp. makes every effort to continue to produce devices that have been proclaimed EOL (End of Life) by various manufacturers, it is an accepted industry practice to discontinue certain devices when customer demand falls below a minimum level of sustainability. Accordingly, the following product(s) have been transitioned to End of Life status as part of Central's Product Management Process. Any replacement product will be noted below. The effective date for placing the last purchase order will be six(6) months from the date of this notice and twelve(12) months from the notice date for final shipments; this may be extended if inventory is available.

| Central Part Number | Replacement |
|---|---|
| 1N5913B BK | N/A |
| 1N5913B TR | N/A |
| 1N5914B TR | N/A |
| 1N5915B BK | N/A |
| 1N5915B TR | N/A |
| 1N5916B BK | N/A |
| 1N5916B TR | N/A |

Central would be happy to assist you by providing additional information or technical data to help locate an alternate source if we have no replacement available. Please email your requests to engineering@centralsemi.com.

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