

1N4728A THRU 1N4764A

SILICON ZENER DIODES  
1.0 WATT, 3.3 THRU 100 VOLT  
5% TOLERANCE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 1N4728A series silicon Zener diode is a highly reliable voltage regulator designed for use in industrial, commercial, entertainment and computer applications.

MARKING: FULL PART NUMBER



DO-41 CASE

MAXIMUM RATINGS:

Power Dissipation ( $T_A=50^\circ\text{C}$ )  
Operating and Storage Temperature

SYMBOL

$P_D$   
 $T_J, T_{stg}$

UNITS

W  
 $^\circ\text{C}$

ELECTRICAL CHARACTERISTICS: ( $T_A=25^\circ\text{C}$ )  $V_F=1.2\text{V MAX @ } I_F=200\text{mA}$  (for all types)

| TYPE    | ZENER VOLTAGE<br>$V_Z @ I_{ZT}$ |     |       | TEST CURRENT<br>$I_{ZT}$ | MAXIMUM ZENER IMPEDANCE |                   |             | MAXIMUM REVERSE CURRENT |               | MAXIMUM DC CURRENT<br>$I_{ZM}$ | MAXIMUM TEMPERATURE COEFFICIENT<br>$\theta_{VZ}$<br>@ $I_{ZT}$ |
|---------|---------------------------------|-----|-------|--------------------------|-------------------------|-------------------|-------------|-------------------------|---------------|--------------------------------|--|
|         | MIN                             | NOM | MAX   |                          | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ | $I_R @ V_R$ |                         |               |                                |  |
|         | V                               | V   | V     |                          | mA                      | $\Omega$          | $\Omega$    | mA                      | $\mu\text{A}$ |                                |  |
| 1N4728A | 3.135                           | 3.3 | 3.465 | 76                       | 10                      | 400               | 1.0         | 100                     | 1.0           | 1380                           | -0.08 to -0.05   |
| 1N4729A | 3.420                           | 3.6 | 3.780 | 69                       | 10                      | 400               | 1.0         | 100                     | 1.0           | 1260                           | -0.08 to -0.05   |
| 1N4730A | 3.705                           | 3.9 | 4.095 | 64                       | 9.0                     | 400               | 1.0         | 50                      | 1.0           | 1190                           | -0.07 to -0.02   |
| 1N4731A | 4.085                           | 4.3 | 4.515 | 58                       | 9.0                     | 400               | 1.0         | 10                      | 1.0           | 1070                           | -0.07 to -0.01   |
| 1N4732A | 4.465                           | 4.7 | 4.935 | 53                       | 8.0                     | 500               | 1.0         | 10                      | 1.0           | 970                            | -0.03 to +0.04   |
| 1N4733A | 4.845                           | 5.1 | 5.355 | 49                       | 7.0                     | 550               | 1.0         | 10                      | 1.0           | 890                            | -0.01 to +0.04   |
| 1N4734A | 5.320                           | 5.6 | 5.880 | 45                       | 5.0                     | 600               | 1.0         | 10                      | 2.0           | 810                            | 0 to +0.045  |
| 1N4735A | 5.890                           | 6.2 | 6.510 | 41                       | 2.0                     | 700               | 1.0         | 10                      | 3.0           | 730                            | +0.01 to +0.055  |
| 1N4736A | 6.460                           | 6.8 | 7.140 | 37                       | 3.5                     | 700               | 1.0         | 10                      | 4.0           | 660                            | +0.015 to +0.06  |
| 1N4737A | 7.125                           | 7.5 | 7.875 | 34                       | 4.0                     | 700               | 0.5         | 10                      | 5.0           | 605                            | +0.02 to +0.065  |
| 1N4738A | 7.790                           | 8.2 | 8.610 | 31                       | 4.5                     | 700               | 0.5         | 10                      | 6.0           | 550                            | +0.03 to +0.07   |
| 1N4739A | 8.645                           | 9.1 | 9.555 | 28                       | 5.0                     | 700               | 0.5         | 10                      | 7.0           | 500                            | +0.035 to +0.075   |
| 1N4740A | 9.500                           | 10  | 10.50 | 25                       | 7.0                     | 700               | 0.25        | 10                      | 7.6           | 454                            | +0.04 to +0.08   |
| 1N4741A | 10.45                           | 11  | 11.55 | 23                       | 8.0                     | 700               | 0.25        | 5.0                     | 8.4           | 414                            | +0.045 to +0.08  |
| 1N4742A | 11.40                           | 12  | 12.60 | 21                       | 9.0                     | 700               | 0.25        | 5.0                     | 9.1           | 380                            | +0.045 to +0.085   |
| 1N4743A | 12.35                           | 13  | 13.65 | 19                       | 10                      | 700               | 0.25        | 5.0                     | 9.9           | 344                            | +0.05 to +0.085  |
| 1N4744A | 14.25                           | 15  | 15.75 | 17                       | 14                      | 700               | 0.25        | 5.0                     | 11.4          | 304                            | +0.055 to +0.09  |
| 1N4745A | 15.20                           | 16  | 16.80 | 15.5                     | 16                      | 700               | 0.25        | 5.0                     | 12.2          | 285                            | +0.055 to +0.09  |
| 1N4746A | 17.10                           | 18  | 18.90 | 14                       | 20                      | 750               | 0.25        | 5.0                     | 13.7          | 250                            | +0.06 to +0.09   |
| 1N4747A | 19.00                           | 20  | 21.00 | 12.5                     | 22                      | 750               | 0.25        | 5.0                     | 15.2          | 225                            | +0.06 to +0.09   |
| 1N4748A | 20.90                           | 22  | 23.10 | 11.5                     | 23                      | 750               | 0.25        | 5.0                     | 16.7          | 205                            | +0.06 to +0.095  |
| 1N4749A | 22.80                           | 24  | 25.20 | 10.5                     | 25                      | 750               | 0.25        | 5.0                     | 18.2          | 190                            | +0.06 to +0.095  |
| 1N4750A | 25.65                           | 27  | 28.35 | 9.5                      | 35                      | 750               | 0.25        | 5.0                     | 20.6          | 170                            | +0.06 to +0.095  |

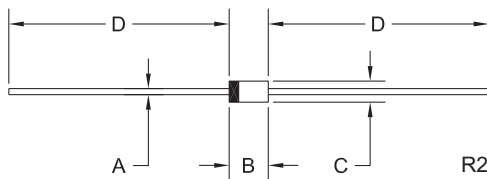
**1N4728A THRU 1N4764A**  
**SILICON ZENER DIODES**  
**1.0 WATT, 3.3 THRU 100 VOLT**  
**5% TOLERANCE**



**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^\circ\text{C}$ )  $V_F=1.2\text{V MAX @ } I_F=200\text{mA}$  (for all types)

| TYPE    | ZENER VOLTAGE<br>$V_Z @ I_{ZT}$ |     |       | TEST<br>CURRENT<br>$I_{ZT}$<br>mA | MAXIMUM<br>ZENER IMPEDANCE |                   |                    | MAXIMUM<br>REVERSE<br>CURRENT |      | MAXIMUM<br>DC<br>CURRENT<br>$I_{ZM}$<br>mA | MAXIMUM<br>TEMPERATURE<br>COEFFICIENT<br>@ $I_{ZT}$<br>$\frac{\partial V_Z}{\partial T}$<br>%/ $^\circ\text{C}$ |
|---------|---------------------------------|-----|-------|-----------------------------------|----------------------------|-------------------|--------------------|-------------------------------|------|--|---|
|         | MIN                             | NOM | MAX   |                                   | $Z_{ZT} @ I_{ZT}$          | $Z_{ZK} @ I_{ZK}$ | $I_R @ V_R$        |                               |      |  |   |
|         | V                               | V   | V     |                                   | $\Omega$                   | $\Omega$<br>mA    | $\mu\text{A}$<br>V |                               |      |  |   |
| 1N4751A | 28.50                           | 30  | 31.50 | 8.5                               | 40                         | 1.0K              | 0.25               | 5.0                           | 22.8 | 150  | +0.06 to +0.095   |
| 1N4752A | 31.35                           | 33  | 34.65 | 7.5                               | 45                         | 1.0K              | 0.25               | 5.0                           | 25.1 | 135  | +0.06 to +0.095   |
| 1N4753A | 34.20                           | 36  | 37.80 | 7.0                               | 50                         | 1.0K              | 0.25               | 5.0                           | 27.4 | 125  | +0.06 to +0.095   |
| 1N4754A | 37.05                           | 39  | 40.95 | 6.5                               | 60                         | 1.0K              | 0.25               | 5.0                           | 29.7 | 115  | +0.06 to +0.095   |
| 1N4755A | 40.85                           | 43  | 45.15 | 6.0                               | 70                         | 1.5K              | 0.25               | 5.0                           | 32.7 | 110  | +0.06 to +0.095   |
| 1N4756A | 44.65                           | 47  | 49.35 | 5.5                               | 80                         | 1.5K              | 0.25               | 5.0                           | 35.8 | 95   | +0.06 to +0.095   |
| 1N4757A | 48.45                           | 51  | 53.55 | 5.0                               | 95                         | 1.5K              | 0.25               | 5.0                           | 38.8 | 90   | +0.06 to +0.095   |
| 1N4758A | 53.20                           | 56  | 58.80 | 4.5                               | 110                        | 2.0K              | 0.25               | 5.0                           | 42.6 | 80   | +0.06 to +0.095   |
| 1N4759A | 58.90                           | 62  | 65.10 | 4.0                               | 125                        | 2.0K              | 0.25               | 5.0                           | 47.1 | 70   | +0.06 to +0.095   |
| 1N4760A | 64.60                           | 68  | 71.40 | 3.7                               | 150                        | 2.0K              | 0.25               | 5.0                           | 51.7 | 65   | +0.06 to +0.095   |
| 1N4761A | 71.25                           | 75  | 78.75 | 3.3                               | 175                        | 2.0K              | 0.25               | 5.0                           | 56.0 | 60   | +0.06 to +0.095   |
| 1N4762A | 77.90                           | 82  | 86.10 | 3.0                               | 200                        | 3.0K              | 0.25               | 5.0                           | 62.2 | 55   | +0.06 to +0.095   |
| 1N4763A | 86.45                           | 91  | 95.55 | 2.8                               | 250                        | 3.0K              | 0.25               | 5.0                           | 69.2 | 50   | +0.06 to +0.095   |
| 1N4764A | 95.00                           | 100 | 105.0 | 2.5                               | 350                        | 3.0K              | 0.25               | 5.0                           | 76.0 | 45   | +0.06 to +0.095   |

**DO-41 CASE - MECHANICAL OUTLINE**



| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.026      | 0.034 | 0.65        | 0.86 |
| B      | 0.138      | 0.205 | 3.50        | 5.21 |
| C      | 0.079      | 0.107 | 2.00        | 2.72 |
| D      | 1.000      | -     | 25.40       | -    |

DO-41 (REV: R2)

R2 (14-October 2013)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### 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

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### DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2<sup>nd</sup> 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

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### 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).

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### CONTACT US

#### Corporate Headquarters & Customer Support Team

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**Worldwide Field Representatives:**  
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**Worldwide Distributors:**  
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<http://www.centrasemi.com>

# Product End of Life Notification

|                           |          |
|---------------------------|----------|
| <b>PDN ID:</b>            | PDN01045 |
| <b>Notification Date:</b> | 8/19/16  |
| <b>Last Buy Date:</b>     | 2/19/17  |
| <b>Last Shipment Date</b> | 8/19/17  |

Summary: The 1N4728A, 1N4729A, 1N4730A, and 1N4731A, 1 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.

| <b>Central Part Number</b> | <b>Replacement</b> |
|----------------------------|--------------------|
| 1N4728A BK                 | N/A                |
| 1N4728A TR                 | N/A                |
| 1N4729A BK                 | N/A                |
| 1N4729A TR                 | N/A                |
| 1N4730A BK                 | N/A                |
| 1N4730A TR                 | N/A                |
| 1N4730C BK                 | N/A                |
| 1N4731A BK                 | N/A                |
| 1N4731A 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@centrasemi.com](mailto:engineering@centrasemi.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.



<http://www.centrasemi.com>

# Product End of Life Notification

|                           |          |
|---------------------------|----------|
| <b>PDN ID:</b>            | PDN01010 |
| <b>Notification Date:</b> | 11/02/15 |
| <b>Last Buy Date:</b>     | 5/02/16  |
| <b>Last Shipment Date</b> | 11/02/16 |

Summary: 1 Watt, High Voltage (82V thru 100V), glass body Zener diodes manufactured in the DO-41 and MELF packages 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.

| <u>Central Part Number</u> | <u>Replacement</u> |
|----------------------------|--------------------|
| CLL4762A BK                | N/A                |
| CLL4762A TR                | N/A                |
| CLL4762C BK                | N/A                |
| CLL4762C TR                | N/A                |
| CLL4763A BK                | N/A                |
| CLL4763A TR                | N/A                |
| CLL4764 TR                 | N/A                |
| CLL4764A BK                | N/A                |
| CLL4764A TR                | N/A                |
| 1N4762A BK                 | N/A                |
| 1N4762A TR                 | N/A                |
| 1N4763A BK                 | N/A                |
| 1N4763A TR                 | N/A                |
| 1N4764 BK                  | N/A                |
| 1N4764 TR                  | N/A                |
| 1N4764A BK                 | N/A                |
| 1N4764A TR                 | N/A                |

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