

CLL4728A THRU CLL4764A

**SURFACE MOUNT  
SILICON ZENER DIODE  
1 WATT, 3.3 THRU 100 VOLTS**



**MELF CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CLL4728A Series Silicon Zener Diode is a high quality voltage regulator for use in surface mount industrial, commercial, entertainment and computer applications.

**MARKING: CATHODE BAND**

**MAXIMUM RATINGS:** ( $T_A=25\text{ }^\circ\text{C}$ )

Power Dissipation  
Operating and Storage Junction Temperature  
 $V_Z$  Tolerance: Part number with "A" suffix  
 $V_Z$  Tolerance: Part number with "C" suffix  
 $V_Z$  Tolerance: Part number with "D" suffix

**SYMBOL**

$P_D$  1.0  
 $T_J, T_{stg}$  -65 to +200  
 $\pm 5$   
 $\pm 2$   
 $\pm 1$

**UNITS**

W  
 $^\circ\text{C}$   
%  
%  
%

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

| TYPE     | ZENER VOLTAGE  | TEST CURRENT | MAXIMUM ZENER IMPEDANCE |                   |      | MAXIMUM REVERSE CURRENT |      | MAXIMUM CURRENT |
|----------|----------------|--------------|-------------------------|-------------------|------|-------------------------|------|-----------------|
|          | $V_Z @ I_{ZT}$ | $I_{ZT}$     | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ |      | $I_R @ V_R$             |      | $I_{ZM}$        |
|          | V              | mA           | $\Omega$                | $\Omega$          | mA   | $\mu\text{A}$           | V    | mA              |
| CLL4728A | 3.3            | 76           | 10                      | 400               | 1.0  | 100                     | 1.0  | 1380            |
| CLL4729A | 3.6            | 69           | 10                      | 400               | 1.0  | 100                     | 1.0  | 1260            |
| CLL4730A | 3.9            | 64           | 9.0                     | 400               | 1.0  | 50                      | 1.0  | 1190            |
| CLL4731A | 4.3            | 58           | 9.0                     | 400               | 1.0  | 10                      | 1.0  | 1070            |
| CLL4732A | 4.7            | 53           | 8.0                     | 500               | 1.0  | 10                      | 1.0  | 970             |
| CLL4733A | 5.1            | 49           | 7.0                     | 550               | 1.0  | 10                      | 1.0  | 890             |
| CLL4734A | 5.6            | 45           | 5.0                     | 600               | 1.0  | 10                      | 2.0  | 810             |
| CLL4735A | 6.2            | 41           | 2.0                     | 700               | 1.0  | 10                      | 3.0  | 730             |
| CLL4736A | 6.8            | 37           | 3.5                     | 700               | 1.0  | 10                      | 4.0  | 660             |
| CLL4737A | 7.5            | 34           | 4.0                     | 700               | 0.5  | 10                      | 5.0  | 605             |
| CLL4738A | 8.2            | 31           | 4.5                     | 700               | 0.5  | 10                      | 6.0  | 550             |
| CLL4739A | 9.1            | 28           | 5.0                     | 700               | 0.5  | 10                      | 7.0  | 500             |
| CLL4740A | 10             | 25           | 7.0                     | 700               | 0.25 | 10                      | 7.6  | 454             |
| CLL4741A | 11             | 23           | 8.0                     | 700               | 0.25 | 5.0                     | 8.4  | 414             |
| CLL4742A | 12             | 21           | 9.0                     | 700               | 0.25 | 5.0                     | 9.1  | 380             |
| CLL4743A | 13             | 19           | 10                      | 700               | 0.25 | 5.0                     | 9.9  | 344             |
| CLL4744A | 15             | 17           | 14                      | 700               | 0.25 | 5.0                     | 11.4 | 304             |
| CLL4745A | 16             | 15.5         | 16                      | 700               | 0.25 | 5.0                     | 12.2 | 285             |
| CLL4746A | 18             | 14           | 20                      | 750               | 0.25 | 5.0                     | 13.7 | 250             |
| CLL4747A | 20             | 12.5         | 22                      | 750               | 0.25 | 5.0                     | 15.2 | 225             |
| CLL4748A | 22             | 11.5         | 23                      | 750               | 0.25 | 5.0                     | 16.7 | 205             |
| CLL4749A | 24             | 10.5         | 25                      | 750               | 0.25 | 5.0                     | 18.2 | 190             |
| CLL4750A | 27             | 9.5          | 35                      | 750               | 0.25 | 5.0                     | 20.6 | 170             |
| CLL4751A | 30             | 8.5          | 40                      | 1000              | 0.25 | 5.0                     | 22.8 | 150             |

R4 (21-April 2010)

**CLL4728A THRU CLL4764A**

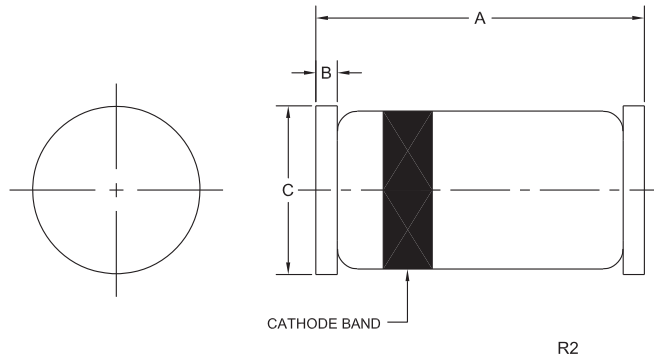
**SURFACE MOUNT  
SILICON ZENER DIODE  
1 WATT, 3.3 THRU 100 VOLTS**



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

| TYPE     | ZENER VOLTAGE  | TEST CURRENT | MAXIMUM ZENER IMPEDANCE |                   |      | MAXIMUM REVERSE CURRENT |      | MAXIMUM CURRENT |
|----------|----------------|--------------|-------------------------|-------------------|------|-------------------------|------|-----------------|
|          | $V_Z @ I_{ZT}$ | $I_{ZT}$     | $Z_{ZT} @ I_{ZT}$       | $Z_{ZK} @ I_{ZK}$ |      | $I_R @ V_R$             |      | $I_{ZM}$        |
|          | V              | mA           | $\Omega$                | $\Omega$          | mA   | $\mu\text{A}$           | V    | mA              |
| CLL4752A | 33             | 7.5          | 45                      | 1000              | 0.25 | 5.0                     | 25.1 | 135             |
| CLL4753A | 36             | 7.0          | 50                      | 1000              | 0.25 | 5.0                     | 27.4 | 125             |
| CLL4754A | 39             | 6.5          | 60                      | 1000              | 0.25 | 5.0                     | 29.7 | 115             |
| CLL4755A | 43             | 6.0          | 70                      | 1500              | 0.25 | 5.0                     | 32.7 | 110             |
| CLL4756A | 47             | 5.5          | 80                      | 1500              | 0.25 | 5.0                     | 35.8 | 95              |
| CLL4757A | 51             | 5.0          | 95                      | 1500              | 0.25 | 5.0                     | 38.8 | 90              |
| CLL4758A | 56             | 4.5          | 110                     | 2000              | 0.25 | 5.0                     | 42.6 | 80              |
| CLL4759A | 62             | 4.0          | 125                     | 2000              | 0.25 | 5.0                     | 47.1 | 70              |
| CLL4760A | 68             | 3.7          | 150                     | 2000              | 0.25 | 5.0                     | 51.7 | 65              |
| CLL4761A | 75             | 3.3          | 175                     | 2000              | 0.25 | 5.0                     | 56   | 60              |
| CLL4762A | 82             | 3.0          | 200                     | 3000              | 0.25 | 5.0                     | 62.2 | 55              |
| CLL4763A | 91             | 2.8          | 250                     | 3000              | 0.25 | 5.0                     | 69.2 | 50              |
| CLL4764A | 100            | 2.5          | 350                     | 3000              | 0.25 | 5.0                     | 76   | 45              |

**MELF CASE - MECHANICAL OUTLINE**



**MARKING: CATHODE BAND**

| SYMBOL  | DIMENSIONS |       |             |      |
|---------|------------|-------|-------------|------|
|         | INCHES     |       | MILLIMETERS |      |
|         | MIN        | MAX   | MIN         | MAX  |
| A       | 0.185      | 0.217 | 4.70        | 5.50 |
| B       | 0.012      | 0.022 | 0.30        | 0.56 |
| C (DIA) | 0.094      | 0.110 | 2.40        | 2.80 |

MELF (REV:R2)

R4 (21-April 2010)

## 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

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
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[www.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

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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.centrasemi.com/terms](http://www.centrasemi.com/terms)

# Product End of Life Notification

|                           |                  |
|---------------------------|------------------|
| <b>PDN ID:</b>            | PDN01010 Rev:001 |
| <b>Notification Date:</b> | 2/15/19          |
| <b>Last Buy Date:</b>     | 5/02/16          |
| <b>Last Shipment Date</b> | 11/02/16         |

Summary: 1 watt, high voltage (75V thru 100V), glass body Zener diodes manufactured in the DO-41 and MELF packages are discontinued and now classified as End of Life (EOL). Rev:001 of PDN#010010, February 15, 2019, is being issued to add 1N4761A omitted from the original PDN.

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.

| <u>Central Part Number</u> | <u>Replacement</u> |
|----------------------------|--------------------|
| CLL4762A BK                | N/A, Stock Only    |
| CLL4762A TR                | N/A, Stock Only    |
| CLL4762C BK                | N/A, Stock Only    |
| CLL4762C TR                | N/A, Stock Only    |
| CLL4763A BK                | N/A, Stock Only    |
| CLL4763A TR                | N/A, Stock Only    |
| CLL4764 TR                 | N/A, Stock Only    |
| CLL4764A BK                | N/A, Stock Only    |
| CLL4764A TR                | N/A, Stock Only    |
| 1N4761A BK                 | N/A, Stock Only    |
| 1N4761A TR                 | N/A, Stock Only    |
| 1N4762A BK                 | N/A, Stock Only    |
| 1N4762A TR                 | N/A, Stock Only    |
| 1N4763A BK                 | N/A, Stock Only    |
| 1N4763A TR                 | N/A, Stock Only    |
| 1N4764 BK                  | N/A, Stock Only    |
| 1N4764 TR                  | N/A, Stock Only    |
| 1N4764A BK                 | N/A, Stock Only    |
| 1N4764A 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@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.

# Product End of Life Notification

|                           |          |
|---------------------------|----------|
| <b>PDN ID:</b>            | PDN01083 |
| <b>Notification Date:</b> | 5/31/18  |
| <b>Last Buy Date:</b>     | 11/30/18 |
| <b>Last Shipment Date</b> | 5/31/19  |

Summary: All extreme low and high voltage Zener diodes in the MELF package 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 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.

| <u>Central Part Number</u> | <u>Replacement</u> |
|----------------------------|--------------------|
| CLL4728A BK                | N/A                |
| CLL4728A TR                | N/A                |
| CLL4729A BK                | N/A                |
| CLL4729A TR                | N/A                |
| CLL4729C BK                | N/A                |
| CLL4729C TR                | N/A                |
| CLL4730A BK                | N/A                |
| CLL4730A TR                | N/A                |
| CLL4731A BK                | N/A                |
| CLL4731A TR                | N/A                |
| CLL4732A BK                | N/A                |
| CLL4732A TR                | N/A                |
| CLL4733A BK                | N/A                |
| CLL4733A TR                | N/A                |
| CLL4733D TR                | N/A                |
| CLL4734A BK                | N/A                |
| CLL4734A TR                | N/A                |
| CLL4735A BK                | N/A                |
| CLL4735A TR                | N/A                |
| CLL4735D BK                | N/A                |
| CLL4735D TR                | N/A                |
| CLL4755A BK                | N/A                |
| CLL4755A TR                | N/A                |
| CLL4756A BK                | N/A                |
| CLL4756A TR                | N/A                |
| CLL4757A BK                | N/A                |
| CLL4757A TR                | N/A                |
| CLL4758A BK                | N/A                |
| CLL4758A TR                | N/A                |
| CLL4759A BK                | N/A                |
| CLL4759A TR                | N/A                |
| CLL4760A BK                | N/A                |
| CLL4760A TR                | N/A                |
| CLL4761A BK                | N/A                |
| CLL4761A TR                | N/A                |

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<http://www.centrasemi.com>

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| PDN ID:            | PDN01083 |
| Notification Date: | 5/31/18  |
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| Last Shipment Date | 5/31/19  |

\*\*\* CONTINUED FROM PRIOR PAGE \*\*\*

Central Part Number                      Replacement

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