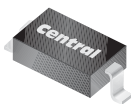


CMDZ2V4 THRU CMDZ47V

**SURFACE MOUNT  
SILICON ZENER DIODE  
2.4 VOLTS THRU 47 VOLTS  
250mW, 5% TOLERANCE**

**SUPERmini™**



**SOD-323 CASE**



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

#### DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMDZ2V4 Series Zener Diode is a high quality voltage regulator in an epoxy-molded **SUPERmini™** package, designed for applications requiring low leakage.

**MARKING CODE: SEE MARKING CODES ON  
ELECTRICAL CHARACTERISTICS TABLE**

**MAXIMUM RATINGS:** ( $T_A = 50^\circ\text{C}$ )

Power Dissipation

Operating and Storage Junction Temperature

**SYMBOL**

$P_D$

$T_J, T_{stg}$

250

-65 to +175

**UNIT**

mW

$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A = 25^\circ\text{C}$ ),  $V_F = 0.9 \text{ MAX @ } I_F = 10 \text{ mA}$  (FOR ALL TYPES)

| TYPE    | ZENER VOLTAGE<br>V <sub>Z</sub> @ I <sub>ZT</sub> |     |       | TEST CURRENT    | MAXIMUM ZENER IMPEDANCE           | MAXIMUM REVERSE CURRENT         |     | MARKING CODE |
|---------|---------------------------------------------------|-----|-------|-----------------|-----------------------------------|---------------------------------|-----|--------------|
|         | MIN                                               | NOM | MAX   | I <sub>ZT</sub> | Z <sub>ZT</sub> @ I <sub>ZT</sub> | I <sub>R</sub> @ V <sub>R</sub> |     |              |
|         | V                                                 | V   | V     | mA              | Ω                                 | μA                              | V   |              |
| CMDZ2V4 | 2.28                                              | 2.4 | 2.52  | 5.0             | 100                               | 25                              | 1.0 | 2V4          |
| CMDZ2V6 | 2.47                                              | 2.6 | 2.73  | 5.0             | 100                               | 25                              | 1.0 | 2V6          |
| CMDZ2V7 | 2.57                                              | 2.7 | 2.84  | 5.0             | 100                               | 10                              | 1.0 | 2V7          |
| CMDZ3V0 | 2.85                                              | 3.0 | 3.15  | 5.0             | 95                                | 5.0                             | 1.0 | 3V0          |
| CMDZ3V3 | 3.14                                              | 3.3 | 3.47  | 5.0             | 95                                | 2.0                             | 1.0 | 3V3          |
| CMDZ3V6 | 3.42                                              | 3.6 | 3.78  | 5.0             | 90                                | 2.0                             | 1.0 | 3V6          |
| CMDZ3V9 | 3.71                                              | 3.9 | 4.10  | 5.0             | 90                                | 2.0                             | 1.0 | 3V9          |
| CMDZ4V3 | 4.09                                              | 4.3 | 4.52  | 5.0             | 90                                | 1.0                             | 1.0 | 4V3          |
| CMDZ4V7 | 4.47                                              | 4.7 | 4.94  | 5.0             | 80                                | 3.0                             | 2.0 | 4V7          |
| CMDZ5V1 | 4.85                                              | 5.1 | 5.36  | 5.0             | 60                                | 2.0                             | 2.0 | 5V1          |
| CMDZ5V6 | 5.32                                              | 5.6 | 5.88  | 5.0             | 40                                | 1.0                             | 2.0 | 5V6          |
| CMDZ6V2 | 5.89                                              | 6.2 | 6.51  | 5.0             | 10                                | 3.0                             | 4.0 | 6V2          |
| CMDZ6V8 | 6.46                                              | 6.8 | 7.14  | 5.0             | 15                                | 2.0                             | 4.0 | 6V8          |
| CMDZ7V5 | 7.12                                              | 7.5 | 7.88  | 5.0             | 15                                | 1.0                             | 5.0 | 7V5          |
| CMDZ8V2 | 7.79                                              | 8.2 | 8.61  | 5.0             | 15                                | 0.7                             | 5.0 | 8V2          |
| CMDZ9V1 | 8.65                                              | 9.1 | 9.56  | 5.0             | 15                                | 0.5                             | 6.0 | 9V1          |
| CMDZ10V | 9.50                                              | 10  | 10.50 | 5.0             | 20                                | 0.2                             | 7.0 | 10V          |
| CMDZ11V | 10.45                                             | 11  | 11.55 | 5.0             | 20                                | 0.1                             | 8.0 | 11V          |
| CMDZ12V | 11.40                                             | 12  | 12.60 | 5.0             | 25                                | 0.1                             | 8.0 | 12V          |
| CMDZ13V | 12.35                                             | 13  | 13.65 | 5.0             | 30                                | 0.1                             | 8.0 | 13V          |

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**CMDZ2V4 THRU CMDZ47V**

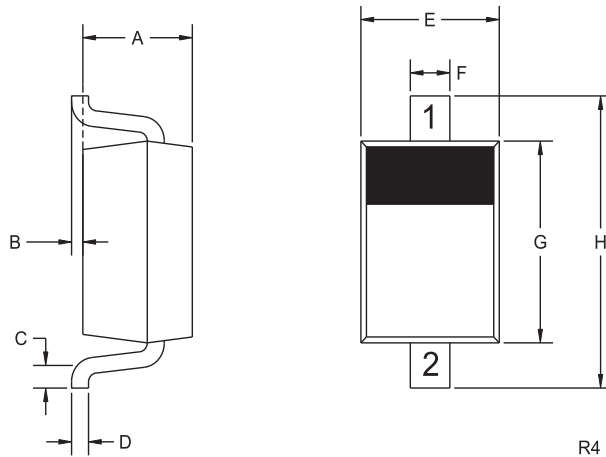
**SURFACE MOUNT  
SILICON ZENER DIODE  
2.4 VOLTS THRU 47 VOLTS  
250mW, 5% TOLERANCE**



**ELECTRICAL CHARACTERISTICS - Continued:** ( $T_A=25^\circ\text{C}$ ),  $V_F=0.9$  MAX @  $I_F=10\text{mA}$  (FOR ALL TYPES)

| TYPE    | ZENER VOLTAGE<br>V <sub>Z</sub> @ I <sub>ZT</sub> |     |       | TEST CURRENT    | MAXIMUM ZENER IMPEDANCE           | MAXIMUM REVERSE CURRENT         |      | MARKING CODE |
|---------|---------------------------------------------------|-----|-------|-----------------|-----------------------------------|---------------------------------|------|--------------|
|         | MIN                                               | NOM | MAX   | I <sub>ZT</sub> | Z <sub>ZT</sub> @ I <sub>ZT</sub> | I <sub>R</sub> @ V <sub>R</sub> |      |              |
|         | V                                                 | V   | V     | mA              | Ω                                 | μA                              | V    |              |
| CMDZ15V | 14.25                                             | 15  | 15.75 | 5.0             | 30                                | 0.05                            | 10.5 | 15V          |
| CMDZ16V | 15.20                                             | 16  | 16.80 | 5.0             | 40                                | 0.05                            | 11.2 | 16V          |
| CMDZ18V | 17.10                                             | 18  | 18.90 | 5.0             | 45                                | 0.05                            | 12.6 | 18V          |
| CMDZ20V | 19.00                                             | 20  | 21.00 | 5.0             | 55                                | 0.05                            | 14.0 | 20V          |
| CMDZ22V | 20.90                                             | 22  | 23.10 | 5.0             | 55                                | 0.05                            | 15.4 | 22V          |
| CMDZ24V | 22.80                                             | 24  | 25.20 | 5.0             | 70                                | 0.05                            | 16.8 | 24V          |
| CMDZ27V | 25.65                                             | 27  | 28.35 | 5.0             | 80                                | 0.05                            | 18.9 | 27V          |
| CMDZ30V | 28.50                                             | 30  | 31.50 | 5.0             | 80                                | 0.05                            | 21.0 | 30V          |
| CMDZ33V | 31.35                                             | 33  | 34.65 | 5.0             | 80                                | 0.05                            | 23.1 | 33V          |
| CMDZ36V | 34.20                                             | 36  | 37.80 | 5.0             | 90                                | 0.05                            | 25.2 | 36V          |
| CMDZ39V | 37.05                                             | 39  | 40.95 | 5.0             | 130                               | 0.05                            | 27.3 | 39V          |
| CMDZ43V | 40.85                                             | 43  | 45.15 | 5.0             | 150                               | 0.05                            | 30.1 | 43V          |
| CMDZ47V | 44.65                                             | 47  | 49.35 | 5.0             | 180                               | 0.05                            | 32.9 | 47V          |

**SOD-323 CASE - MECHANICAL OUTLINE**



| SYMBOL | INCHES |       | MILLIMETERS |      |
|--------|--------|-------|-------------|------|
|        | MIN    | MAX   | MIN         | MAX  |
| A      | 0.031  | 0.039 | 0.80        | 1.00 |
| B      | 0.000  | 0.004 | 0.00        | 0.10 |
| C      | 0.008  | -     | 0.20        | -    |
| D      | 0.004  | 0.007 | 0.11        | 0.19 |
| E      | 0.045  | 0.053 | 1.15        | 1.35 |
| F      | -      | 0.014 | -           | 0.35 |
| G      | 0.063  | 0.071 | 1.60        | 1.80 |
| H      | 0.094  | 0.102 | 2.40        | 2.60 |

SOD-323 (REV: R4)

**LEAD CODE:**

- 1) CATHODE
- 2) ANODE

R2 (8-January 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

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Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

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