



# THE DATASHEET OF CMOZ16V TR



**CMOZ2V4 THRU CMOZ43V**

**SURFACE MOUNT  
SILICON ZENER DIODE  
2.4 VOLTS THRU 43 VOLTS  
5% TOLERANCE**



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

**ULTRAmimi™**



**SOD-523 CASE**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMOZ2V4 Series Zener Diode is a high quality voltage regulator in an epoxy-molded ULTRAmimi™ package, designed for applications requiring low leakage.

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

| MAXIMUM RATINGS: ( $T_A=25^\circ\text{C}$ unless otherwise noted) | SYMBOL         |             | UNITS              |
|---|----------------|-------------|--------------------|
| Power Dissipation (Note 1) ( $T_A=50^\circ\text{C}$ )             | $P_D$          | 350         | mW                 |
| Power Dissipation (Note 2)  | $P_D$          | 300         | mW                 |
| Power Dissipation (Note 3)  | $P_D$          | 250         | mW                 |
| Operating and Storage Junction Temperature                        | $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| Thermal Resistance ( $P_D=300\text{mW}$ )                         | $\Theta_{JA}$  | 417         | $^\circ\text{C/W}$ |

**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>$V_Z @ I_{ZT}$ |       |       | TEST CURRENT<br>$I_{ZT}$ | MAXIMUM ZENER IMPEDANCE<br>$Z_{ZT} @ I_{ZT}$ | MAXIMUM REVERSE CURRENT |         | MARKING CODE |
|---------|---------------------------------|-------|-------|--------------------------|--|-------------------------|---------|--------------|
|         | MIN V                           | NOM V | MAX V |                          |  | $I_R$                   | @ $V_R$ |              |
|         |                                 |       |       | mA                       | $\Omega$                                     | $\mu\text{A}$           | V       |              |
| CMOZ2V4 | 2.28                            | 2.4   | 2.52  | 5.0                      | 100  | 25                      | 1.0     | F1           |
| CMOZ2V6 | 2.47                            | 2.6   | 2.73  | 5.0                      | 100  | 25                      | 1.0     | F1A          |
| CMOZ2V7 | 2.57                            | 2.7   | 2.84  | 5.0                      | 100  | 10                      | 1.0     | F2           |
| CMOZ3V0 | 2.85                            | 3.0   | 3.15  | 5.0                      | 95   | 5.0                     | 1.0     | F3           |
| CMOZ3V3 | 3.14                            | 3.3   | 3.47  | 5.0                      | 95   | 2.0                     | 1.0     | F4           |
| CMOZ3V6 | 3.42                            | 3.6   | 3.78  | 5.0                      | 90   | 2.0                     | 1.0     | F5           |
| CMOZ3V9 | 3.71                            | 3.9   | 4.10  | 5.0                      | 90   | 2.0                     | 1.0     | F6           |
| CMOZ4V3 | 4.09                            | 4.3   | 4.52  | 5.0                      | 90   | 1.0                     | 1.0     | F7           |
| CMOZ4V7 | 4.47                            | 4.7   | 4.94  | 5.0                      | 80   | 3.0                     | 2.0     | F8           |
| CMOZ5V1 | 4.85                            | 5.1   | 5.36  | 5.0                      | 60   | 2.0                     | 2.0     | F9           |
| CMOZ5V6 | 5.32                            | 5.6   | 5.88  | 5.0                      | 40   | 1.0                     | 2.0     | F0           |
| CMOZ6V2 | 5.89                            | 6.2   | 6.51  | 5.0                      | 10   | 3.0                     | 4.0     | H1           |
| CMOZ6V8 | 6.46                            | 6.8   | 7.14  | 5.0                      | 15   | 2.0                     | 4.0     | H2           |
| CMOZ7V5 | 7.12                            | 7.5   | 7.88  | 5.0                      | 15   | 1.0                     | 5.0     | H3           |
| CMOZ8V2 | 7.79                            | 8.2   | 8.61  | 5.0                      | 15   | 0.7                     | 5.0     | H4           |
| CMOZ9V1 | 8.65                            | 9.1   | 9.56  | 5.0                      | 15   | 0.5                     | 6.0     | H5           |
| CMOZ10V | 9.50                            | 10    | 10.50 | 5.0                      | 20   | 0.2                     | 7.0     | H6           |

- Notes: (1) Ceramic or aluminum core PC Board with copper mounting pad area of  $4.0\text{mm}^2$   
 (2) FR-4 Epoxy PC Board with copper mounting pad area of  $4.0\text{mm}^2$   
 (3) FR-4 Epoxy PC Board with copper mounting pad area of  $1.4\text{mm}^2$

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CMOZ2V4 THRU CMOZ43V

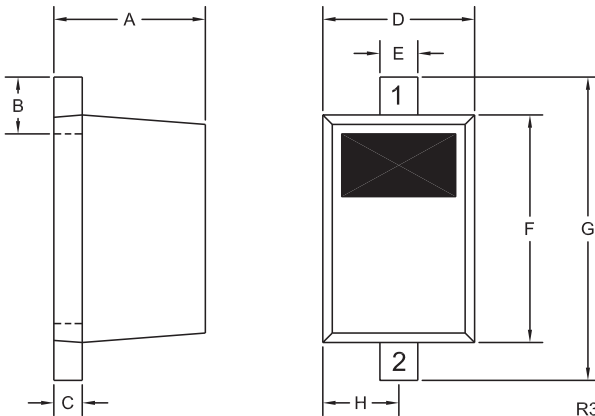
SURFACE MOUNT  
SILICON ZENER DIODE  
2.4 VOLTS THRU 43 VOLTS  
5% TOLERANCE



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>$V_Z @ I_{ZT}$ |       |       | TEST CURRENT<br>$I_{ZT}$ | MAXIMUM ZENER IMPEDANCE<br>$Z_{ZT} @ I_{ZT}$ | MAXIMUM REVERSE CURRENT<br>$I_R @ V_R$ |      | MARKING CODE |
|---------|---------------------------------|-------|-------|--------------------------|--|--|------|--------------|
|         | MIN V                           | NOM V | MAX V | mA                       | $\Omega$                                     | $\mu\text{A}$                          | V    |              |
| CMOZ11V | 10.45                           | 11    | 11.55 | 5.0                      | 20   | 0.1                                    | 8.0  | H7           |
| CMOZ12V | 11.40                           | 12    | 12.60 | 5.0                      | 25   | 0.1                                    | 8.0  | H8           |
| CMOZ13V | 12.35                           | 13    | 13.65 | 5.0                      | 30   | 0.1                                    | 8.0  | H9           |
| CMOZ15V | 14.25                           | 15    | 15.75 | 5.0                      | 30   | 0.05                                   | 10.5 | H0           |
| CMOZ16V | 15.20                           | 16    | 16.80 | 5.0                      | 40   | 0.05                                   | 11.2 | J1           |
| CMOZ18V | 17.10                           | 18    | 18.90 | 5.0                      | 45   | 0.05                                   | 12.6 | J2           |
| CMOZ20V | 19.00                           | 20    | 21.00 | 5.0                      | 55   | 0.05                                   | 14.0 | J3           |
| CMOZ22V | 20.90                           | 22    | 23.10 | 5.0                      | 55   | 0.05                                   | 15.4 | J4           |
| CMOZ24V | 22.80                           | 24    | 25.20 | 5.0                      | 70   | 0.05                                   | 16.8 | J5           |
| CMOZ27V | 25.65                           | 27    | 28.35 | 5.0                      | 80   | 0.05                                   | 18.9 | J6           |
| CMOZ30V | 28.50                           | 30    | 31.50 | 5.0                      | 80   | 0.05                                   | 21.0 | J7           |
| CMOZ33V | 31.35                           | 33    | 34.65 | 5.0                      | 80   | 0.05                                   | 23.1 | J8           |
| CMOZ36V | 34.20                           | 36    | 37.80 | 5.0                      | 90   | 0.05                                   | 25.2 | J9           |
| CMOZ39V | 37.05                           | 39    | 40.95 | 5.0                      | 130  | 0.05                                   | 27.3 | J0           |
| CMOZ43V | 40.85                           | 43    | 45.15 | 5.0                      | 150  | 0.05                                   | 30.1 | K1           |

SOD-523 CASE - MECHANICAL OUTLINE



| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.020      | 0.031 | 0.50        | 0.80 |
| B      | 0.008      | 0.016 | 0.20        | 0.40 |
| C      | 0.002      | 0.008 | 0.05        | 0.20 |
| D      | 0.028      | 0.035 | 0.70        | 0.90 |
| E      | 0.008      | 0.014 | 0.20        | 0.35 |
| F      | 0.039      | 0.055 | 1.00        | 1.40 |
| G      | 0.055      | 0.071 | 1.40        | 1.80 |
| H      | 0.016      |       | 0.40        |      |

SOD-523 (REV: R3)

LEAD CODE:

- 1) Cathode
- 2) Anode

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- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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- 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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