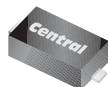


**CMOZ2V4 THRU CMOZ43V**

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

**ULTRAmini™****SOD-523 CASE**[www.centraalsemi.com](http://www.centraalsemi.com)**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMOZ2V4 Series Zener Diode is a high quality voltage regulator in an epoxy-molded ULTRAmini™ 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)Power Dissipation (Note 1) ( $T_A=50^{\circ}\text{C}$ )

Power Dissipation (Note 2)

Power Dissipation (Note 3)

Operating and Storage Junction Temperature

Thermal Resistance ( $P_D=300\text{mW}$ )**SYMBOL** $P_D$  $P_D$  $P_D$  $T_J, T_{stg}$  $\theta_{JA}$ 

350

300

250

-65 to +150

417

**UNITS**

mW

mW

mW

 $^{\circ}\text{C}$  $^{\circ}\text{C/W}$ **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 <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    | μA              | Ω                                 | μA                              | 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           |

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

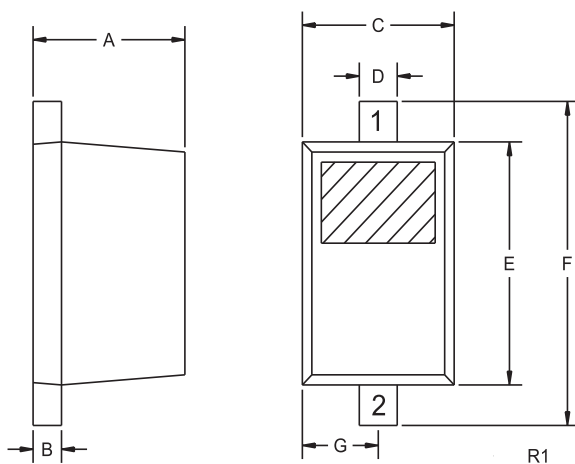
**SURFACE MOUNT  
SILICON ZENER DIODE  
2.4 VOLTS THRU 43 VOLTS  
5% TOLERANCE**



**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 <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     | μA              | Ω                                 | μA                              | V    |              |
| CMOZ10V | 9.50                                              | 10  | 10.50 | 5.0             | 20                                | 0.2                             | 7.0  | H6           |
| 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      | 0.004      | 0.008 | 0.10        | 0.20 |
| C      | 0.028      | 0.035 | 0.70        | 0.90 |
| D      | 0.008      | 0.011 | 0.20        | 0.28 |
| E      | 0.039      | 0.055 | 1.00        | 1.40 |
| F      | 0.055      | 0.071 | 1.40        | 1.80 |
| G      | 0.016      |       | 0.40        |      |

SOD-523 (REV: R1)

### LEAD CODE:

- 1) Cathode
- 2) Anode

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