

CMOZ2V4 THRU CMOZ43V

ULTRAmi<sup>TM</sup>  
ZENER DIODE  
2.4 VOLTS THRU 43 VOLTS  
350mW, 5% TOLERANCE

ULTRAmi<sup>TM</sup>



SOD-523 CASE

**Central**<sup>TM</sup>  
**Semiconductor Corp.**

**DESCRIPTION:**

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

**ABSOLUTE MAXIMUM RATINGS:**

|                                           | SYMBOL                            | UNIT              |
|-------------------------------------------|-----------------------------------|-------------------|
| Power Dissipation (@T <sub>A</sub> =50°C) | P <sub>D</sub>                    | 350<br>mW         |
| Operating and Storage Temperature         | T <sub>J</sub> , T <sub>stg</sub> | -65 to +175<br>°C |

**ELECTRICAL CHARACTERISTICS:** (T<sub>A</sub>=25°C), V<sub>F</sub>=0.9 MAX @ I<sub>F</sub>=10mA FOR ALL TYPES.

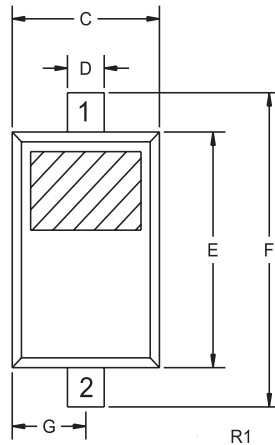
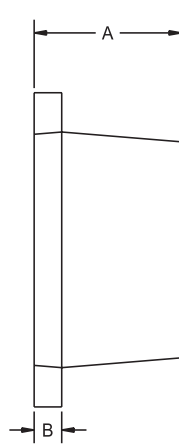
| TYPE    | ZENER VOLTAGE<br>V <sub>Z</sub> @ I <sub>ZT</sub> |              |              | TEST CURRENT<br>I <sub>ZT</sub><br>mA | MAXIMUM ZENER IMPEDANCE<br>Z <sub>ZT</sub> @ I <sub>ZT</sub><br>Ω | MAXIMUM REVERSE CURRENT<br>I <sub>R</sub> @ V <sub>R</sub> |                         | MARKING CODE |
|---------|---------------------------------------------------|--------------|--------------|---------------------------------------|-------------------------------------------------------------------|------------------------------------------------------------|-------------------------|--------------|
|         | MIN<br>VOLTS                                      | NOM<br>VOLTS | MAX<br>VOLTS |                                       |                                                                   | I <sub>R</sub><br>μA                                       | V <sub>R</sub><br>VOLTS |              |
|         |                                                   |              |              |                                       |                                                                   |                                                            |                         |              |
| 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           |
| 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           |

R0 ( 16-November 2001)

ELECTRICAL CHARACTERISTICS (CONTINUED):

| TYPE    | ZENER<br>VOLTAGE<br>V <sub>Z</sub> @ I <sub>ZT</sub> |       |       | TEST<br>CURRENT | MAXIMUM<br>ZENER<br>IMPEDANCE     | MAXIMUM<br>REVERSE<br>CURRENT   |       | MARKING<br>CODE |
|---------|------------------------------------------------------|-------|-------|-----------------|-----------------------------------|---------------------------------|-------|-----------------|
|         | MIN                                                  | NOM   | MAX   | I <sub>ZT</sub> | Z <sub>ZT</sub> @ I <sub>ZT</sub> | I <sub>R</sub> @ V <sub>R</sub> |       |                 |
|         | VOLTS                                                | VOLTS | VOLTS | mA              | Ω                                 | μA                              | VOLTS |                 |
| 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

R0 ( 16-November 2001)