

CMDZ2V4 THRU CMDZ47V

**SUPERmini™
ZENER DIODE
2.4 VOLTS THRU 47 VOLTS
250mW, 5% TOLERANCE**

SUPERmini™



SOD-323 CASE

**Central™
Semiconductor Corp.**

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 Code on Electrical Characteristics table.

ABSOLUTE MAXIMUM RATINGS:

Power Dissipation (@ $T_A = 50^\circ\text{C}$)
Operating and Storage 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.

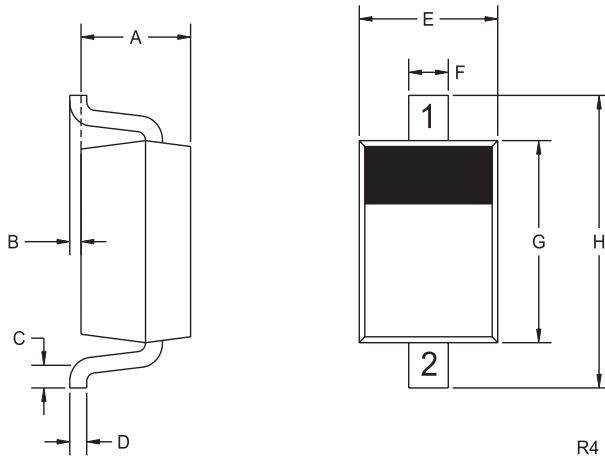
| TYPE | ZENER VOLTAGE $V_Z @ I_{ZT}$ | | | TEST CURRENT I_{ZT} mA | MAXIMUM ZENER IMPEDANCE $Z_{ZT} @ I_{ZT}$ Ω | MAXIMUM REVERSE CURRENT | | MARKING CODE |
|---------|---------------------------------|-------|-------|--------------------------------|--|------------------------------|-------|--------------|
| | MIN | NOM | MAX | | | $I_R @ V_R$ μA | VOLTS | |
| | VOLTS | VOLTS | VOLTS | | | | | |
| 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 |

R1 (31-October 2002)

ELECTRICAL CHARACTERISTICS (CONTINUED):

| TYPE | ZENER VOLTAGE $V_Z @ I_{ZT}$ | | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | MAXIMUM REVERSE CURRENT | | MARKING CODE |
|----------------|---------------------------------|-------|-------|--------------|-------------------------|-------------------------|-------|--------------|
| | MIN | NOM | MAX | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $I_R @ V_R$ | | |
| | VOLTS | VOLTS | VOLTS | mA | Ω | μA | VOLTS | |
| 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 | DIMENSIONS | | | |
|--------|------------|-------|-------------|------|
| | 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