

**CMOZ1L8 THRU CMOZ47L**

**SURFACE MOUNT  
LOW LEVEL SILICON ZENER DIODE  
1.8 VOLTS THRU 47 VOLTS  
250mW, 5% TOLERANCE**

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

The CENTRAL SEMICONDUCTOR CMOZ1L8 Series Low Level Zener Diode is a high quality voltage regulator in an epoxy-molded ULTRAmmini™ package, designed for applications requiring an extremely low operating current and low leakage.

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

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Power Dissipation  
Operating and Storage Junction Temperature  
Thermal Resistance

**SYMBOL**

$P_D$  250  
 $T_J, T_{stg}$  -65 to +150  
 $\theta_{JA}$  500

**UNITS**

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>$V_Z @ I_{ZT}$ |     |       | TEST CURRENT  | MAXIMUM ZENER IMPEDANCE | MAXIMUM REVERSE CURRENT |         | MARKING CODE |
|---------|---------------------------------|-----|-------|---------------|-------------------------|-------------------------|---------|--------------|
|         | MIN                             | NOM | MAX   | $I_{ZT}$      | $Z_{ZT} @ I_{ZT}$       | $I_R$                   | @ $V_R$ |              |
|         | V                               | V   | V     | $\mu\text{A}$ | $\Omega$                | $\mu\text{A}$           | V       |              |
| CMOZ1L8 | 1.71                            | 1.8 | 1.89  | 250           | 1400                    | 25                      | 1.0     | L8           |
| CMOZ2L0 | 1.90                            | 2.0 | 2.10  | 250           | 1400                    | 25                      | 1.0     | L9           |
| CMOZ2L2 | 2.09                            | 2.2 | 2.31  | 250           | 1400                    | 25                      | 1.0     | L0           |
| CMOZ2L4 | 2.28                            | 2.4 | 2.52  | 250           | 1400                    | 25                      | 1.0     | M1           |
| CMOZ2L5 | 2.37                            | 2.5 | 2.63  | 250           | 1500                    | 10                      | 1.0     | M2           |
| CMOZ2L7 | 2.57                            | 2.7 | 2.84  | 250           | 1500                    | 5.0                     | 1.0     | M3           |
| CMOZ3L0 | 2.85                            | 3.0 | 3.15  | 250           | 1600                    | 5.0                     | 1.0     | M30          |
| CMOZ3L3 | 3.14                            | 3.3 | 3.47  | 250           | 1600                    | 5.0                     | 1.0     | M4           |
| CMOZ3L6 | 3.42                            | 3.6 | 3.78  | 250           | 1700                    | 5.0                     | 1.0     | M5           |
| CMOZ3L9 | 3.71                            | 3.9 | 4.10  | 250           | 1600                    | 5.0                     | 1.0     | M6           |
| CMOZ4L3 | 4.09                            | 4.3 | 4.52  | 250           | 1600                    | 1.0                     | 1.5     | M7           |
| CMOZ4L7 | 4.47                            | 4.7 | 4.94  | 250           | 1500                    | 1.0                     | 1.5     | M8           |
| CMOZ5L1 | 4.85                            | 5.1 | 5.36  | 250           | 1500                    | 1.0                     | 1.5     | M9           |
| CMOZ5L6 | 5.32                            | 5.6 | 5.88  | 250           | 1400                    | 1.0                     | 2.0     | M0           |
| CMOZ6L2 | 5.89                            | 6.2 | 6.51  | 250           | 1200                    | 1.0                     | 2.0     | N1           |
| CMOZ6L8 | 6.46                            | 6.8 | 7.14  | 250           | 200                     | 1.0                     | 3.5     | N2           |
| CMOZ7L5 | 7.12                            | 7.5 | 7.88  | 250           | 200                     | 1.0                     | 3.5     | N3           |
| CMOZ8L2 | 7.79                            | 8.2 | 8.61  | 250           | 200                     | 1.0                     | 6.0     | N4           |
| CMOZ9L1 | 8.65                            | 9.1 | 9.56  | 250           | 200                     | 1.0                     | 6.0     | N5           |
| CMOZ10L | 9.50                            | 10  | 10.50 | 250           | 200                     | 1.0                     | 8.0     | N6           |
| CMOZ11L | 10.45                           | 11  | 11.55 | 250           | 200                     | 1.0                     | 8.0     | N7           |

R8 (11-April 2011)

# CMOZ1L8 THRU CMOZ47L

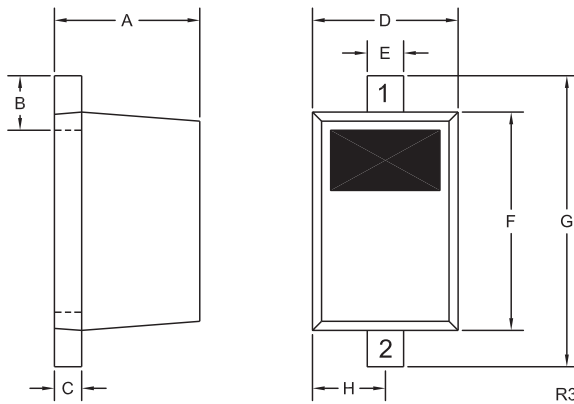
**SURFACE MOUNT  
LOW LEVEL SILICON ZENER DIODE  
1.8 VOLTS THRU 47 VOLTS  
250mW, 5% TOLERANCE**



**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>$V_Z$ @ $I_{ZT}$ |     |       | TEST CURRENT  | MAXIMUM ZENER IMPEDANCE | MAXIMUM REVERSE CURRENT |         | MARKING CODE |
|---------|-----------------------------------|-----|-------|---------------|-------------------------|-------------------------|---------|--------------|
|         | MIN                               | NOM | MAX   | $I_{ZT}$      | $Z_{ZT}$ @ $I_{ZT}$     | $I_R$                   | @ $V_R$ |              |
|         | V                                 | V   | V     | $\mu\text{A}$ | $\Omega$                | $\mu\text{A}$           | V       |              |
| CMOZ12L | 11.40                             | 12  | 12.60 | 250           | 200                     | 1.0                     | 10.5    | N8           |
| CMOZ13L | 12.35                             | 13  | 13.65 | 250           | 200                     | 1.0                     | 10.5    | N9           |
| CMOZ15L | 14.25                             | 15  | 15.75 | 250           | 100                     | 1.0                     | 11.5    | N0           |
| CMOZ16L | 15.20                             | 16  | 16.80 | 250           | 100                     | 1.0                     | 14      | P1           |
| CMOZ18L | 17.10                             | 18  | 18.90 | 250           | 100                     | 1.0                     | 16      | P2           |
| CMOZ20L | 19.00                             | 20  | 21.00 | 250           | 150                     | 1.0                     | 18      | P3           |
| CMOZ22L | 20.90                             | 22  | 23.10 | 250           | 150                     | 1.0                     | 20      | P4           |
| CMOZ24L | 22.80                             | 24  | 25.20 | 250           | 150                     | 1.0                     | 22      | P5           |
| CMOZ27L | 25.65                             | 27  | 28.35 | 250           | 150                     | 1.0                     | 24      | P6           |
| CMOZ30L | 28.50                             | 30  | 31.50 | 250           | 200                     | 1.0                     | 27      | P7           |
| CMOZ33L | 31.35                             | 33  | 34.65 | 250           | 250                     | 1.0                     | 30      | P8           |
| CMOZ36L | 34.20                             | 36  | 37.80 | 250           | 200                     | 1.0                     | 33      | P9           |
| CMOZ39L | 37.05                             | 39  | 40.95 | 250           | 200                     | 1.0                     | 36      | P0           |
| CMOZ43L | 40.85                             | 43  | 45.15 | 250           | 250                     | 1.0                     | 40      | R1           |
| CMOZ47L | 44.65                             | 47  | 49.35 | 250           | 250                     | 1.0                     | 43      | R2           |

## 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

R8 (11-April 2011)

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