

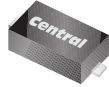
CMOZ1L8 THRU CMOZ47L

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



www.centrasemi.com

ULTRAm<sup>TM</sup>ini



SOD-523 CASE

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CMOZ1L8 Series Low Level Zener Diode is a high quality voltage regulator in an epoxy-molded ULTRAm<sup>TM</sup>ini 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<sub>A</sub>=25°C)

Power Dissipation  
Operating and Storage Junction Temperature  
Thermal Resistance

**SYMBOL**

P<sub>D</sub> 250  
T<sub>J</sub>, T<sub>stg</sub> -65 to +150  
θ<sub>JA</sub> 500

**UNITS**

mW  
°C  
°C/W

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

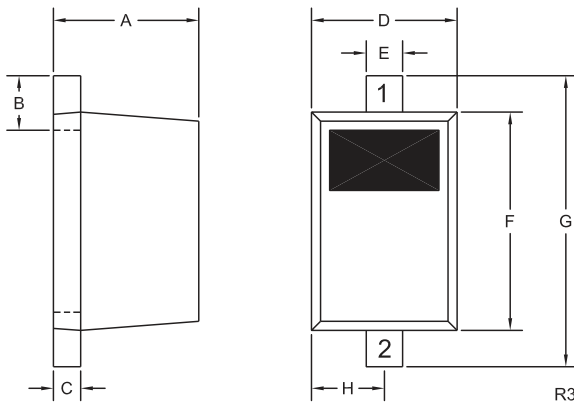
SURFACE MOUNT  
LOW LEVEL SILICON ZENER DIODE  
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ELECTRICAL CHARACTERISTICS - Continued: ( $T_A=25^\circ\text{C}$ ),  $V_F=0.9$  MAX @  $I_F=10\text{mA}$  (for all types)

| 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

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## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- 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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