



THE DATASHEET OF CMOZ13L TR



CMOZ1L8 THRU CMOZ47L

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



www.centrasemi.com

ULTRAmulti™



SOD-523 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMOZ1L8 Series Low Level Zener Diode is a high quality voltage regulator in an epoxy-molded ULTRAmulti™ 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°C)

Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL

P_D 250
T_J, T_{stg} -65 to +150
θ_{JA} 500

UNITS

mW
°C
°C/W

ELECTRICAL CHARACTERISTICS: (T_A=25°C), V_F=0.9 MAX @ I_F=10mA (for all types)

| TYPE | ZENER VOLTAGE V _Z @ I _{ZT} | | | TEST CURRENT I _{ZT} μA | MAXIMUM ZENER IMPEDANCE Z _{ZT} @ I _{ZT} Ω | MAXIMUM REVERSE CURRENT | | MARKING CODE |
|---------|---|-----|-------|---------------------------------------|---|-------------------------|------------------|--------------|
| | MIN | NOM | MAX | | | I _R | @ V _R | |
| | 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)

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



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

DESIGNER SUPPORT/SERVICES

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

- Free quick ship samples (2nd 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

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).

CONTACT US

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Looking for pricing, stock, or lifecycle information?

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- [Central Semiconductor Corp Information](#)

Optimize Your Supply Chain with WIN SOURCE Solutions

- ✓ Global Sourcing Solution
- ✓ Obsolete Management
- ✓ Cost Control Management
- ✓ Shortage Management
- ✓ Alternative Solution
- ✓ Excess Inventory Management