

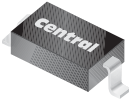
CMDZ1L8 THRU CMDZ47L

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



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SUPERmini™



SOD-323 CASE

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CMDZ1L8 Series Silicon Low Level Zener Diode is a high quality voltage regulator, manufactured in a SUPERmini™ surface mount package, designed for applications requiring a low operating current, low leakage, and a sharp knee.

MARKING CODE: SEE MARKING CODES 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

UNIT

mW
°C
°C/W

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

| TYPE | ZENER VOLTAGE V _Z @ I _{ZT} | | | TEST CURRENT I _{ZT} | MAXIMUM ZENER IMPEDANCE Z _{ZT} @ I _{ZT} | MAXIMUM REVERSE CURRENT | | MAXIMUM TEMPERATURE COEFFICIENT ϑV _Z | MARKING CODE |
|---------|---|-----|-------|---------------------------------|--|---------------------------------|------|--|--------------|
| | MIN | NOM | MAX | | | I _R @ V _R | | | |
| | V | V | V | | | μA | V | | |
| CMDZ1L8 | 1.710 | 1.8 | 1.890 | 500 | 1200 | 25 | 1.0 | -0.085 | 7N |
| CMDZ2L0 | 1.900 | 2.0 | 2.100 | 500 | 1100 | 25 | 1.0 | -0.080 | 8N |
| CMDZ2L2 | 2.090 | 2.2 | 2.310 | 500 | 1000 | 25 | 1.0 | -0.065 | 9N |
| CMDZ2L4 | 2.280 | 2.4 | 2.520 | 500 | 900 | 25 | 1.0 | -0.060 | AP |
| CMDZ2L5 | 2.375 | 2.5 | 2.625 | 500 | 900 | 10 | 1.0 | -0.060 | BP |
| CMDZ2L7 | 2.565 | 2.7 | 2.835 | 500 | 900 | 10 | 1.0 | ±0.055 | CP |
| CMDZ2L8 | 2.660 | 2.8 | 2.940 | 500 | 900 | 10 | 1.0 | ±0.055 | DP |
| CMDZ3L0 | 2.850 | 3.0 | 3.150 | 500 | 900 | 5.0 | 1.0 | ±0.055 | EP |
| CMDZ3L3 | 3.135 | 3.3 | 3.465 | 500 | 900 | 5.0 | 1.0 | ±0.055 | FP |
| CMDZ3L6 | 3.420 | 3.6 | 3.780 | 500 | 900 | 5.0 | 1.0 | ±0.030 | GP |
| CMDZ3L9 | 3.705 | 3.9 | 4.095 | 500 | 900 | 5.0 | 1.0 | ±0.030 | HP |
| CMDZ4L3 | 4.085 | 4.3 | 4.515 | 500 | 900 | 5.0 | 1.0 | ±0.030 | JP |
| CMDZ4L7 | 4.465 | 4.7 | 4.935 | 500 | 750 | 1.0 | 1.5 | ±0.030 | KP |
| CMDZ5L1 | 4.845 | 5.1 | 5.355 | 500 | 400 | 1.0 | 1.5 | ±0.030 | LP |
| CMDZ5L6 | 5.320 | 5.6 | 5.880 | 500 | 325 | 1.0 | 2.0 | +0.038 | NP |
| CMDZ6L2 | 5.890 | 6.2 | 6.510 | 500 | 90 | 1.0 | 2.0 | +0.045 | OP |
| CMDZ6L8 | 6.460 | 6.8 | 7.140 | 500 | 60 | 1.0 | 3.5 | +0.050 | PP |
| CMDZ7L5 | 7.125 | 7.5 | 7.875 | 500 | 60 | 1.0 | 3.5 | +0.058 | QP |
| CMDZ8L2 | 7.790 | 8.2 | 8.610 | 500 | 60 | 1.0 | 6.0 | +0.062 | RP |
| CMDZ9L1 | 8.645 | 9.1 | 9.555 | 500 | 60 | 1.0 | 6.0 | +0.068 | SP |
| CMDZ10L | 9.50 | 10 | 10.50 | 500 | 80 | 1.0 | 8.0 | +0.075 | TP |
| CMDZ11L | 10.45 | 11 | 11.55 | 500 | 80 | 1.0 | 8.0 | +0.076 | UP |
| CMDZ12L | 11.40 | 12 | 12.60 | 500 | 80 | 1.0 | 10.5 | +0.077 | VP |
| CMDZ13L | 12.35 | 13 | 13.65 | 500 | 80 | 1.0 | 10.5 | +0.079 | XP |
| CMDZ15L | 14.25 | 15 | 15.75 | 500 | 80 | 1.0 | 11.5 | +0.082 | YP |

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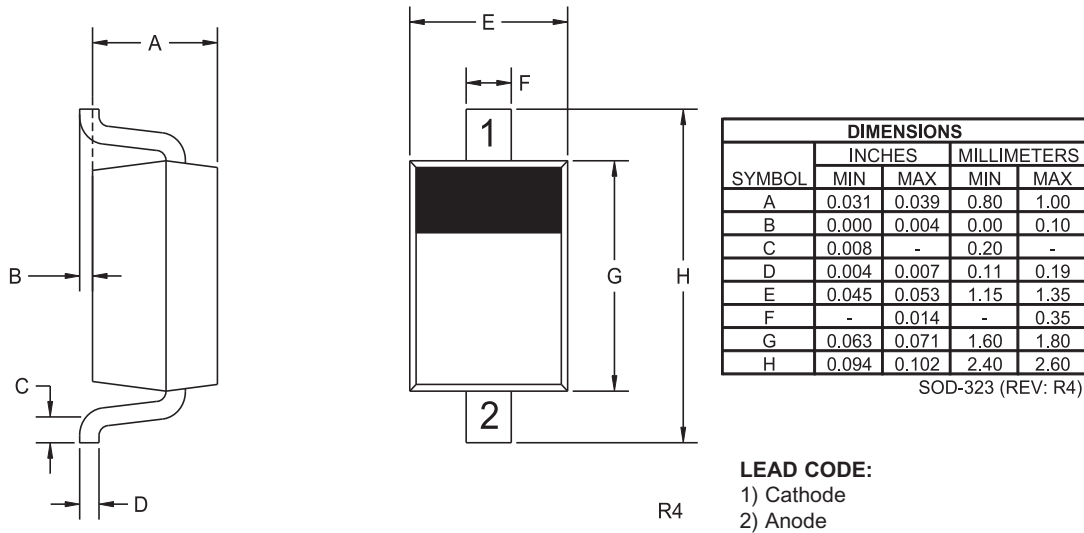
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ELECTRICAL CHARACTERISTICS - Continued: ($T_A=25^\circ\text{C}$) $V_F=0.9\text{V Max @ } I_F=10\text{mA}$ (for all types)

| TYPE | ZENER VOLTAGE $V_Z @ I_{ZT}$ | | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | MAXIMUM REVERSE CURRENT | | MAXIMUM TEMPERATURE COEFFICIENT | MARKING CODE |
|---------|---------------------------------|-----|-------|--------------|-------------------------|-------------------------|----|---------------------------------|--------------|
| | MIN | NOM | MAX | | | $I_R @ V_R$ | | | |
| | V | V | V | | | μA | V | | |
| CMDZ16L | 15.20 | 16 | 16.80 | 500 | 80 | 1.0 | 14 | +0.083 | ZP |
| CMDZ18L | 17.10 | 18 | 18.90 | 500 | 80 | 1.0 | 16 | +0.085 | 1P |
| CMDZ20L | 19.00 | 20 | 21.00 | 500 | 100 | 1.0 | 18 | +0.086 | 2P |
| CMDZ22L | 20.90 | 22 | 23.10 | 500 | 100 | 1.0 | 20 | +0.087 | 3P |
| CMDZ24L | 22.80 | 24 | 25.20 | 500 | 120 | 1.0 | 22 | +0.088 | 4P |
| CMDZ27L | 25.65 | 27 | 28.35 | 500 | 150 | 1.0 | 24 | +0.090 | 5P |
| CMDZ30L | 28.50 | 30 | 31.50 | 500 | 200 | 1.0 | 27 | +0.091 | 6P |
| CMDZ33L | 31.35 | 33 | 34.65 | 500 | 250 | 1.0 | 30 | +0.092 | 7P |
| CMDZ36L | 34.20 | 36 | 37.80 | 500 | 300 | 1.0 | 33 | +0.093 | 8P |
| CMDZ39L | 37.05 | 39 | 40.95 | 500 | 350 | 1.0 | 36 | +0.094 | 9P |
| CMDZ43L | 40.85 | 43 | 45.15 | 500 | 400 | 1.0 | 40 | +0.095 | AR |
| CMDZ47L | 44.65 | 47 | 49.35 | 500 | 450 | 1.0 | 44 | +0.095 | BR |

SOD-323 CASE - MECHANICAL OUTLINE



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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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