

CLL4099 THRU CLL4125

**SURFACE MOUNT
LOW NOISE SILICON ZENER DIODES
6.8 VOLTS THRU 47 VOLTS
500mW, 5% TOLERANCE**



SOD-80 CASE

Central™
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR CLL4099 Series types are high quality Silicon Zener Diodes designed for low leakage, low current and low noise applications.

MARKING CODE: CATHODE BAND

MAXIMUM RATINGS:

Power Dissipation (@ $T_A=25^\circ\text{C}$)

Operating and Storage Temperature

SYMBOL

P_D

T_J, T_{stg}

500

-65 to +200

UNIT

mW

$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS: ($T_A=25^\circ\text{C}$) $V_F=1.0\text{V MAX @ } I_F=200\text{mA FOR ALL TYPES}$)

| TYPE NO. | ZENER VOLTAGE | | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | MAX REVERSE LEAKAGE CURRENT | | MAXIMUM ZENER CURRENT | MAXIMUM NOISE DENSITY |
|----------|----------------|-----|-------|---------------|-------------------------|-----------------------------|------|-----------------------|--------------------------------|
| | $V_Z @ I_{ZT}$ | | | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | $I_R @ V_R$ | | I_{ZM} | $N_D @ I_{ZT}$ |
| | MIN | NOM | MAX | | | | | | |
| | V | V | V | μA | Ω | μA | V | mA | $\mu\text{V}/\sqrt{\text{Hz}}$ |
| CLL4099* | 6.460 | 6.8 | 7.140 | 250 | 200 | 10 | 5.2 | 35.0 | 40 |
| CLL4100* | 7.125 | 7.5 | 7.865 | 250 | 200 | 10 | 5.7 | 31.8 | 40 |
| CLL4101* | 7.790 | 8.2 | 8.610 | 250 | 200 | 1.0 | 6.3 | 29.0 | 40 |
| CLL4102* | 8.265 | 8.7 | 9.135 | 250 | 200 | 1.0 | 6.7 | 27.4 | 40 |
| CLL4103* | 8.645 | 9.1 | 9.555 | 250 | 200 | 1.0 | 7.0 | 26.2 | 40 |
| CLL4104* | 9.500 | 10 | 10.50 | 250 | 200 | 1.0 | 7.6 | 24.8 | 40 |
| CLL4105* | 10.45 | 11 | 11.55 | 250 | 200 | 0.05 | 8.5 | 21.6 | 40 |
| CLL4106* | 11.40 | 12 | 12.60 | 250 | 200 | 0.05 | 9.2 | 20.4 | 40 |
| CLL4107* | 12.35 | 13 | 13.65 | 250 | 200 | 0.05 | 9.9 | 19.0 | 40 |
| CLL4108* | 13.30 | 14 | 14.70 | 250 | 200 | 0.05 | 10.7 | 17.5 | 40 |
| CLL4109* | 14.25 | 15 | 15.75 | 250 | 100 | 0.05 | 11.4 | 16.3 | 40 |
| CLL4110* | 15.20 | 16 | 16.80 | 250 | 100 | 0.05 | 12.2 | 15.4 | 40 |
| CLL4111* | 16.15 | 17 | 17.85 | 250 | 100 | 0.05 | 13.0 | 14.5 | 40 |
| CLL4112* | 17.10 | 18 | 18.90 | 250 | 100 | 0.05 | 13.7 | 13.2 | 40 |
| CLL4113* | 18.05 | 19 | 19.95 | 250 | 150 | 0.05 | 14.5 | 12.5 | 40 |
| CLL4114* | 19.00 | 20 | 21.00 | 250 | 150 | 0.01 | 15.2 | 11.9 | 40 |
| CLL4115* | 20.90 | 22 | 23.10 | 250 | 150 | 0.01 | 16.8 | 10.8 | 40 |

* Available on special order only, please consult factory

R4 (13-November 2002)

**SURFACE MOUNT
LOW NOISE SILICON ZENER DIODES
6.8 VOLTS THRU 47 VOLTS
500mW, 5% TOLERANCE**

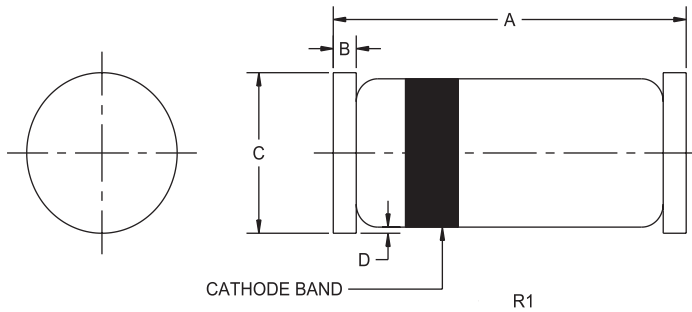
ELECTRICAL CHARACTERISTICS:

(T_A=25°C) V_F=1.0V MAX @ I_F=200mA FOR ALL TYPES)

| TYPE NO. | ZENER VOLTAGE | | | TEST CURRENT | MAXIMUM ZENER IMPEDANCE | MAX REVERSE LEAKAGE CURRENT | | MAXIMUM ZENER CURRENT | MAXIMUM NOISE DENSITY |
|----------|----------------------------------|-----|-------|-----------------|-----------------------------------|---------------------------------|------|-----------------------|----------------------------------|
| | V _Z @ I _{ZT} | | | I _{ZT} | Z _{ZT} @ I _{ZT} | I _R @ V _R | | I _{ZM} | N _D @ I _{ZT} |
| | MIN | NOM | MAX | | | | | | |
| | V | V | V | μA | Ω | μA | V | mA | μV/√Hz |
| CLL4116* | 22.80 | 24 | 25.20 | 250 | 150 | 0.01 | 18.3 | 9.9 | 40 |
| CLL4117* | 23.75 | 25 | 26.25 | 250 | 150 | 0.01 | 19.0 | 9.5 | 40 |
| CLL4118* | 25.65 | 27 | 28.35 | 250 | 150 | 0.01 | 20.5 | 8.8 | 40 |
| CLL4119* | 26.60 | 28 | 29.40 | 250 | 200 | 0.01 | 21.3 | 8.5 | 40 |
| CLL4120* | 28.50 | 30 | 31.50 | 250 | 200 | 0.01 | 22.8 | 7.9 | 40 |
| CLL4121* | 31.35 | 33 | 34.65 | 250 | 200 | 0.01 | 25.1 | 7.2 | 40 |
| CLL4122* | 34.20 | 36 | 37.80 | 250 | 200 | 0.01 | 27.4 | 6.6 | 40 |
| CLL4123* | 37.05 | 39 | 40.95 | 250 | 200 | 0.01 | 29.7 | 6.1 | 40 |
| CLL4124* | 40.85 | 43 | 45.15 | 250 | 250 | 0.01 | 32.7 | 5.5 | 40 |
| CLL4125* | 44.65 | 47 | 49.35 | 250 | 250 | 0.01 | 35.8 | 5.1 | 40 |

* Available on special order only, please consult factory

SOD-80 CASE - MECHANICAL OUTLINE



MARKING CODE: CATHODE BAND

| SYMBOL | DIMENSIONS | | | |
|---------|------------|-------|-------------|------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.130 | 0.146 | 3.30 | 3.71 |
| B | 0.016 | | 0.41 | |
| C (DIA) | 0.051 | 0.067 | 1.30 | 1.70 |
| D | - | 0.004 | - | 0.10 |

SOD-80 (REV:R1)