**CLL4678**
**THRU**
**CLL4717**

**LOW LEVEL ZENER DIODE**
**1.8 VOLTS THRU 43 VOLTS**
**500mW, 5% TOLERANCE**

**SOD-80 CASE**

**Central™**
**Semiconductor Corp.**

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CLL4678 Series Silicon Low Level Zener Diode is a high quality voltage regulator designed for applications requiring an extremely low operating current and low leakage.

| **ABSOLUTE MAXIMUM RATINGS:** | **SYMBOL** | | **UNIT** |
|---|---|---|---|
| Power Dissipation (@$T_A$=25°C) | $P_D$ | 500 | mW |
| Operating and Storage Temperature | $T_J$,$T_{stg}$ | -65 to +200 | °C |

**ELECTRICAL CHARACTERISTICS:** ($T_A$=25°C), $V_F$=1.5V MAX @ $I_F$=100mA FOR ALL TYPES.

| TYPE | ZENER VOLTAGE $V_Z$ @ $I_{ZT}$ | | | TEST CURRENT | MAXIMUM REVERSE LEAKAGE CURRENT | | MAXIMUM VOLTAGE CHANGE** | MAXIMUM ZENER CURRENT |
|---|---|---|---|---|---|---|---|---|
| | MIN | NOM | MAX | $I_{ZT}$ | $I_R$ @ $V_R$ | | $\Delta V_Z$ | $I_{ZM}$ |
| | VOLTS | VOLTS | VOLTS | µA | µA | VOLTS | VOLTS | mA |
| CLL4678 | 1.710 | 1.8 | 1.890 | 50 | 7.5 | 1.0 | 0.70 | 120.0 |
| CLL4679 | 1.900 | 2.0 | 2.100 | 50 | 5.0 | 1.0 | 0.70 | 110.0 |
| CLL4680 | 2.090 | 2.2 | 2.310 | 50 | 4.0 | 1.0 | 0.75 | 100.0 |
| CLL4681 | 2.280 | 2.4 | 2.520 | 50 | 2.0 | 1.0 | 0.80 | 95.0 |
| CLL4682 | 2.565 | 2.7 | 2.835 | 50 | 1.0 | 1.0 | 0.85 | 90.0 |
| CLL4683 | 2.850 | 3.0 | 3.150 | 50 | 0.8 | 1.0 | 0.90 | 85.0 |
| CLL4684 | 3.135 | 3.3 | 3.465 | 50 | 7.5 | 1.5 | 0.95 | 80.0 |
| CLL4685 | 3.420 | 3.6 | 3.780 | 50 | 7.5 | 2.0 | 0.95 | 75.0 |
| CLL4686 | 3.705 | 3.9 | 4.095 | 50 | 5.0 | 2.0 | 0.97 | 70.0 |
| CLL4687 | 4.085 | 4.3 | 4.515 | 50 | 4.0 | 2.0 | 0.99 | 65.0 |
| CLL4688 | 4.465 | 4.7 | 4.935 | 50 | 10 | 3.0 | 0.99 | 60.0 |
| CLL4689 | 4.845 | 5.1 | 5.355 | 50 | 10 | 3.0 | 0.97 | 55.0 |
| CLL4690 | 5.320 | 5.6 | 5.880 | 50 | 10 | 4.0 | 0.96 | 50.0 |
| CLL4691 | 5.890 | 6.2 | 6.510 | 50 | 10 | 5.0 | 0.95 | 45.0 |
| CLL4692 | 6.460 | 6.8 | 7.140 | 50 | 10 | 5.1 | 0.90 | 35.0 |
| CLL4693 | 7.125 | 7.5 | 7.875 | 50 | 10 | 5.7 | 0.75 | 31.8 |
| CLL4694 | 7.790 | 8.2 | 8.610 | 50 | 1.0 | 6.2 | 0.50 | 29.0 |
| CLL4695 | 8.265 | 8.7 | 9.135 | 50 | 1.0 | 6.6 | 0.10 | 27.4 |
| CLL4696 | 8.645 | 9.1 | 9.555 | 50 | 1.0 | 6.9 | 0.08 | 26.2 |

** $\Delta V_Z$=$V_Z$ @ 100µA MINUS $V_Z$ @ 10µA

R4 ( 4-October 2001)

**Central™**
**Semiconductor Corp.**

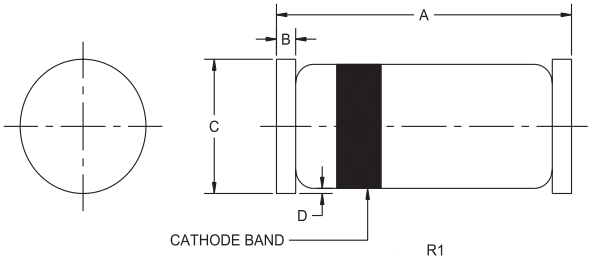
# CLL4678 THRU CLL4717

## LOW LEVEL ZENER DIODE
## 1.8 VOLTS THRU 43 VOLTS
## 500mW, 5% TOLERANCE

| TYPE | ZENER VOLTAGE $V_Z$ @ $I_{ZT}$ | | | TEST CURRENT | MAXIMUM REVERSE LEAKAGE CURRENT | | MAXIMUM VOLTAGE CHANGE** | MAXIMUM ZENER CURRENT |
|---|---|---|---|---|---|---|---|---|
| | MIN | NOM | MAX | $I_{ZT}$ | $I_R$ @ $V_R$ | | $\Delta V_Z$ | $I_{ZM}$ |
| | VOLTS | VOLTS | VOLTS | μA | μA | VOLTS | VOLTS | mA |
| CLL4697 | 9.500 | 10 | 10.50 | 50 | 1.0 | 7.6 | 0.10 | 24.8 |
| CLL4698 | 10.45 | 11 | 11.55 | 50 | 0.05 | 8.4 | 0.11 | 21.6 |
| CLL4699 | 11.40 | 12 | 12.60 | 50 | 0.05 | 9.1 | 0.12 | 20.4 |
| CLL4700 | 12.35 | 13 | 13.65 | 50 | 0.05 | 9.8 | 0.13 | 19.0 |
| CLL4701 | 13.30 | 14 | 14.70 | 50 | 0.05 | 10.6 | 0.14 | 17.5 |
| CLL4702 | 14.25 | 15 | 15.75 | 50 | 0.05 | 11.4 | 0.15 | 16.3 |
| CLL4703 | 15.20 | 16 | 16.80 | 50 | 0.05 | 12.1 | 0.16 | 15.4 |
| CLL4704 | 16.15 | 17 | 17.85 | 50 | 0.05 | 12.9 | 0.17 | 14.5 |
| CLL4705 | 17.10 | 18 | 18.90 | 50 | 0.05 | 13.6 | 0.18 | 13.2 |
| CLL4706 | 18.05 | 19 | 19.95 | 50 | 0.05 | 14.4 | 0.19 | 12.5 |
| CLL4707 | 19.00 | 20 | 21.00 | 50 | 0.01 | 15.2 | 0.20 | 11.9 |
| CLL4708 | 20.90 | 22 | 23.10 | 50 | 0.01 | 16.7 | 0.22 | 10.8 |
| CLL4709 | 22.80 | 24 | 25.20 | 50 | 0.01 | 18.2 | 0.24 | 9.9 |
| CLL4710 | 23.75 | 25 | 26.25 | 50 | 0.01 | 19.0 | 0.25 | 9.5 |
| CLL4711 | 25.65 | 27 | 28.35 | 50 | 0.01 | 20.4 | 0.27 | 8.8 |
| CLL4712 | 26.60 | 28 | 29.40 | 50 | 0.01 | 21.2 | 0.28 | 8.5 |
| CLL4713 | 28.50 | 30 | 31.50 | 50 | 0.01 | 22.8 | 0.30 | 7.9 |
| CLL4714 | 31.35 | 33 | 34.65 | 50 | 0.01 | 25.0 | 0.33 | 7.2 |
| CLL4715 | 34.20 | 36 | 37.80 | 50 | 0.01 | 27.3 | 0.36 | 6.6 |
| CLL4716 | 37.05 | 39 | 40.95 | 50 | 0.01 | 29.6 | 0.39 | 6.1 |
| CLL4717 | 40.85 | 43 | 45.15 | 50 | 0.01 | 32.6 | 0.43 | 5.5 |

** $\Delta V_Z = V_Z$ @ 100μA MINUS $V_Z$ @ 10μA

### SOD-80 CASE - MECHANICAL OUTLINE




| DIMENSIONS | | | | |
|---|---|---|---|---|
| | INCHES | | MILLIMETERS | |
| SYMBOL | 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)

R4 ( 4-October 2001)

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