

CCLM0035  
THRU  
CCLM5750

**SURFACE MOUNT SILICON  
CURRENT LIMITING DIODE**



**SOD-80 CASE**



[www.centrasemi.com](http://www.centrasemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CCLM0035 series types are silicon field effect current regulator diodes designed for applications requiring a constant current over a wide voltage range. These devices are manufactured in the cost effective SOD-80 double plug case which provides many benefits to the user including space savings and improved thermal characteristics. Special selections of  $I_P$  (regulator current) are available for critical applications.

**MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE**

**FEATURES:**

- Low Cost
- High Reliability
- Smaller Case Size than Competition
- Special Selections Available
- Superior Lot to Lot Consistency
- Leaded Devices Available

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Peak Operating Voltage

Power Dissipation

Operating and Storage Junction Temperature

**SYMBOL**

$P_{OV}$

$P_D$

$T_J, T_{stg}$

100

400

-65 to +200

**UNITS**

V

mW

$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

| Type     | Regulator Current<br>(Note 1) |             |             | Minimum<br>Dynamic<br>Impedance | Minimum<br>Knee<br>Impedance | Maximum<br>Limiting<br>Voltage   | Temperature<br>Coefficient<br>(Note 2) |
|----------|-------------------------------|-------------|-------------|---------------------------------|------------------------------|----------------------------------|----------------------------------------|
|          | $I_P$ @ $V_T=25\text{V}$      |             |             | $Z_T$ @ $V_T=25\text{V}$        | $Z_K$ @ $V_K=6.0\text{V}$    | $V_L$ @ $I_L=0.8 \times I_P$ MIN | TC                                     |
|          | MIN<br>(mA)                   | NOM<br>(mA) | MAX<br>(mA) | M $\Omega$                      | M $\Omega$                   | V                                | %/ $^\circ\text{C}$                    |
| CCLM0035 | 0.01                          | 0.035       | 0.06        | 8.0                             | 4.0                          | 0.4                              | +2.10 to +0.10                         |
| CCLM0130 | 0.05                          | 0.13        | 0.21        | 6.0                             | 2.0                          | 0.6                              | +2.10 to +0.10                         |
| CCLM0300 | 0.20                          | 0.31        | 0.42        | 4.0                             | 1.0                          | 0.8                              | +0.40 to -0.20                         |
| CCLM0500 | 0.40                          | 0.515       | 0.63        | 2.0                             | 0.5                          | 1.1                              | +0.15 to -0.25                         |
| CCLM0750 | 0.60                          | 0.76        | 0.92        | 1.0                             | 0.2                          | 1.4                              | 0.0 to -0.32                           |
| CCLM1000 | 0.88                          | 1.1         | 1.32        | 0.65                            | 0.1                          | 1.7                              | -0.10 to -0.37                         |
| CCLM1500 | 1.28                          | 1.5         | 1.72        | 0.45                            | 0.07                         | 2.0                              | -0.13 to -0.40                         |
| CCLM2000 | 1.68                          | 2.0         | 2.32        | 0.35                            | 0.05                         | 2.3                              | -0.15 to -0.42                         |
| CCLM2700 | 2.28                          | 2.69        | 3.1         | 0.30                            | 0.03                         | 2.7                              | -0.18 to -0.45                         |
| CCLM3500 | 3.0                           | 3.55        | 4.1         | 0.25                            | 0.02                         | 3.2                              | -0.20 to -0.47                         |
| CCLM4500 | 3.9                           | 4.5         | 5.1         | 0.20                            | 0.01                         | 3.7                              | -0.22 to -0.50                         |
| CCLM5750 | 5.0                           | 5.75        | 6.5         | 0.05                            | 0.005                        | 4.5                              | -0.25 to -0.53                         |

**Notes:**

1) Pulsed Method: Pulse Width (ms) = 27.5 divided by  $I_P$  NOM (mA)

2) The Temperature Coefficient is measured between + 25 $^\circ\text{C}$  and +50 $^\circ\text{C}$ .

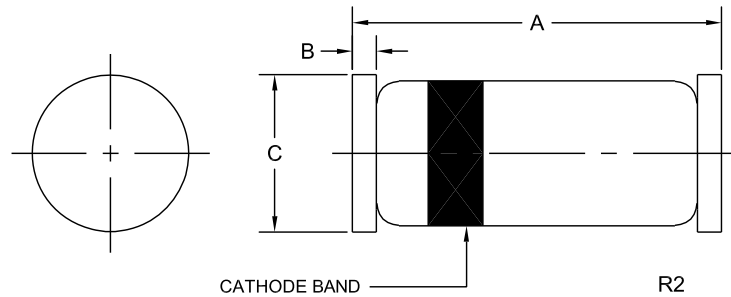
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# SOD-80 CASE - MECHANICAL OUTLINE



| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| SYMBOL     | INCHES |       | MILLIMETERS |      |
|            | MIN    | MAX   | MIN         | MAX  |
| A          | 0.130  | 0.146 | 3.30        | 3.71 |
| B          | 0.014  |       | 0.35        |      |
| C (DIA)    | 0.049  | 0.067 | 1.25        | 1.70 |

SOD-80 (REV:R2)

| MARKING CODES |         |            |            |
|---------------|---------|------------|------------|
| TYPE          | BAND 1* | BAND 2     | BAND 3     |
| CCLM0035      | BLACK   | LIGHT BLUE | WHITE      |
| CCLM0130      | BLACK   | LIGHT BLUE | PINK       |
| CCLM0300      | BLACK   | LIGHT BLUE | ORANGE     |
| CCLM0500      | BLACK   | LIGHT BLUE | GREEN      |
| CCLM0750      | BLACK   | LIGHT BLUE | DARK BLUE  |
| CCLM1000      | BLACK   | GREEN      | PINK       |
| CCLM1500      | BLACK   | GREEN      | ORANGE     |
| CCLM2000      | BLACK   | GREEN      | GREEN      |
| CCLM2700      | BLACK   | GREEN      | LIGHT BLUE |
| CCLM3500      | BLACK   | GREEN      | DARK BLUE  |
| CCLM4500      | BLACK   | GREEN      | VIOLET     |
| CCLM5750      | BLACK   | GREEN      | WHITE      |

\* Cathode Band

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