

CCLM0035
THRU
CCLM5750

**SURFACE MOUNT SILICON
CURRENT LIMITING DIODE**



SOD-80 CASE



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 (Note 1) | | | Minimum Dynamic Impedance | Minimum Knee Impedance | Maximum Limiting Voltage | Temperature Coefficient (Note 2) |
|----------|----------------------------|----------|----------|---------------------------|------------------------|--|----------------------------------|
| | $I_P @ V_T=25V$ | | | $Z_T @ V_T=25V$ | $Z_K @ V_K=6.0V$ | $V_L @ I_L=0.8 \times I_P \text{ MIN}$ | TC |
| | MIN (mA) | NOM (mA) | MAX (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 $^\circ\text{C}$.

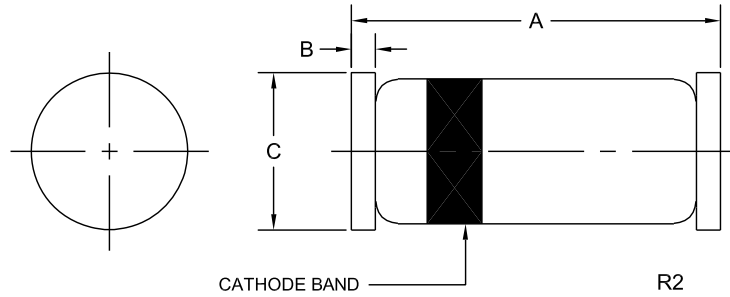
R7 (21-April 2011)

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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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