

# Central<sup>TM</sup> Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

www.centrasemi.com

CCLH080 THRU CCLH150

HIGH CURRENT  
CURRENT LIMITING DIODE

JEDEC DO-35 CASE

## DESCRIPTION

The CENTRAL SEMICONDUCTOR CCLH080 Series types are high current, 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 DO-35 double plug case, which provides many benefits to the user including space saving and improved thermal characteristics. Special selections of  $I_P$  (regulator current) are available for critical applications.

## MAXIMUM RATINGS ( $T_L=75^\circ\text{C}$ unless otherwise noted)

|                                               | SYMBOL         |             | UNITS            |
|-----------------------------------------------|----------------|-------------|------------------|
| Peak Operating Voltage                        | POV            | 50          | V                |
| Power Dissipation                             | $P_D$          | 600         | mW               |
| Operating and Storage<br>Junction Temperature | $T_J, T_{stg}$ | -65 to +200 | $^\circ\text{C}$ |

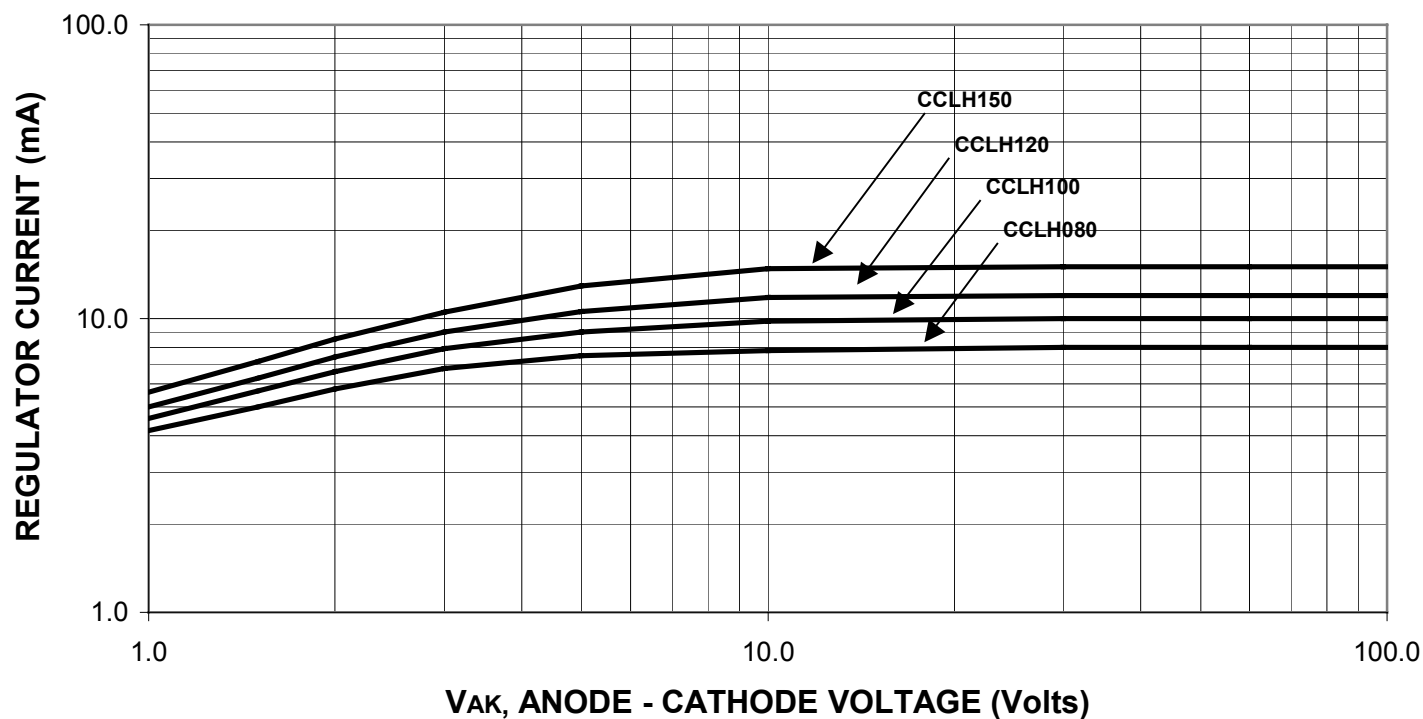
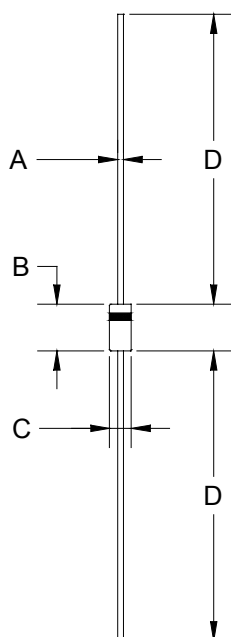
## ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

| TYPE NO. | REGULATOR<br>CURRENT(1) |      |      | DYNAMIC<br>IMPEDANCE   | KNEE<br>IMPEDANCE       | LIMITING<br>VOLTAGE             | TEMPERATURE<br>COEFFICIENT |
|----------|-------------------------|------|------|------------------------|-------------------------|---------------------------------|----------------------------|
|          | $I_P @ V_T=25\text{V}$  |      |      | $Z_T @ V_T=25\text{V}$ | $Z_K @ V_K=6.0\text{V}$ | $V_L @ I_L=0.8 I_P \text{ MIN}$ | TC*                        |
|          | mA                      |      |      | M $\Omega$             | k $\Omega$              | V                               | %/ $^\circ\text{C}$        |
|          | MIN                     | NOM  | MAX  | MIN                    | MIN                     | MAX                             |                            |
| CCLH080  | 6.56                    | 8.20 | 9.84 | 0.32                   | 15                      | 3.1                             | -0.25 TO -0.45             |
| CCLH100  | 8.00                    | 10.0 | 12.0 | 0.17                   | 6.0                     | 3.5                             | -0.25 TO -0.45             |
| CCLH120  | 9.60                    | 12.0 | 14.4 | 0.08                   | 3.0                     | 3.8                             | -0.25 TO -0.45             |
| CCLH150  | 12.0                    | 15.0 | 18.0 | 0.03                   | 2.0                     | 4.3                             | -0.25 TO -0.45             |

\*The Temperature Coefficient is measured between the following points:  $+25^\circ\text{C}$ ,  $+50^\circ\text{C}$

(1) PULSED METHOD PULSE WIDTH (ms) =  $27.5 / I_P \text{ NOM (mA)}$

(SEE REVERSE SIDE)

TYPICAL REGULATOR CURRENT VS. VOLTAGEDO-35 PACKAGE - MECHANICAL OUTLINE

| DIMENSIONS |        |       |             |      |
|------------|--------|-------|-------------|------|
| SYMBOL     | INCHES |       | MILLIMETERS |      |
|            | MIN    | MAX   | MIN         | MAX  |
| A          | 0.018  | 0.022 | 0.46        | 0.56 |
| B          | 0.120  | 0.200 | 3.05        | 5.08 |
| C          | 0.060  | 0.090 | 1.52        | 2.29 |
| D          | 1.000  | -     | 25.40       | -    |

DO-35 (REV: R1)

R1

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