

# DIGITRON SEMICONDUCTORS

## CCL0035-CCL5750

### CURRENT LIMITING DIODE

Available Non-RoHS (standard) or RoHS compliant (add PBF suffix).  
 Available as "HR" (high reliability) screened per MIL-PRF-19500, JANTX level. Add "HR" suffix to base part number.

#### MAXIMUM RATINGS

| Rating                                           | Symbol                            | Value       | Unit |
|--------------------------------------------------|-----------------------------------|-------------|------|
| Peak operating voltage                           | POV                               | 100         | V    |
| Power dissipation                                | P <sub>D</sub>                    | 600         | mW   |
| Operating junction and storage temperature range | T <sub>J</sub> , T <sub>stg</sub> | -65 to +200 | °C   |

#### ELECTRICAL CHARACTERISTICS (T<sub>A</sub> = 25°C unless otherwise noted)

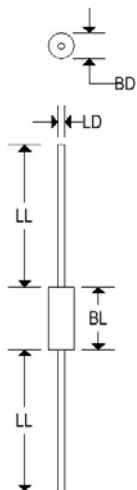
| Part number | Regulator current <sup>(1)</sup>      |       |       | Minimum dynamic impedance             | Minimum knee impedance                 | Maximum limiting voltage                                 | Temperature coefficient <sup>(2)</sup> |
|-------------|---------------------------------------|-------|-------|---------------------------------------|----------------------------------------|----------------------------------------------------------|----------------------------------------|
|             | I <sub>P</sub> @ V <sub>T</sub> = 25V |       |       | Z <sub>T</sub> @ V <sub>T</sub> = 25V | Z <sub>K</sub> @ V <sub>K</sub> = 6.0V | V <sub>L</sub> @ I <sub>L</sub> = 0.8 I <sub>P</sub> min | TC                                     |
|             | mA                                    |       |       | MΩ                                    | MΩ                                     | V                                                        | % / °C                                 |
|             | Min                                   | Nom   | Max   |                                       |                                        |                                                          |                                        |
| CCL0035     | 0.010                                 | 0.035 | 0.060 | 8.0                                   | 4.0                                    | 0.4                                                      | 2.10 to 0.10                           |
| CCL0130     | 0.050                                 | 0.130 | 0.210 | 6.0                                   | 2.0                                    | 0.6                                                      | 2.10 to 0.10                           |
| CCL0300     | 0.200                                 | 0.310 | 0.420 | 4.0                                   | 1.0                                    | 0.80                                                     | 0.40 to -0.20                          |
| CCL0500     | 0.400                                 | 0.515 | 0.630 | 2.0                                   | 0.5                                    | 1.1                                                      | 0.15 to -0.25                          |
| CCL0750     | 0.600                                 | 0.760 | 0.920 | 1.0                                   | 0.2                                    | 1.4                                                      | 0.0 to -0.32                           |
| CCL1000     | 0.880                                 | 1.100 | 1.320 | 0.65                                  | 0.1                                    | 1.7                                                      | -0.10 to -0.37                         |
| CCL1500     | 1.280                                 | 1.500 | 1.720 | 0.45                                  | 0.070                                  | 2.0                                                      | -0.13 to -0.40                         |
| CCL2000     | 1.680                                 | 2.000 | 2.320 | 0.35                                  | 0.050                                  | 2.3                                                      | -0.15 to -0.42                         |
| CCL2700     | 2.280                                 | 2.690 | 3.100 | 0.30                                  | 0.030                                  | 2.7                                                      | -0.18 to -0.45                         |
| CCL3500     | 3.000                                 | 3.550 | 4.100 | 0.25                                  | 0.020                                  | 3.2                                                      | -0.20 to -0.47                         |
| CCL4500     | 3.900                                 | 4.500 | 5.100 | 0.20                                  | 0.010                                  | 3.7                                                      | -0.22 to -0.50                         |
| CCL5750     | 5.000                                 | 5.750 | 6.500 | 0.05                                  | 0.005                                  | 4.5                                                      | -0.25 to -0.53                         |

Note 1: Pulsed method: pulse width(ms) = 27.5/ I<sub>P</sub> Nom (mA)

Note 2: The temperature coefficient is measured between the following points: +25°C, +50°C

#### MECHANICAL CHARACTERISTICS

|          |                             |
|----------|-----------------------------|
| Case     | DO-35                       |
| Marking  | Body painted, alpha-numeric |
| Polarity | Cathode band                |



|    | DO-35  |       |             |        |
|----|--------|-------|-------------|--------|
|    | Inches |       | Millimeters |        |
|    | Min    | Max   | Min         | Max    |
| BD | 0.055  | 0.090 | 1.400       | 2.290  |
| BL | 0.120  | 0.200 | 3.050       | 5.080  |
| LD | 0.018  | 0.022 | 0.460       | 0.560  |
| LL | 1.000  | 1.500 | 25.400      | 38.100 |