

CentralTM Semiconductor Corp.

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Manufacturers of World Class Discrete Semiconductors

www.centrasemi.com

CCL0035 THRU CCL5750

CURRENT LIMITING DIODE

JEDEC DO-35 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR CCL0035 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 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. This series is the most cost effective of the current limiting diode family.

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

	SYMBOL		UNITS
Peak Operating Voltage	POV	100	V
Power Dissipation	P_D	600	mW
Operating and Storage 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 CURRENT(1)			DYNAMIC IMPEDANCE	KNEE IMPEDANCE	LIMITING VOLTAGE	TEMPERATURE 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 Ω	M Ω	V	%/ $^\circ\text{C}$
	MIN	NOM	MAX	MIN	MIN	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	0.8	+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

*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)

DO-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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