

CCL0035  
THRU  
CCL5750

SILICON  
CURRENT LIMITING DIODES

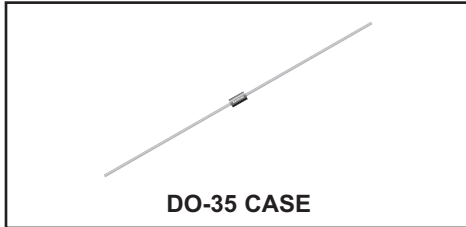


www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CCL0035 thru CCL5750 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 savings 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.

**MARKING: FULL PART NUMBER**



DO-35 CASE

**MAXIMUM RATINGS:** ( $T_L=75^\circ\text{C}$ )

Peak Operating Voltage  
Power Dissipation  
Operating and Storage Junction Temperature

**SYMBOL**

$P_{OV}$   
 $P_D$   
 $T_J, T_{stg}$

**UNITS**

V  
mW  
 $^\circ\text{C}$

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

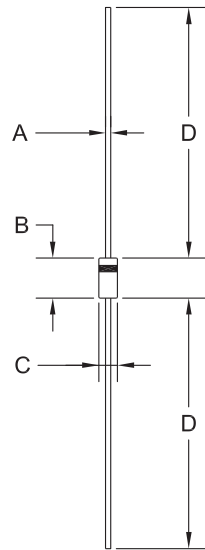
Type	Regulator Current (Note 1)			Minimum Dynamic Impedance	Minimum Knee Impedance	Maximum Limiting Voltage	Temperature Coefficient (Note 2)
	$I_p @ V_T=25\text{V}$			$Z_T @ V_T=25\text{V}$	$Z_K @ V_K=6.0\text{V}$	$V_L @ I_L=0.8 \times I_p \text{ MIN}$	TC
	MIN (mA)	NOM (mA)	MAX (mA)	M $\Omega$	M $\Omega$	V	%/ $^\circ\text{C}$
CCL0035	0.01	0.035	0.06	8.0	4.0	0.4	+2.10 to +0.10
CCL0130	0.05	0.130	0.21	6.0	2.0	0.6	+2.10 to +0.10
CCL0300	0.20	0.310	0.42	4.0	1.0	0.8	+0.40 to -0.20
CCL0500	0.40	0.515	0.63	2.0	0.5	1.1	+0.15 to -0.25
CCL0750	0.60	0.760	0.92	1.0	0.2	1.4	0.0 to -0.32
CCL1000	0.88	1.100	1.32	0.65	0.1	1.7	-0.10 to -0.37
CCL1500	1.28	1.500	1.72	0.45	0.07	2.0	-0.13 to -0.40
CCL2000	1.68	2.000	2.32	0.35	0.05	2.3	-0.15 to -0.42
CCL2700	2.28	2.690	3.10	0.30	0.03	2.7	-0.18 to -0.45
CCL3500	3.00	3.550	4.10	0.25	0.02	3.2	-0.20 to -0.47
CCL4500	3.90	4.500	5.10	0.20	0.01	3.7	-0.22 to -0.50
CCL5750	5.00	5.750	6.50	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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**DO-35 CASE - MECHANICAL OUTLINE**



<b>DIMENSIONS</b>				
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)

**MARKING: FULL PART NUMBER**

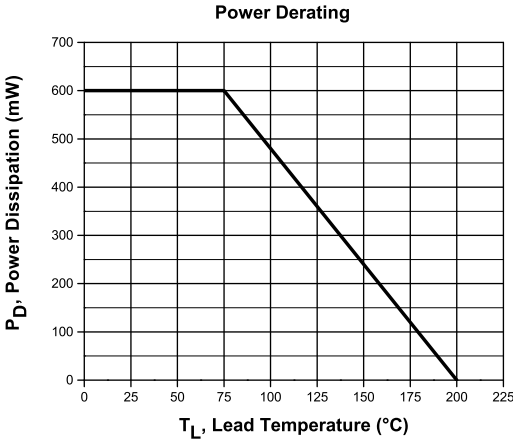
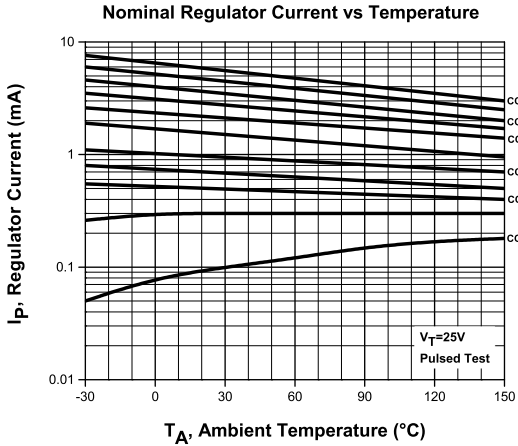
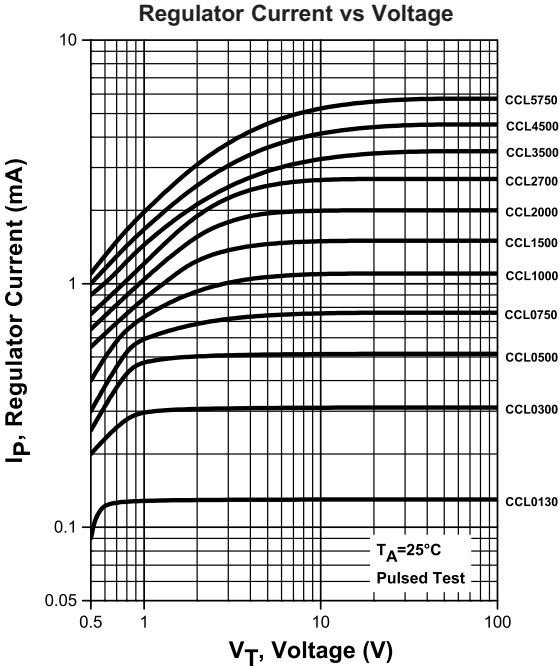
R1

R3 (18-June 2013)

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**TYPICAL ELECTRICAL CHARACTERISTICS**



R3 (18-June 2013)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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