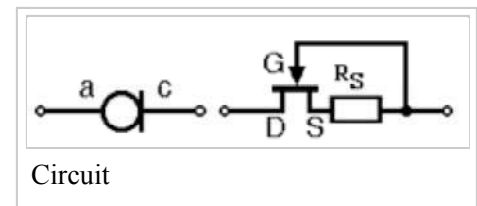


Constant-current diode

From Wikipedia, the free encyclopedia

Constant-current diode is an electronic device that limits current to a maximum specified value for the device. It is known as **current-limiting diode (CLD)**, **current-regulating diode (CRD)**.

These diodes consist of a n-channel JFET-transistor with the gate shorted to the source, which functions like a two-terminal current limiter or current source (analogous to a voltage-limiting Zener diode). They allow a current through them to rise to a certain value, and then level off at a specific value. Unlike Zener diodes, these diodes keep the current constant instead of the voltage constant. These devices keep the current flowing through them unchanged when the voltage changes. An example is the 1N5312. Note the negative V_{GS} is required, as an example on the n-type junction-gate field-effect transistor 2N5457.



External links

- IEEE 315 symbol for current-regulating diode (<http://sub.allaboutcircuits.com/images/05269.png>)
- Advantages of Constant Current Regulators (CCR) in Driving LEDs (<https://www.youtube.com/watch?v=zKVL2XWqDI0>) on YouTube

Diode

- CLD diode datasheet ([http://www.mccsemi.com/up_pdf/CLD20B\(DO-214AA\).pdf](http://www.mccsemi.com/up_pdf/CLD20B(DO-214AA).pdf)), MCC
- CRD diode datasheet (<http://www.atcsemitec.co.uk/pdfdocs/SemitecCRDs.pdf>), Semitec
- 1N5283 to 1N5314 diode datasheet (<http://centralsemi.com/PDFs/products/1N5283-5314.pdf>), Central Semiconductor

JFET

- 2N5457 & MMBF5457 JFET datasheet (<https://www.fairchildsemi.com/datasheets/MM/MMBF5457.pdf>), Fairchild

Retrieved from "https://en.wikipedia.org/w/index.php?title=Constant-current_diode&oldid=683419185"

Categories: Diodes | Electronics stubs

-
- This page was last modified on 30 September 2015, at 05:17.
 - Text is available under the Creative Commons Attribution-ShareAlike License; additional terms may apply. By using this site, you agree to the Terms of Use and Privacy Policy. Wikipedia® is a registered trademark of the Wikimedia Foundation, Inc., a non-profit organization.