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Introduction to Electronics

An introduction to linear electric components and a study of circuits containing such devices.

TECH

Ideal Diode Model



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Introduce ideal diodes in circuits

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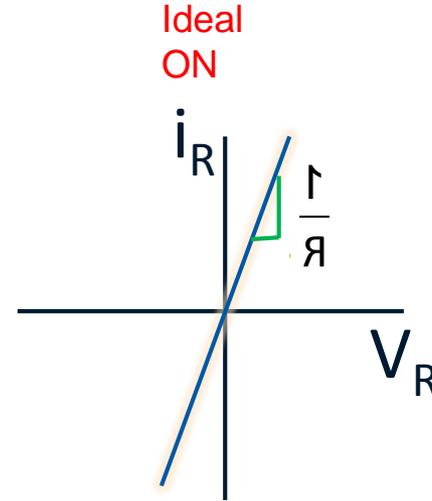
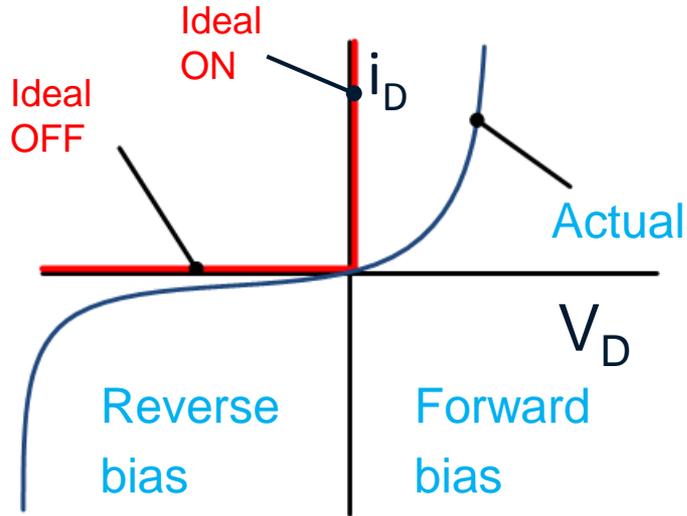
Previous Lesson

- ⦿ Introduction to diodes
- ⦿ Simple diode models

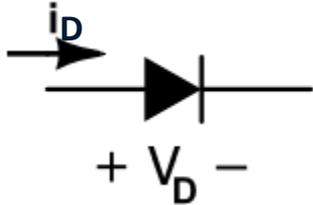
Lesson Objectives

- Introduce ideal diode operation
- Describe how to analyze DC diode circuits

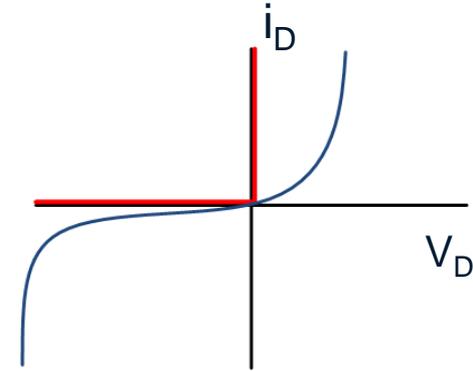
Ideal Diode Model



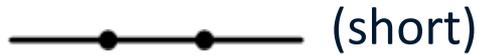
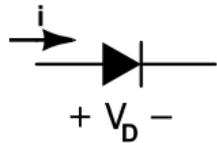
Ideal Diode Model



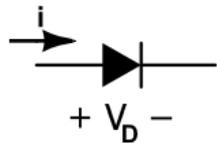
Two possible states: ON and OFF



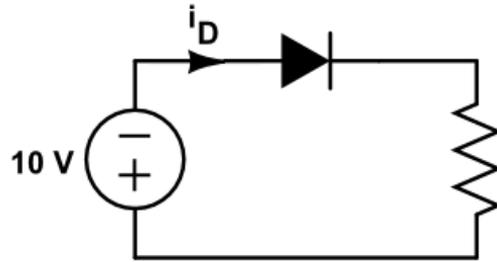
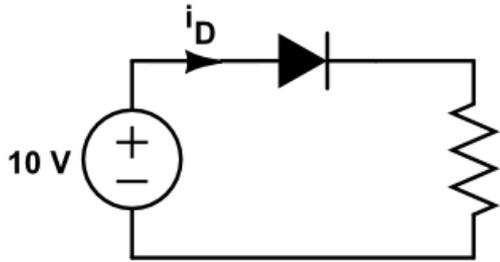
ON (conducting): if $i_D > 0$



OFF (blocking): if $V_D < 0$, $i_D = 0$



Example



Summary

- ⦿ Diodes act as a short or an open, depending on the bias

Next Lesson

- Circuits with multiple ideal diodes