

 Prof. Mor M. Peretz Analog Electronic Circuits 361-1-3671 [1]
 THE CENTER FOR POWER ELECTRONICS AND MIXED-SIGNAL IC, BEN-GURION UNIVERSITY

Analog Electronic Circuits


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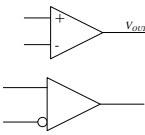

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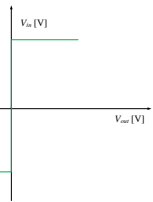
Lesson #7
Outline

- Comparators
 - Voltage comparator – basic characteristics
 - Internal circuit
 - Propagation time and overdrive
 - Output stage
- Basic applications
 - Level detection, window, counter, PWM, ON-OFF control
- Schmitt trigger
 - Inverting and noninverting
 - Single supply
- Advanced applications
 - Oscillators


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Comparator





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Output stage

Push-pull

Open-drain (Open-Collector)

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Basic operation

BASIC OPERATION OF VOLTAGE COMPARATORS
 (OPERATION MODE)

CIRCUIT - A

CIRCUIT - B

http://home.cergec.ca/~gaurby/4E/notes/index.html

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Applications –basic

Figure 13. Zero-Crossing Detector

FIGURE 9.11 Basic level detector with optical indicator.

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Applications –basic

FIGURE 8-23
 Window detector and its VTC.

PWM

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Applications –basic

FIGURE 8-24
 Power supply monitor. LED glows as long as V_V is within specification.

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