Circuits and Signals

Introduction

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2022 winter semester

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Contact information

email:	marek.rupniewski@pw.edu.pl	(USOSMAIL, Studia Mail)
USOS:	2022Z Circuits and Signals	(grades)
MS Teams:	Circuits and Signals - 2022Z	(courseware)
Studia server:	Circuits and Signals	(only as a backup)
Office hours:	Monday 2-4 p.m., office 446	(subject to change)

Grading

- Laboratory exercises $5 \times 8p = 40p$,
- Tests (during lectures) $2 \times 20p = 40p$,
- Homeworks $2 \times 10p = 20p$,
- Activity (tutorial) points ($\leq 5p$).

The total can be as high as 105p!

Final grade will be given according to the following scale:

	$50p$		$60p$		$70p$		$80p$		$90p$	
2		**3**		**3.5**		**4**		**4.5**		**5**

Preliminary lab schedule (subject to change)

lab. no.	Monday	Friday
1	14 November	18 November
2	28 November	2 December
3	12 December	16 December
4	2 January	5 January (Thursday!)
5	16 January	20 January

References

1. Chi Kong Tse *Linear Circuit Analysis*, Addison-Wesley, 1998,
2. R. C. Dorf, J. A. Svoboda *Introduction to Electric Circuits*, John Wiley, 1999,
3. W. A. Blackwell, L. L. Grigsby *Introductory Network Theory*, PWS Publishers, Boston Mass. 1985,

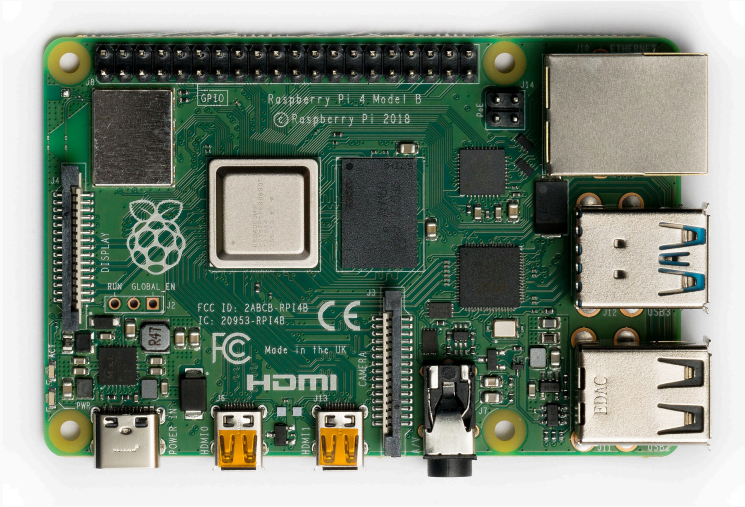
Online supplementary resources

1. Tony R. Kuphaldt. Lessons In Electric Circuits (http://www.faqs.org/docs/electric/index.htm)
2. Electronic Circuit Theory (http://utwired.engr.utexas.edu/rgd1/index.cfm)
3. Agarwal, Anant. 6.002 Circuits and Electronics, Spring 2007 (http://ocw.mit.edu/courses/electrical-engineering-and-computer-science/6-002-circuits-and-electronics-spring-2007)

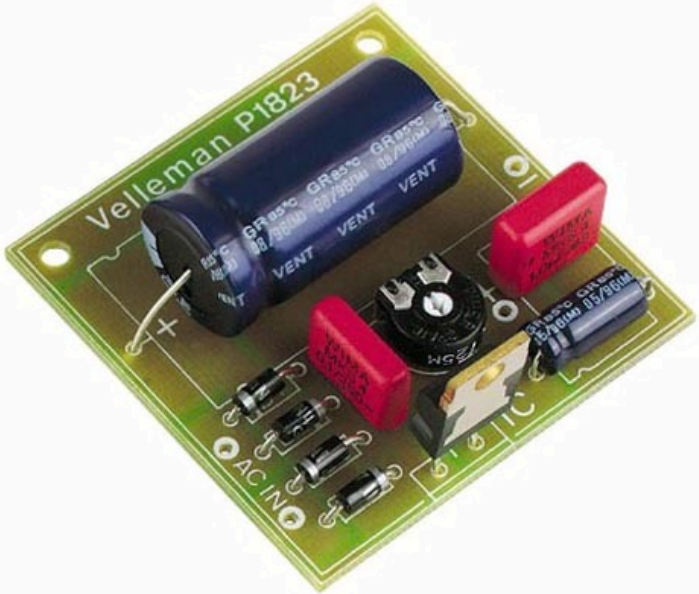
Electric circuits

look like:

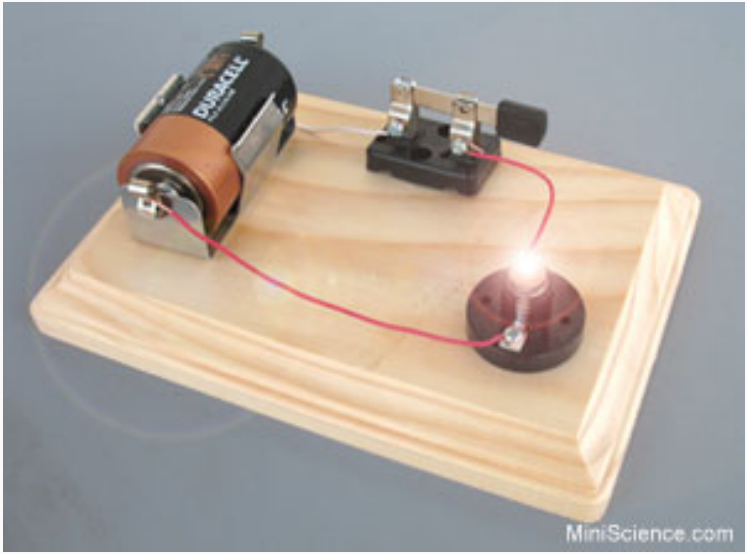
Electric circuits



or they look like e.g.:

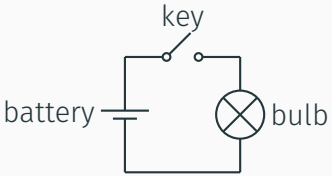


and eventually they might look like:

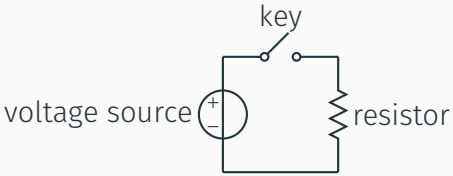


Abstraction

We study (abstracted) circuits:



or (by forgetting about some detail):



Why do we study circuits?

- To save time  ,
- To save money  .