

Krátky popis procesů testování
používaných tranzistorovým testerem AVR
Verze 1.11.k

Karl-Heinz Kübbeler
kh_kuebbeler@web.de

Překlad
ing.František Procházka
fandapro@seznam.cz

6. dubna 2015



Edited with **Infix PDF Editor**
- free for non-commercial use.

To remove this notice, visit:
www.iceni.com/unlock.htm

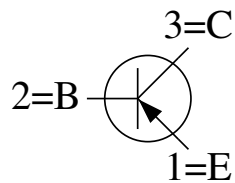
□ Obsah

- | | |
|---|---|
| 1. □ testování bipolárních tranzistorů | 2 |
| 2. testování tranzistorů řízených polem | 6 |

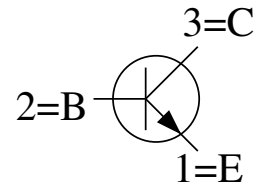
□ Hlava 1

□ testování bipolárních tranzistorů

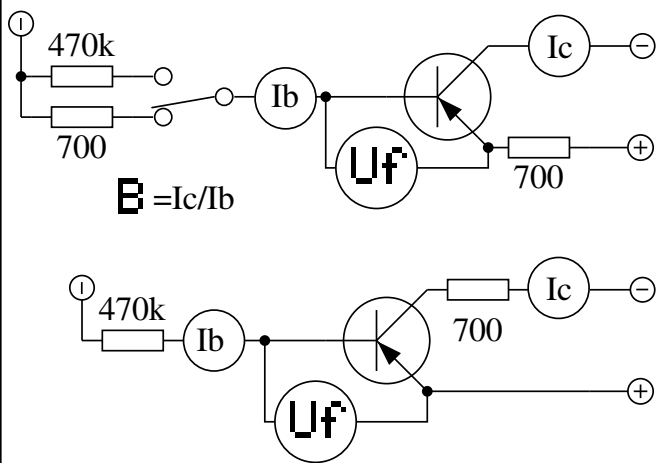
BC640



BC639

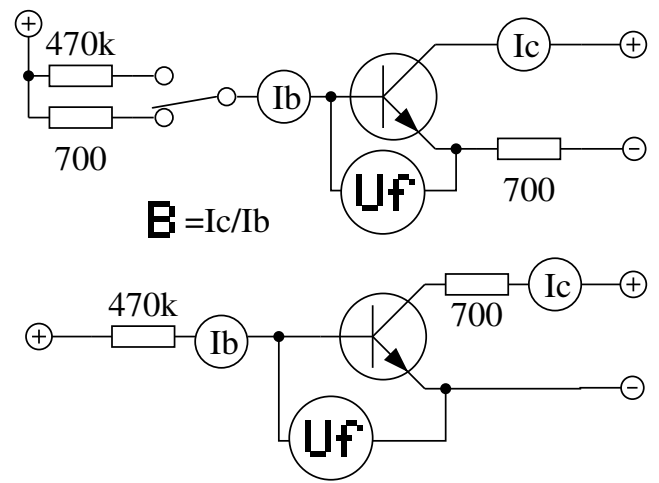


PNP 123=EBC
B=185 $U_f=607\text{mV}$



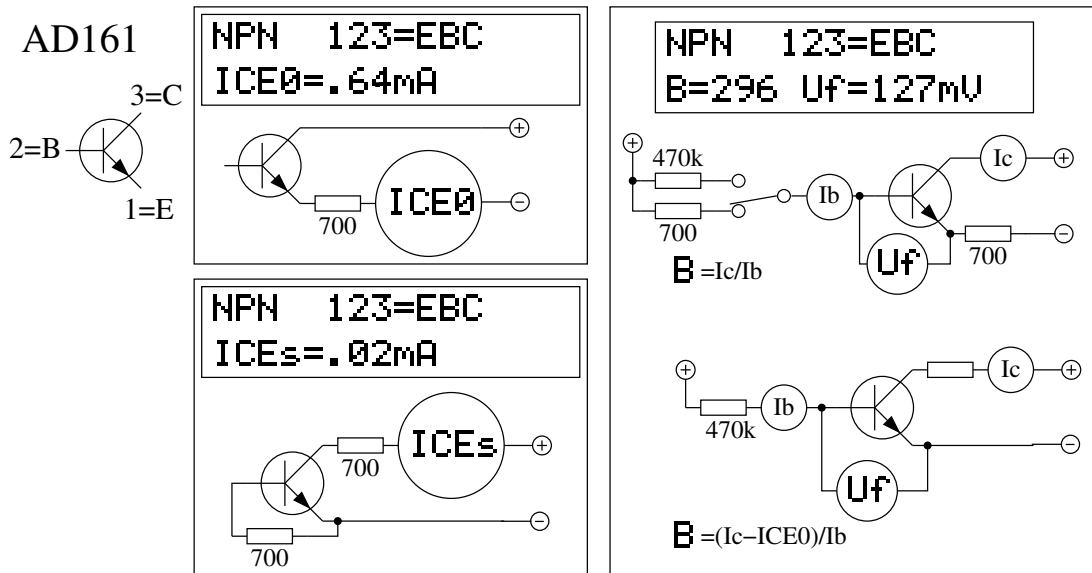
(a) PNP

NPN 123=EBC
B=216 $U_f=632\text{mV}$

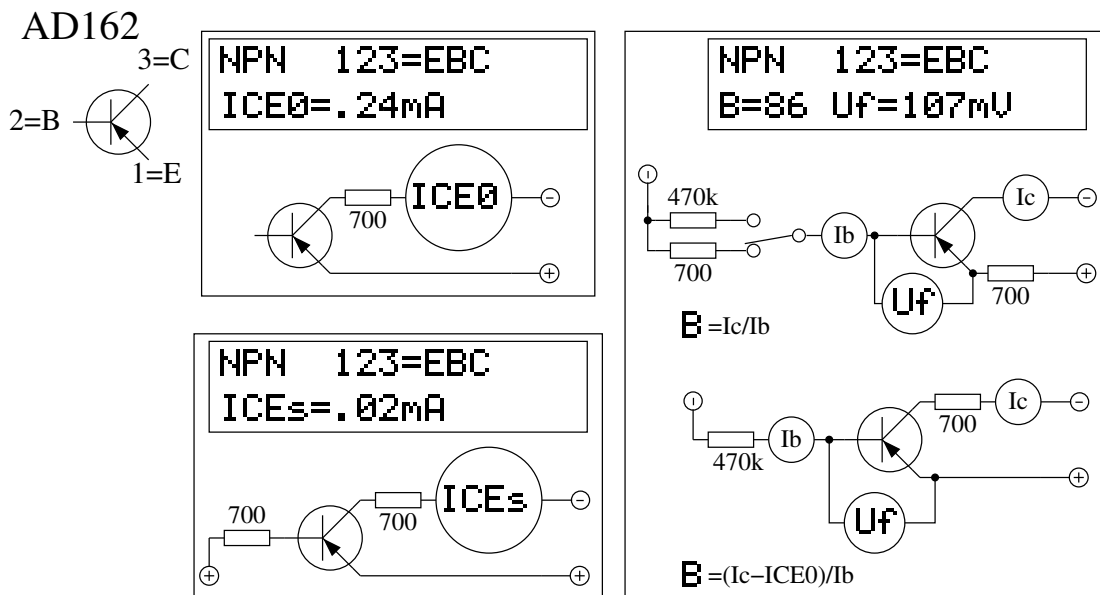


(b) NPN

□ br. 1.1 Křemíkové □ bipolární tranzistory

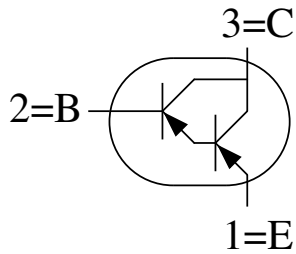


□ Obr. 1.2 □ Germaniové □ NPN □ ramzistry

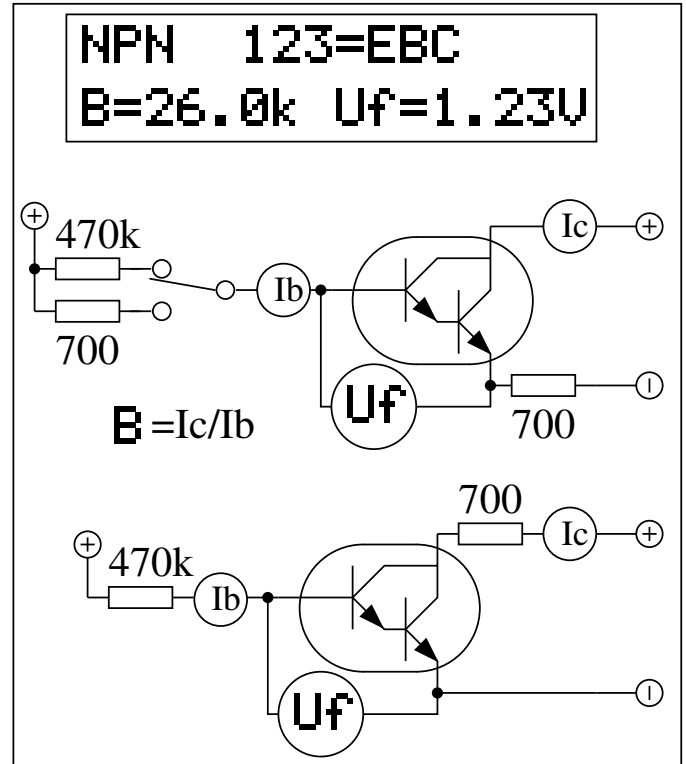
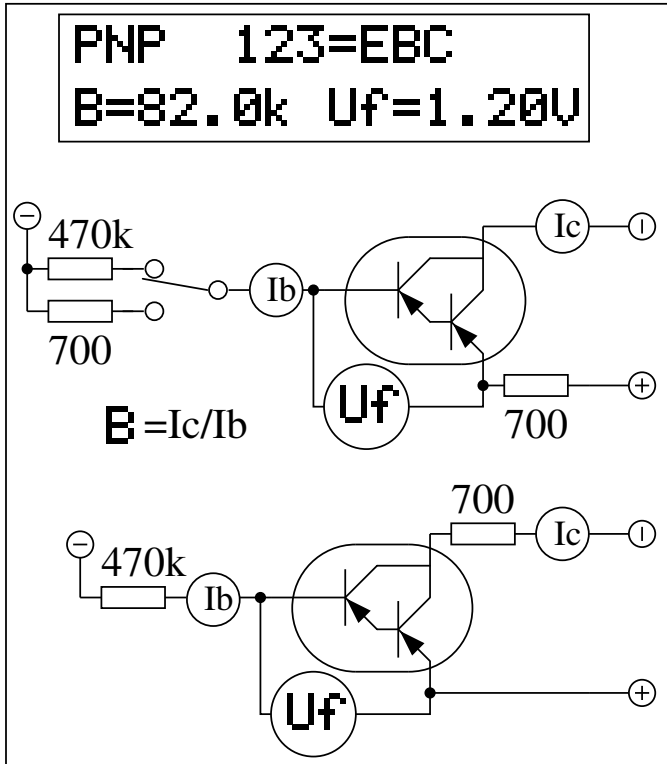
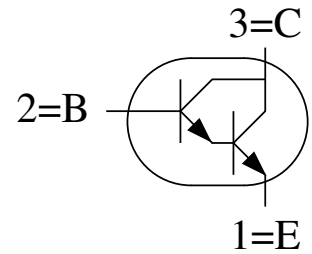


□ Obr. 1.3 □ Germaniové □ PNP tranzistory

BC516



BC517

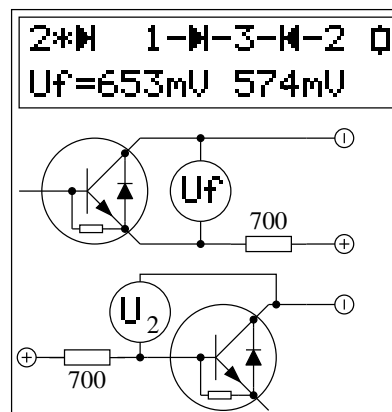
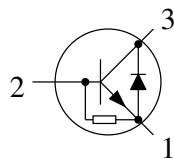


(a) PNP

(b) NPN

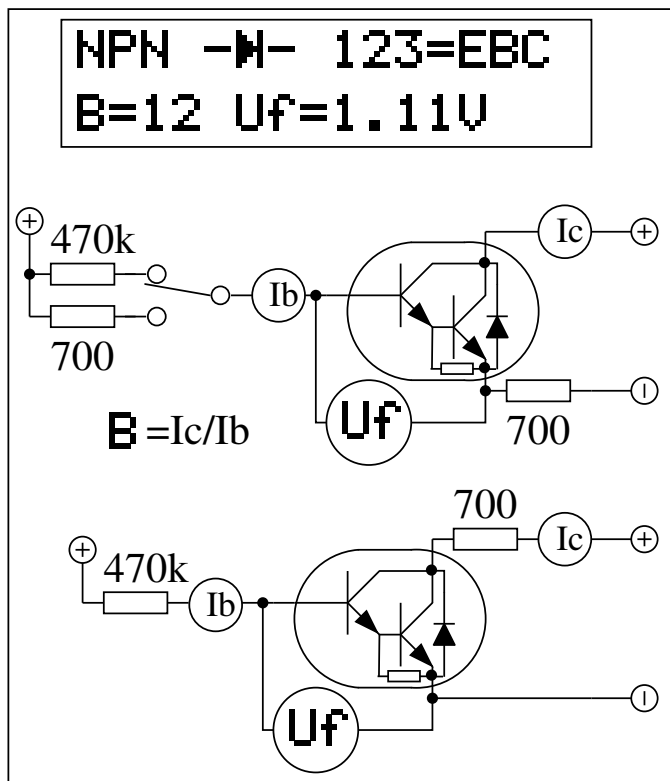
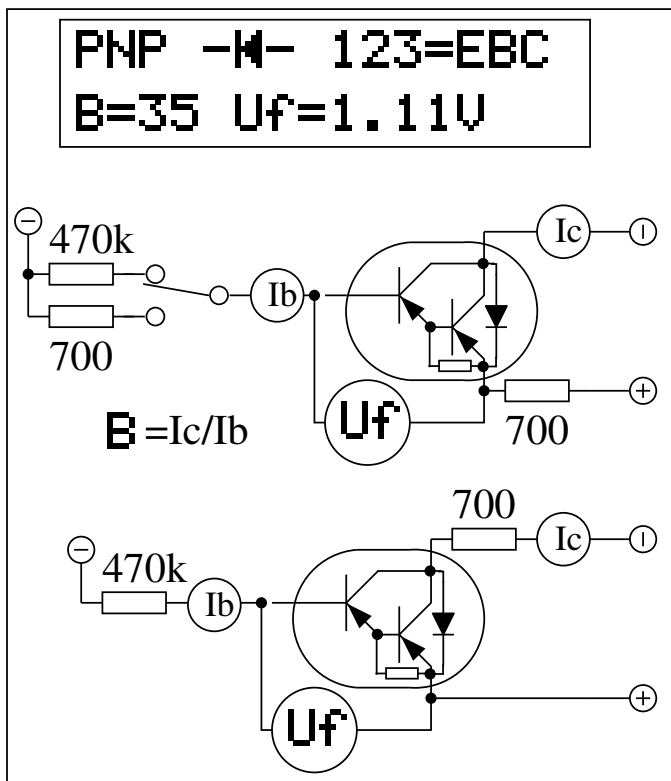
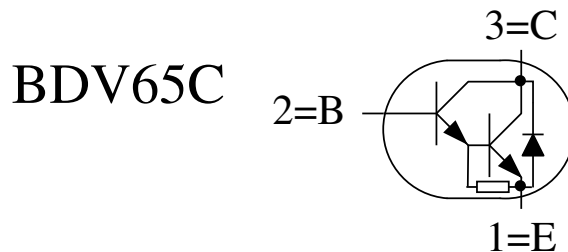
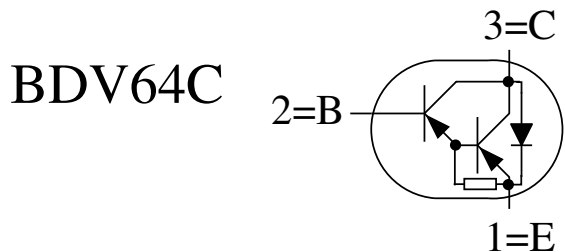
□br. 1. □ Křemíkové □ tranzistory □ Darlington

BU508D



2*N 1-C-2
41.5Ω

Obr. 1.5. NPN Tranzistory s diodou a odporem



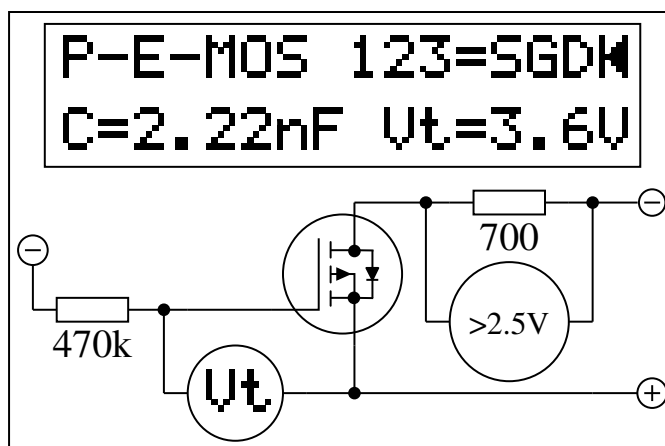
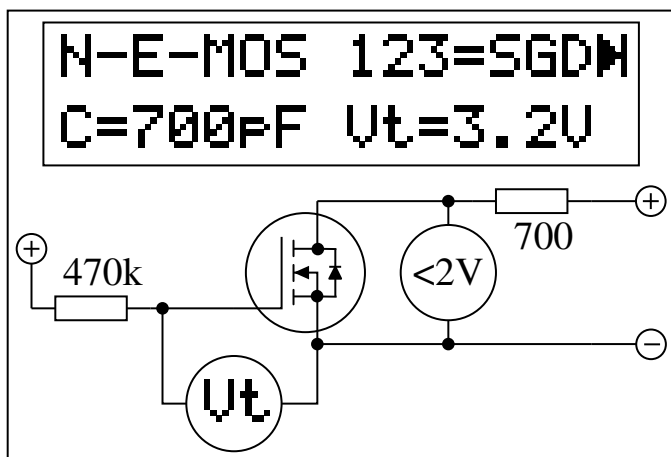
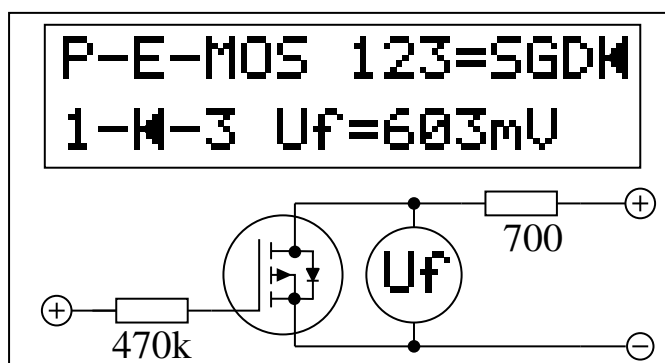
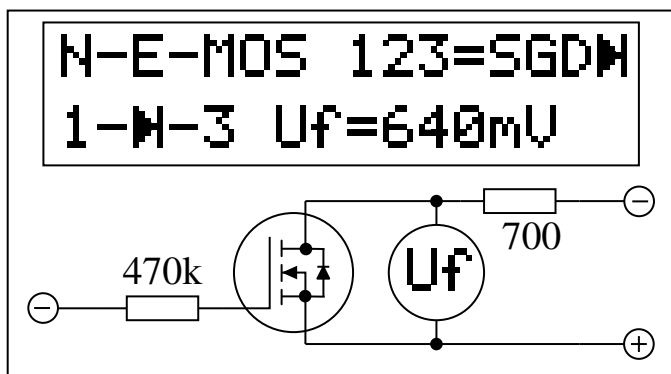
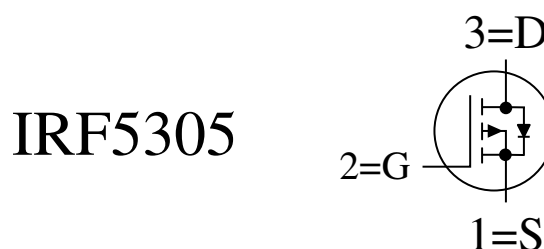
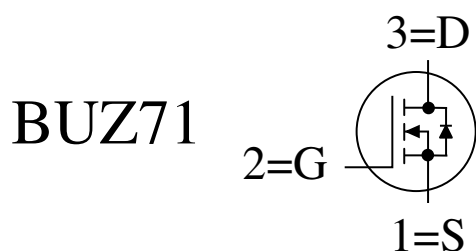
(a) PNP

(b) NPN

□ br. 1.6 Křemíkové □ tranzistory □ Darlington

Hlava 2

Testování tranzistorů řízených polem

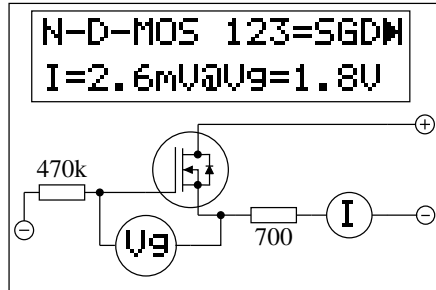
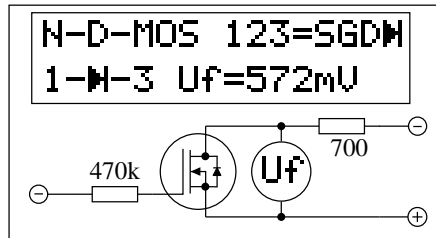
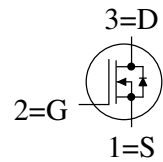


(a) N-E-MOSFET

(b) P-E-MOSFET

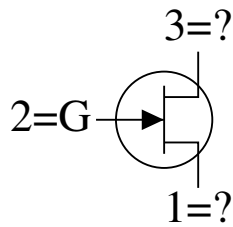
Obr. 2.1. Výkonové MOSFET Tranzistory

BSS169

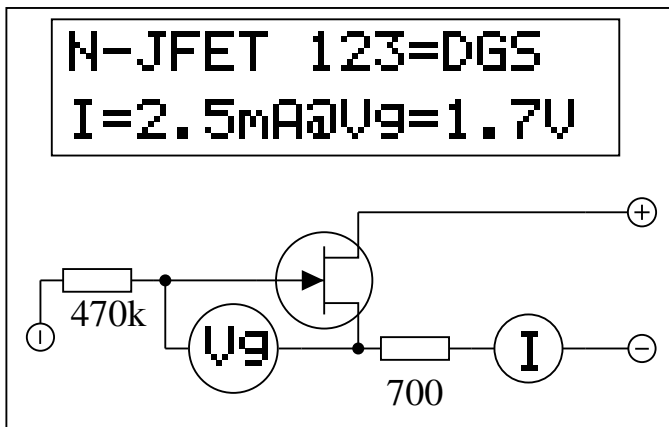
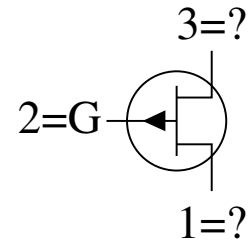


Obr. 2.2. N-D-MOSFET

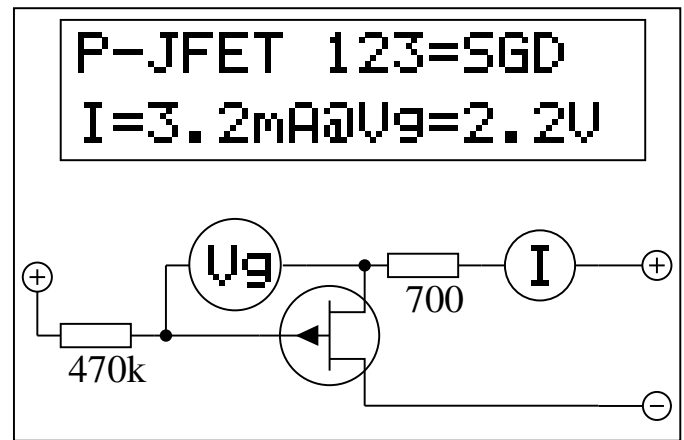
BF245



J175



(a) N-JFET



(b) P-JFET

Obr. 2.3. JFET tranzistory

□Literatura

- [1] Markus Frejek AVR-Transistortester,. Embedded Projects Journal, 11. Ausgabe, 2011
- [2] Atmel Corporation 8-bit AVR with 8KBytes In-System Programmable Flash - ATmega8(L),. Manual, 2486Z-AVR-02/11, 2011
- [3] Atmel Corporation 8-bit AVR with 4/8/16/32KBytes In-System Programmable Flash - ATmega48 - ATmega328,. Manual, 8271D-AVR-05/11, 2011
- [4] <http://en.wikibooks.org/wiki/LaTeX> LaTeX documentation,. Guide to the LaTeX markup language, 2012
- [5] Wikipedia http://de.wikipedia.org/wiki/Equivalent_Series_Resistance Erl uterung zum ESR. Normung und Ersatzschaltbild eines Kondensators, 2012
- [6] <http://www.xfig.org/userman> Xfig documentation,. Documentation of the interactive drawing tool xfig, 2009
- [7] <http://docs.gimp.org/2.6/de> gimp documentation. Documentation of the GNU Image Manipolation Program, 2010
- [8] <http://www.mikrocontroller.net/articles/AVR-Transistortester> Online Dokumentation des Transistortester, Online Article, 2009-2011
- [9] <http://www.mikrocontroller.net/articles/AVRDUDE> Online Dokumentation des avrdude programmer interface, Online Article, 2004-2011
- [10] <http://www.mikrocontroller.net/topic/131804> Thread von Markus F., Forum thread, 2009
- [11] http://www.mikrocontroller.net/articles/AVR_Transistortester Kurze Eigenschaftenbeschreibung des TransistorTester von Karl-Heinz K., Online Article, 2012
- [12] <http://www.mikrocontroller.net/topic/248078> Thread von Karl-Heinz K., Thread und Software Versionen, 2012