

Short description of the measurements  
with the Transistor Tester  
Version 1.11k

Karl-Heinz K"ubbeler  
kh\_kuebbeler@web.de

December 21, 2014

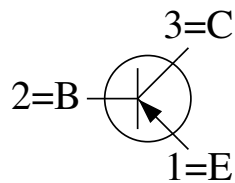
# Contents

1	Beschreibung der BJT-Messungen	2
2	Description of MOSFET measurements	6

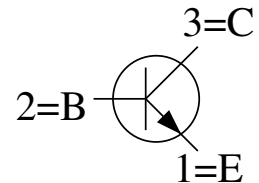
# Chapter 1

## Beschreibung der BJT-Messungen

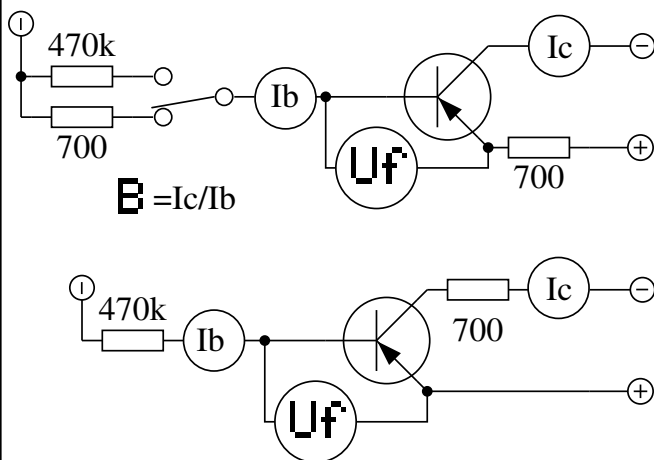
BC640



BC639

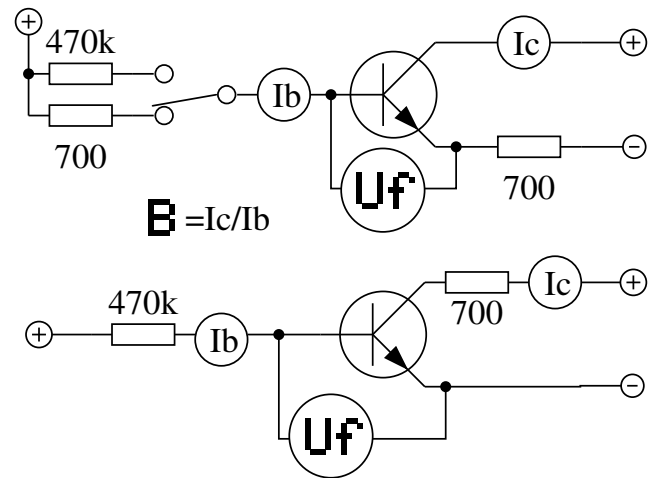


PNP 123=EBC  
 $B=185$   $U_f=607\text{mV}$



(a) PNP

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



(b) NPN

Figure 1.1. Bipolar Silizium transistors

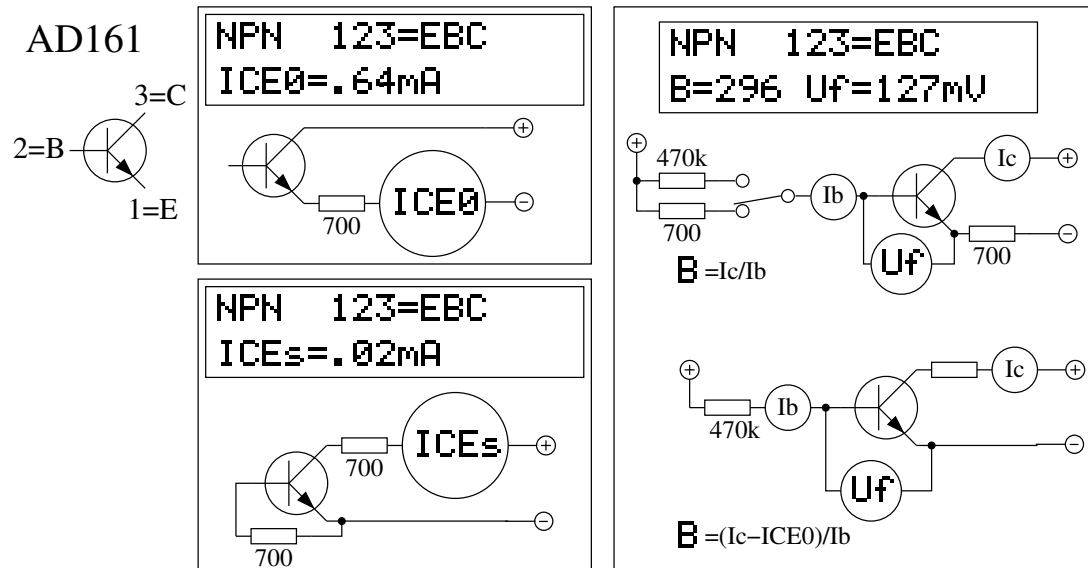


Figure 1.2. NPN Germanium transistor

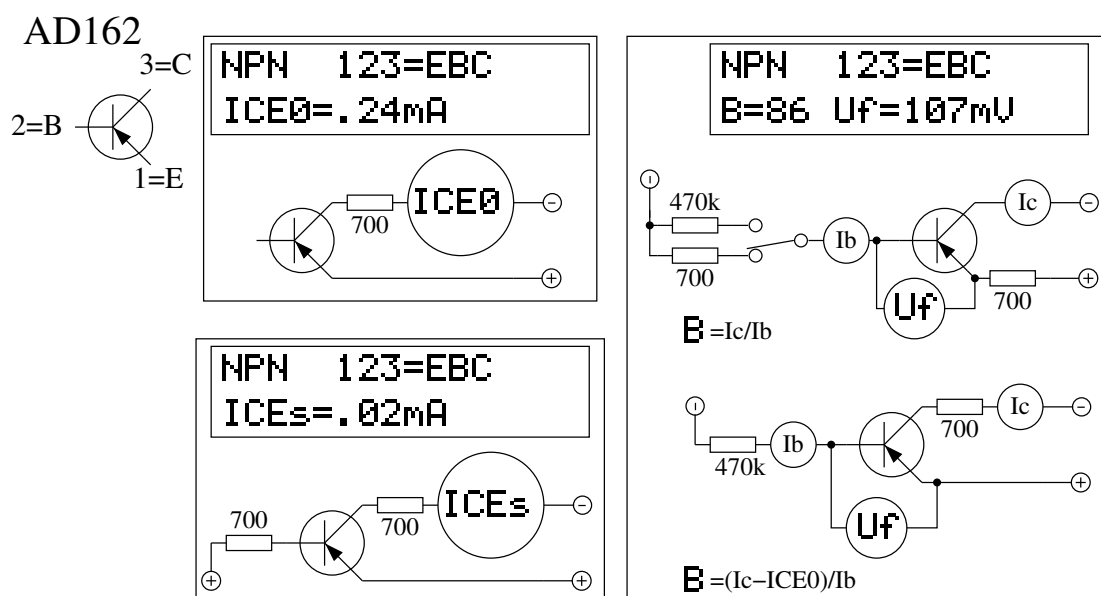
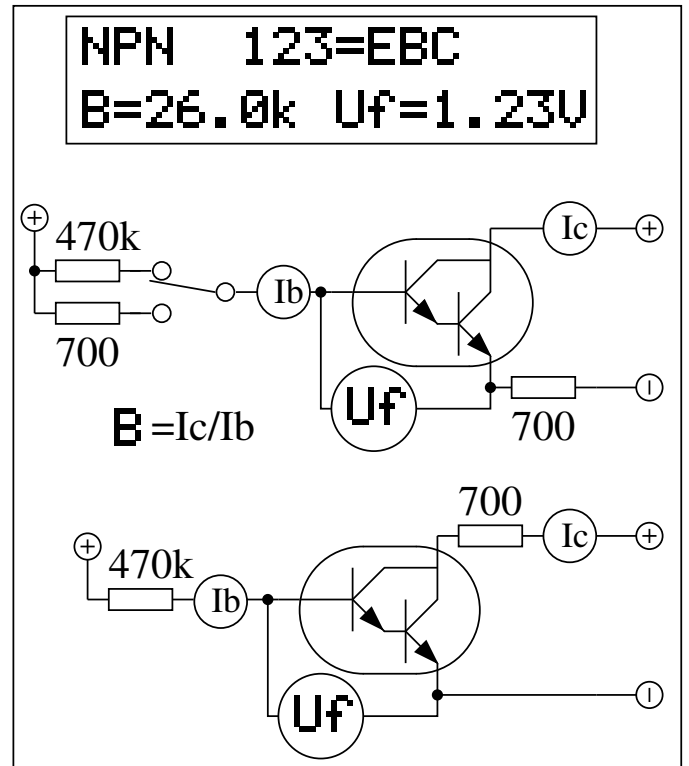
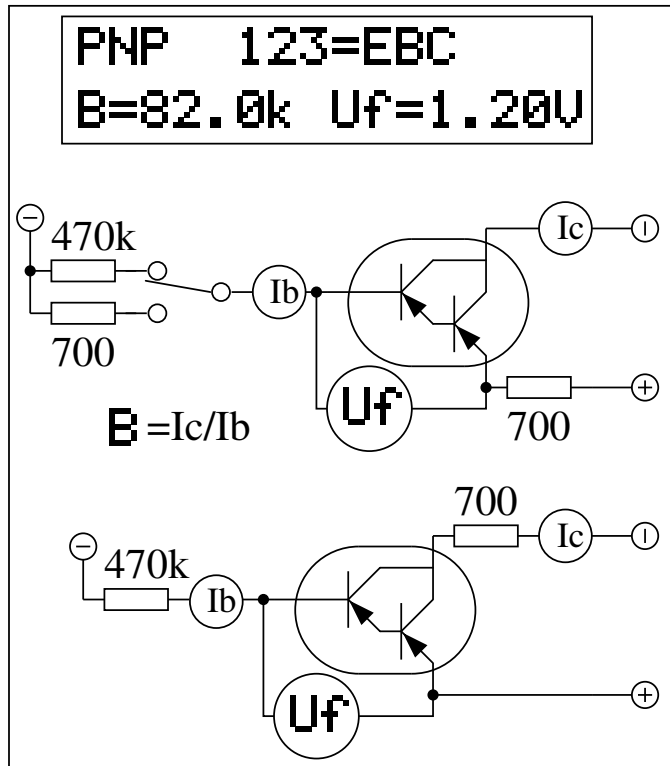
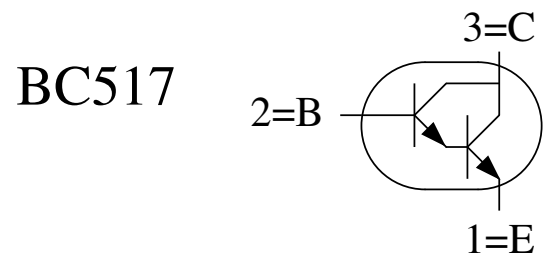
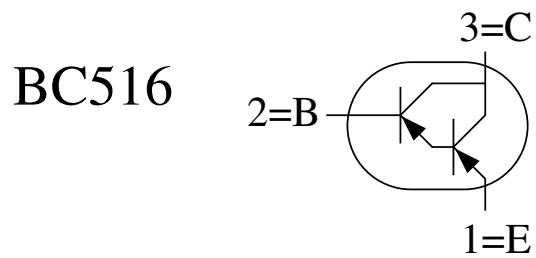


Figure 1.3. PNP-Germanium-Transistor



(a) PNP

(b) NPN

Figure 1.4. Silizium Darlington transistors

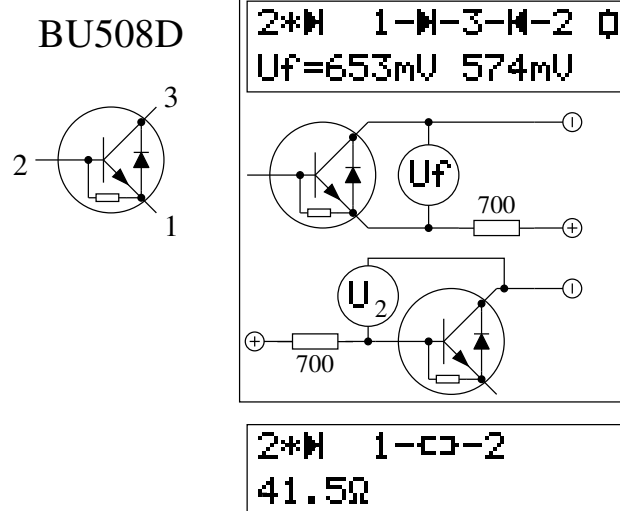
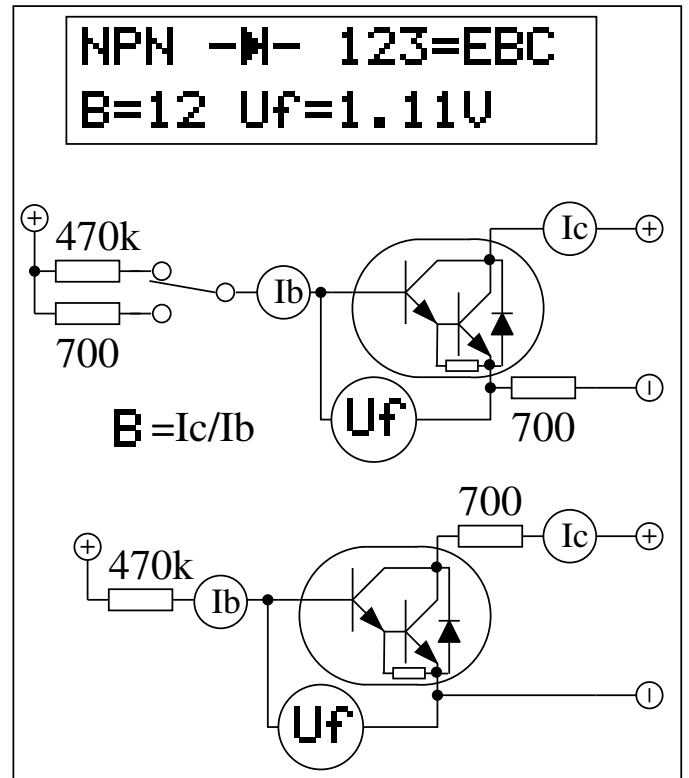
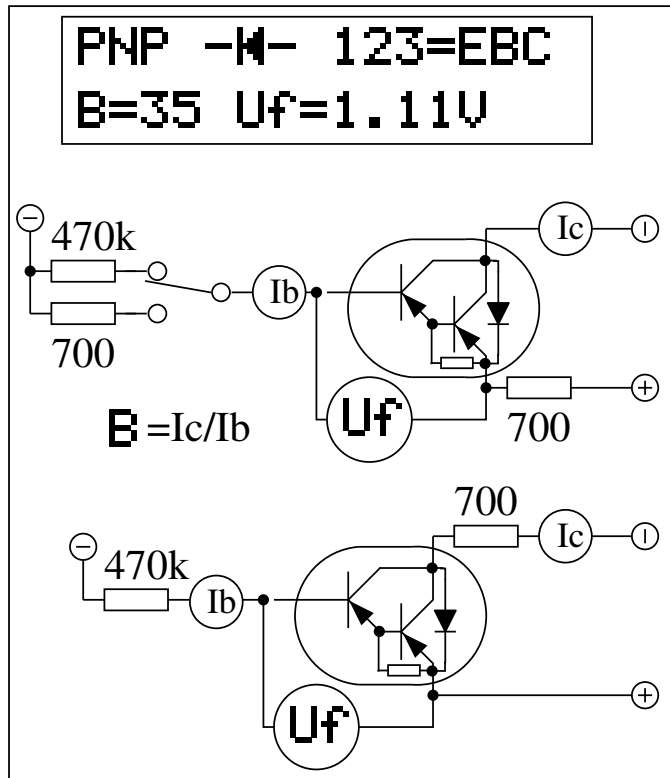
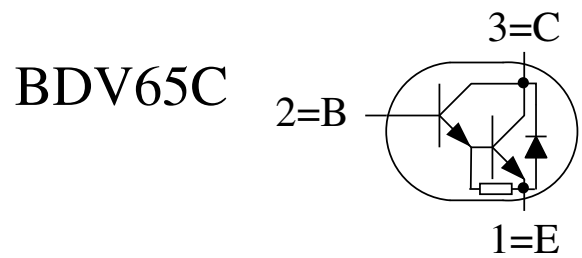
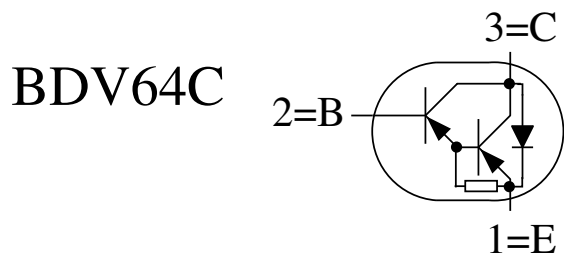


Figure 1.5. NPN-Transistor with diode and resistor



(a) PNP

(b) NPN

Figure 1.6. Silizium Darlington transistors

# Chapter 2

## Description of MOSFET measurements

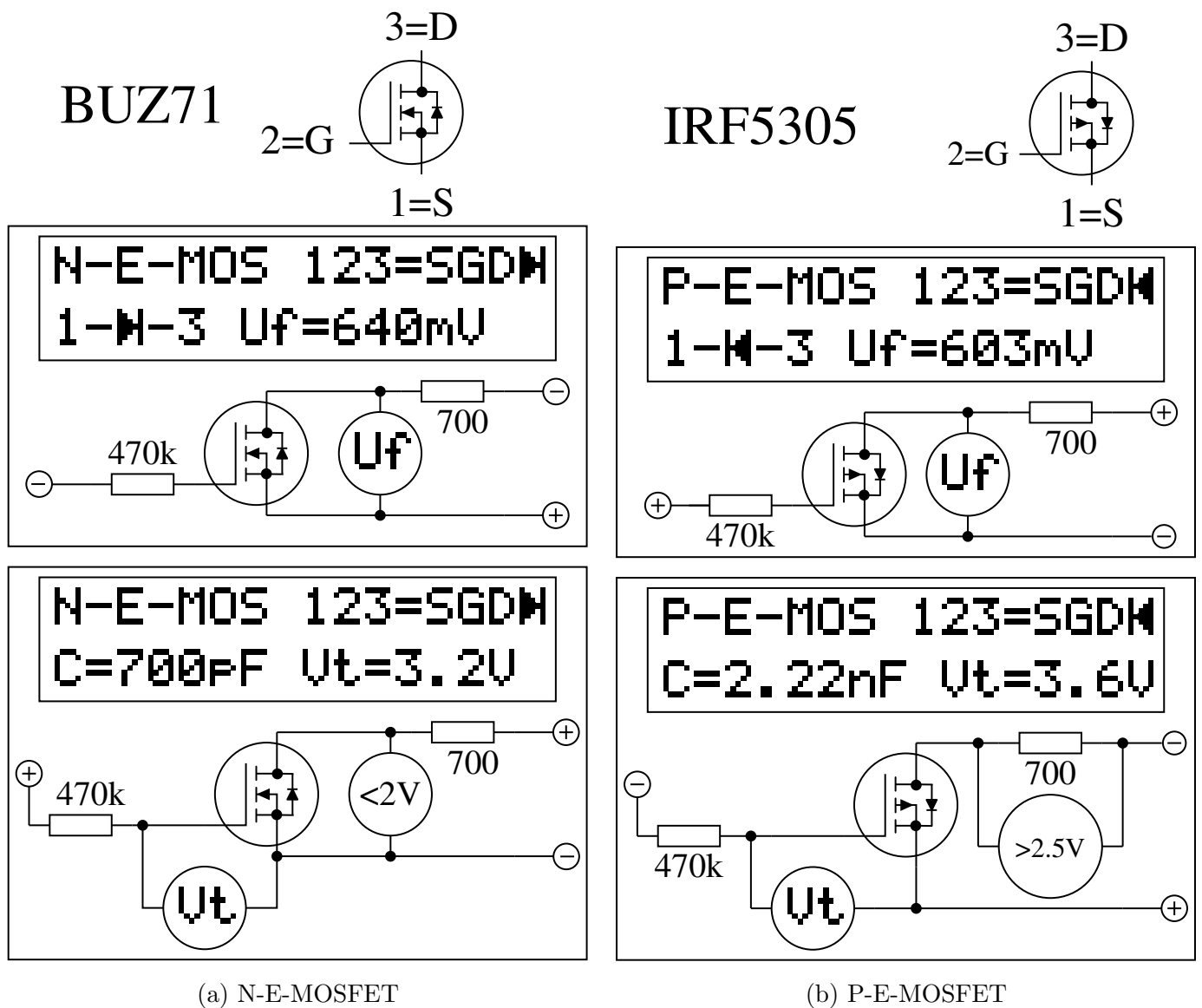


Figure 2.1. Enhancement MOSFET transistors

BSS169

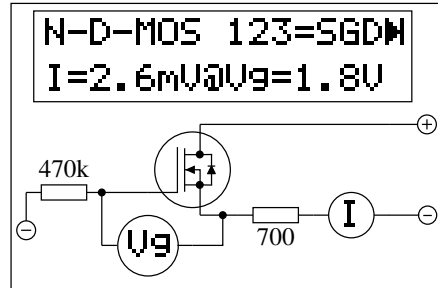
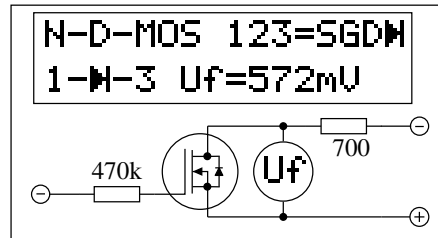
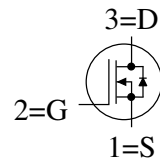
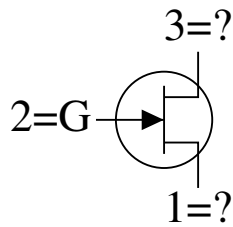
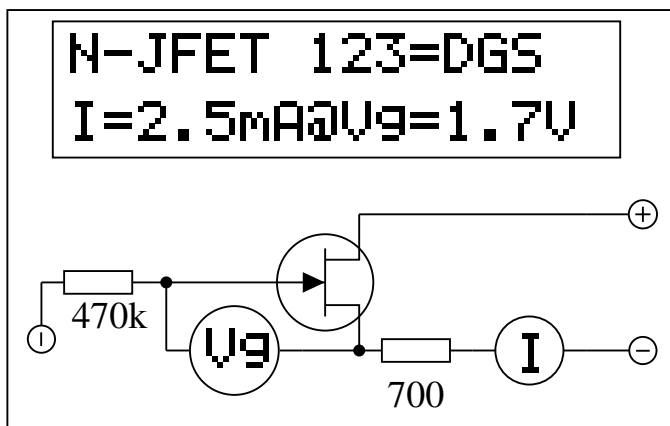
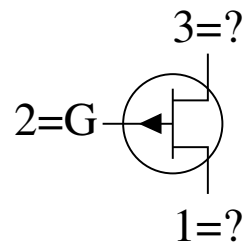


Figure 2.2. N-D-MOSFET

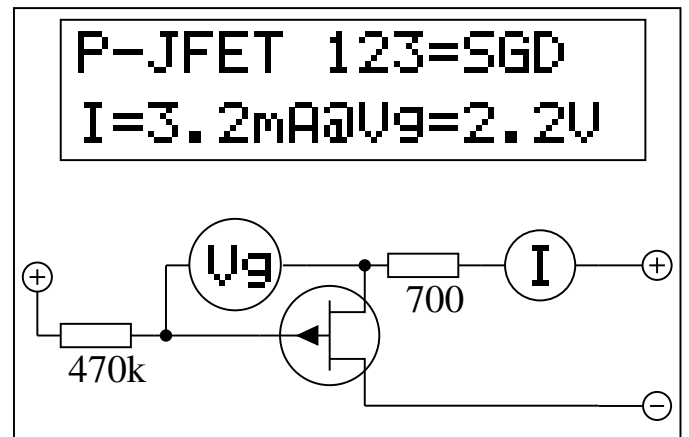
BF245



J175



(a) N-JFET



(b) P-JFET

Figure 2.3. JFET transistors



# Bibliography

- [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](http://de.wikipedia.org/wiki/Equivalent_Series_Resistance) *Erluterung 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 Manipulation Program, 2010
- [8] <http://www.mikrocontroller.net/articles/AVR-Transistortester> *Online documentation of the Transistor Tester*, Online Article, 2009-2011
- [9] <http://www.mikrocontroller.net/articles/AVRDUDE> *Online documentation of the 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](http://www.mikrocontroller.net/articles/AVR_Transistortester) *Short decription of the TransistorTester von Karl-Heinz K.*, Online Article, 2012
- [12] <http://www.mikrocontroller.net/topic/248078> *Thread von Karl-Heinz K.*, Thread and early Software versions, 2012