Krátky popis procesů testování používaných tranzistorovým testerem AVR

Verze 1.11.k

Karl-Heinz Kübbeler
kh_kuebbeler@web.de

Překlad

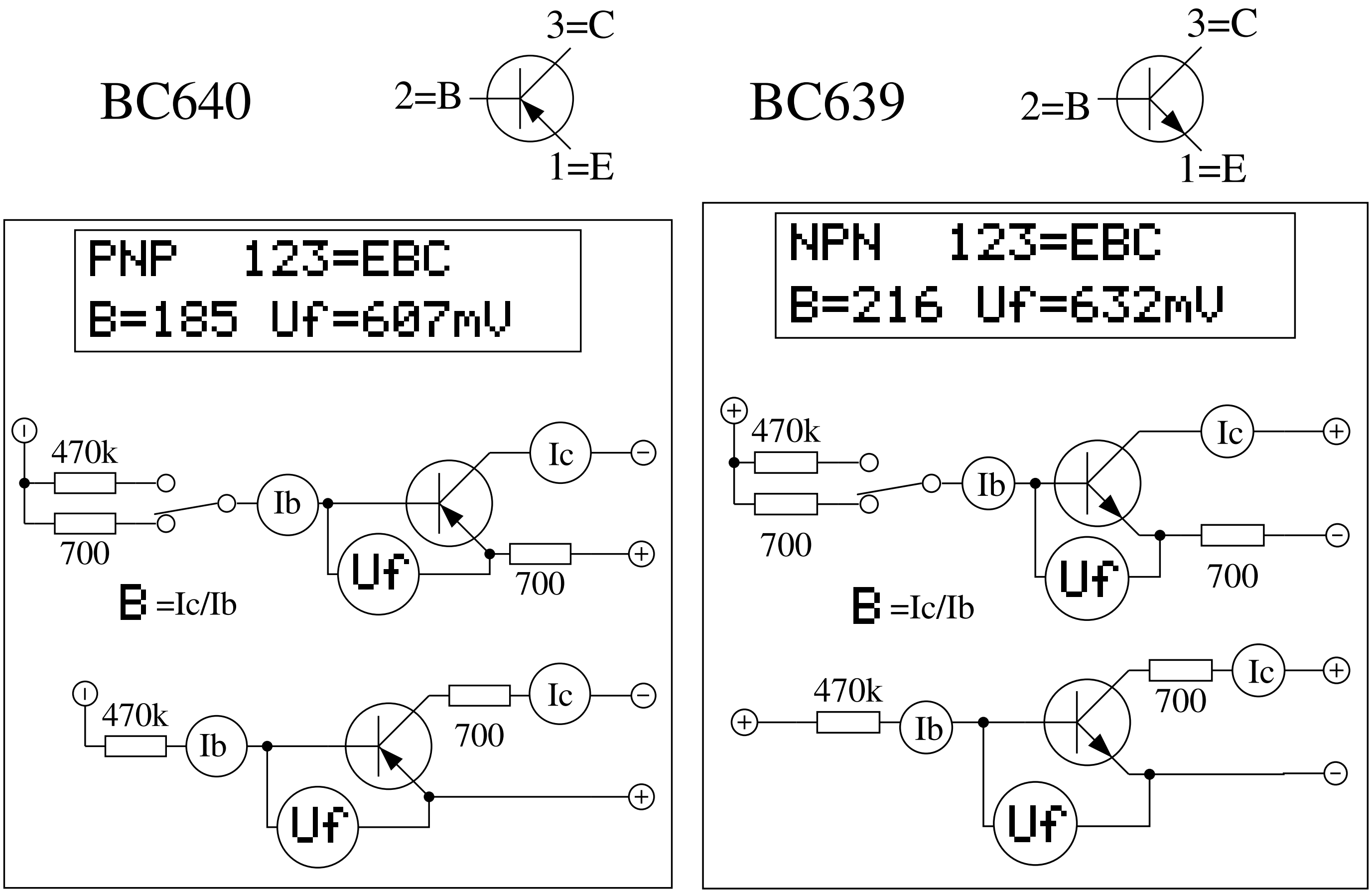
ing.František Procházka
fandapro@seznam.cz

6. dubna 2015

Obsah

Hlava 1

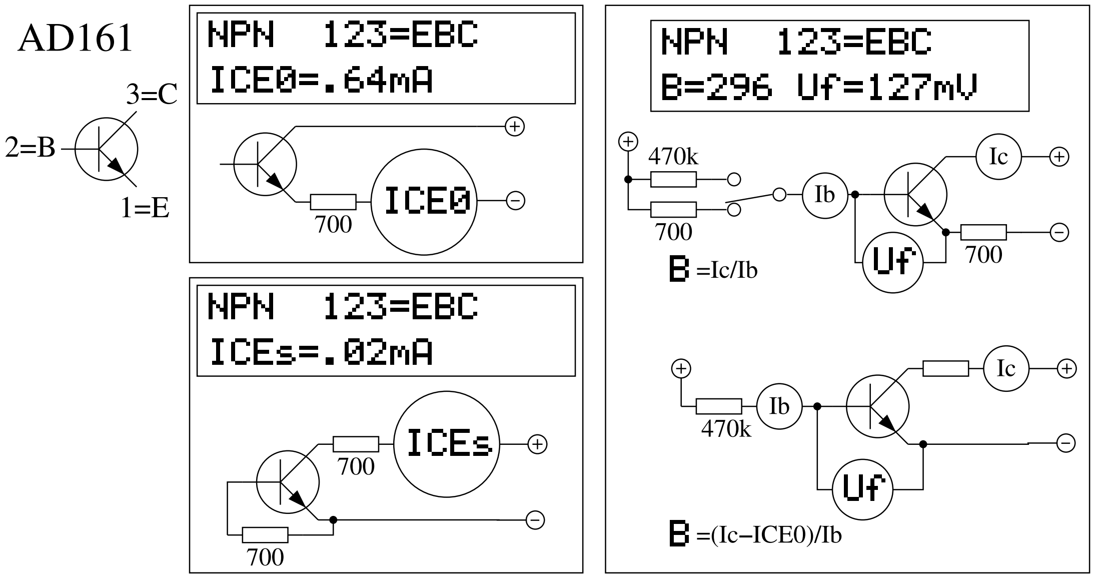
testování bipolárních tranzistorů



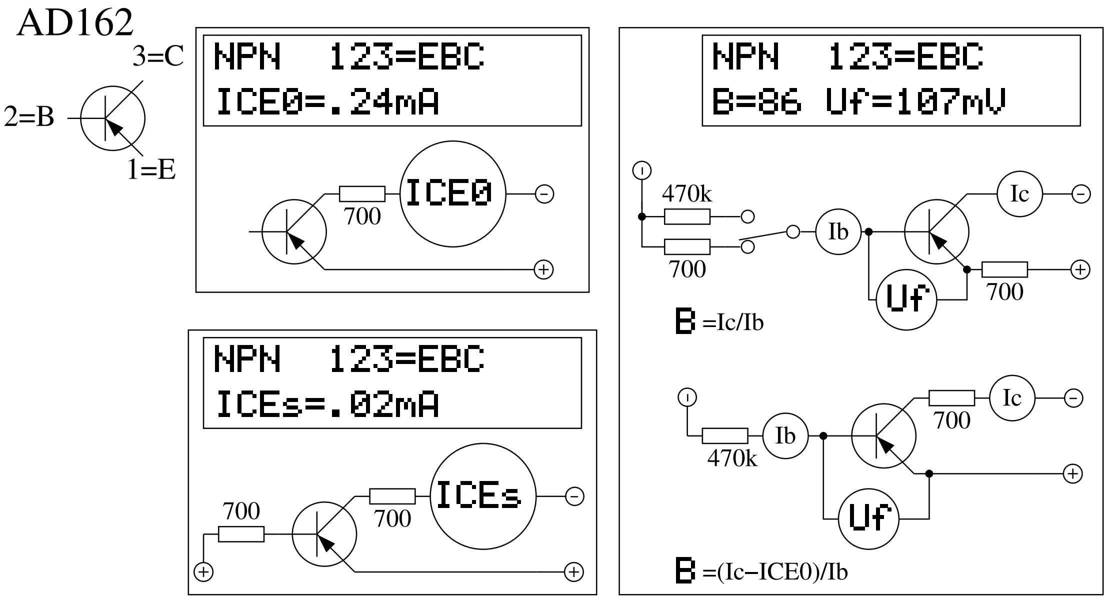
(a) PNP

(b) NPN

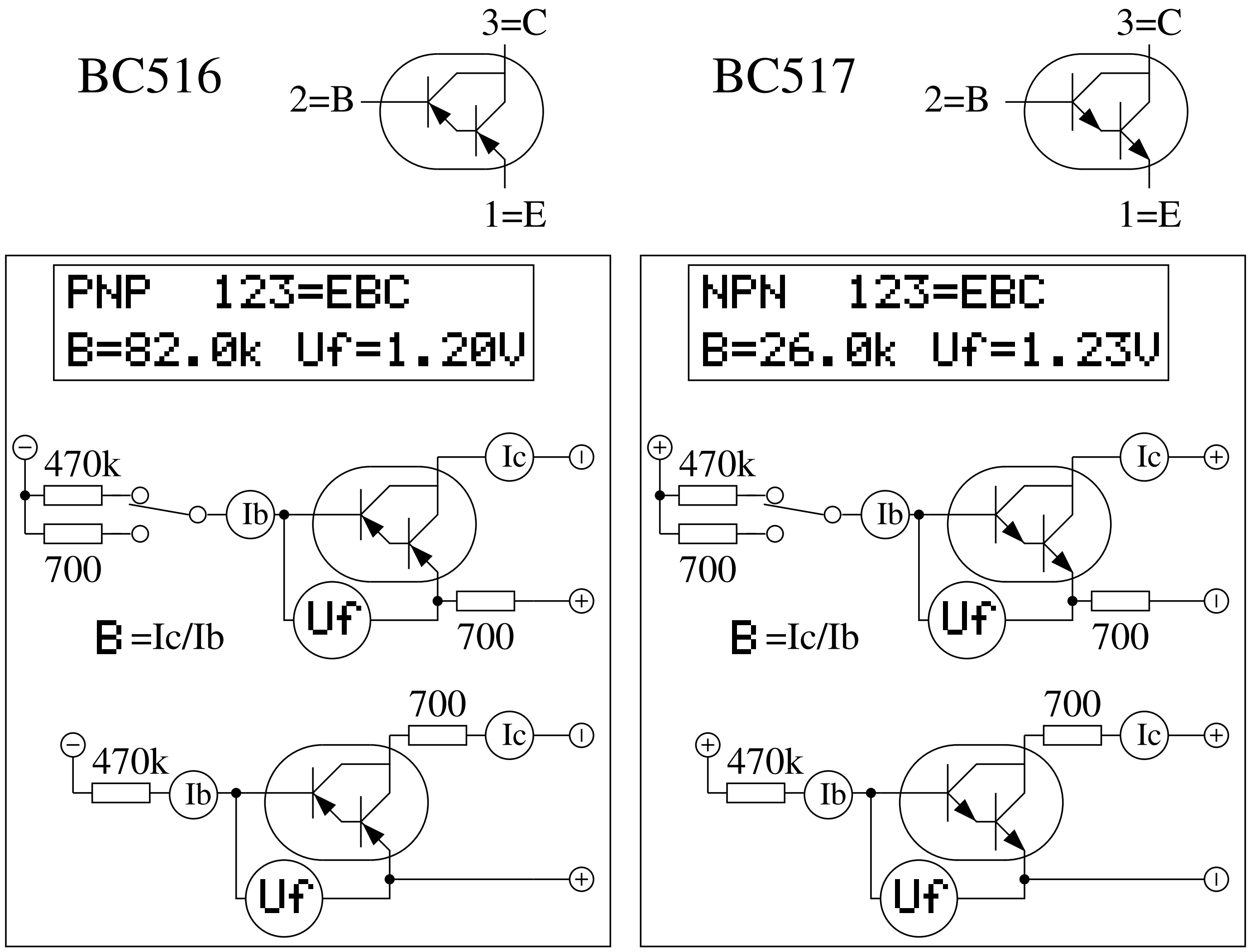
Obr. 1.1 Křemíkové bipolární tranzistory



Obr. 1.2 Germaniové NPN ramzistory



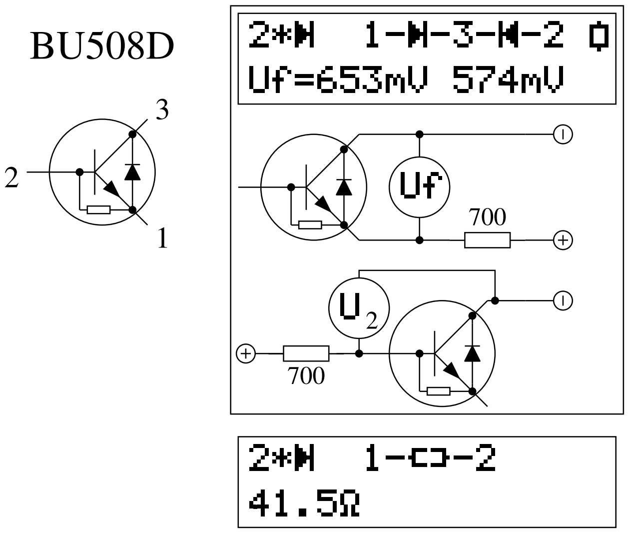
Obr. 1.3 Germaniové PNP tranzistory



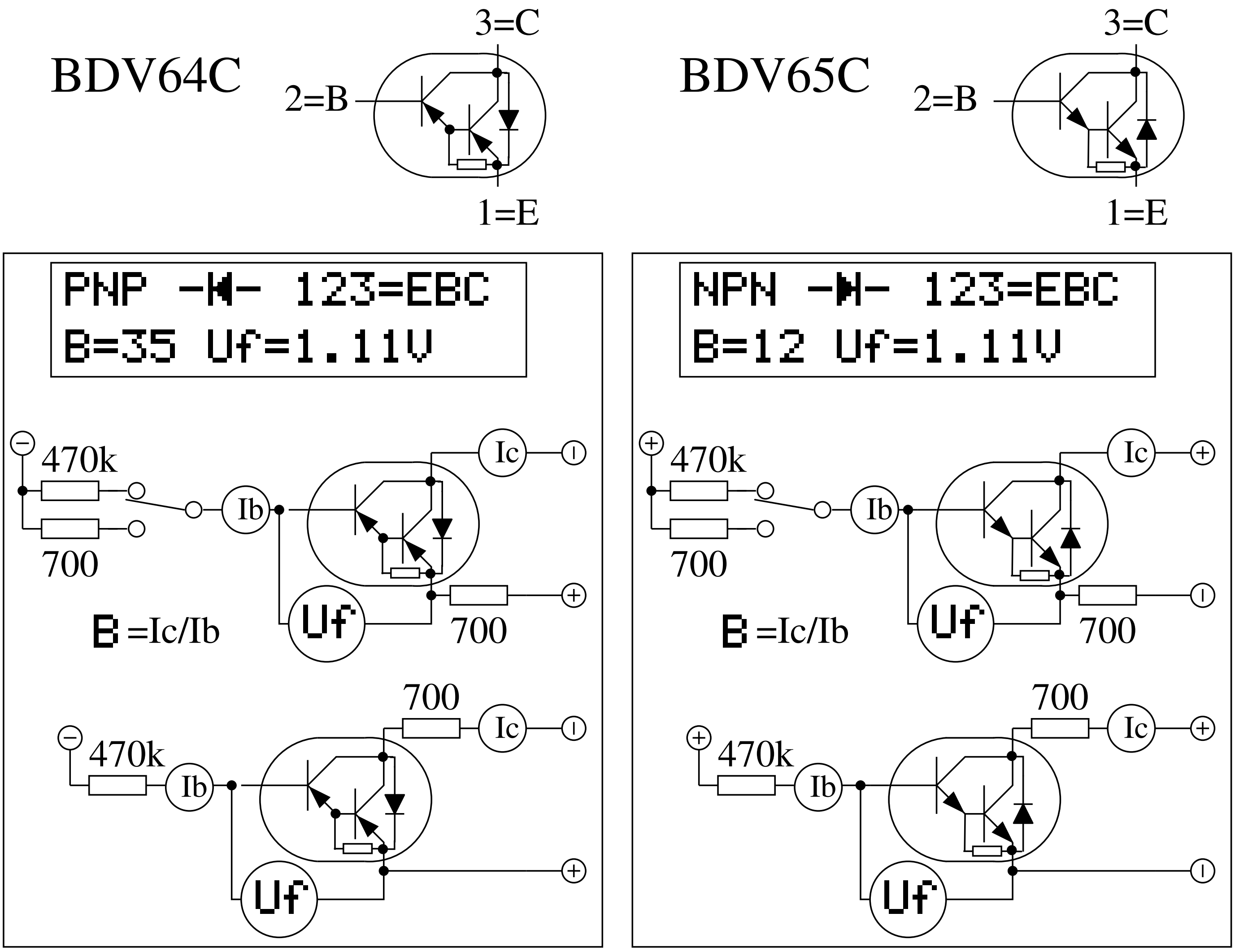
(a) PNP

(b) NPN

□br. 1.□ Křemíkové□ tranzistory □Darlington



Obr. 1.5. NPN Tranzistory s diodou a odporem

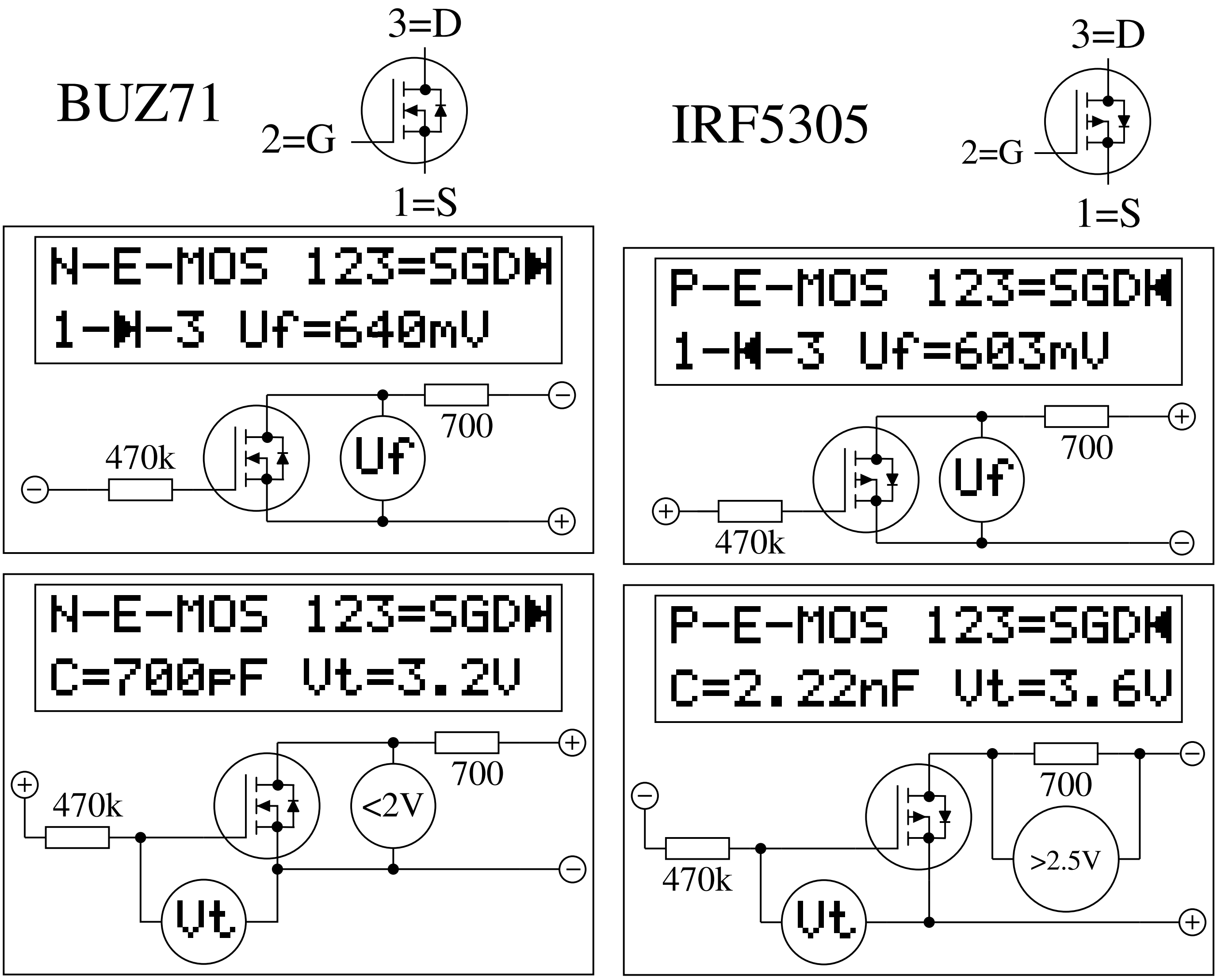


(a) PNP (b) NPN

Obr. 1.6 Křemíkové tranzistory Darlington

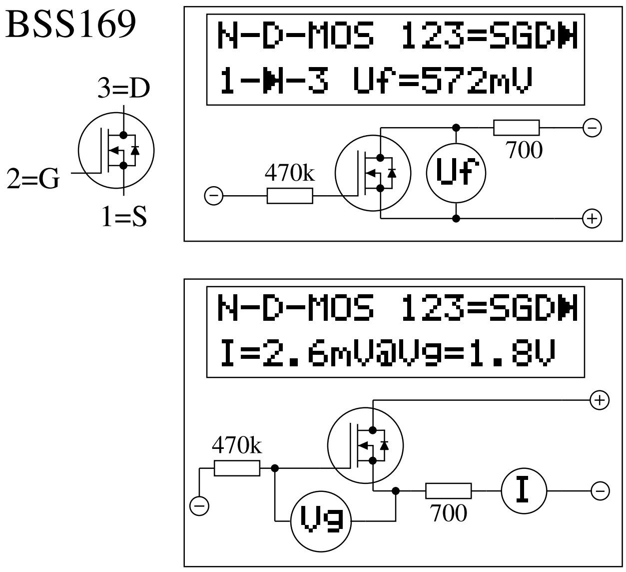
Hlava 2

Testovámí tranzistorů řízených polem



(a) N-E-MOSFET (b) P-E-MOSFET

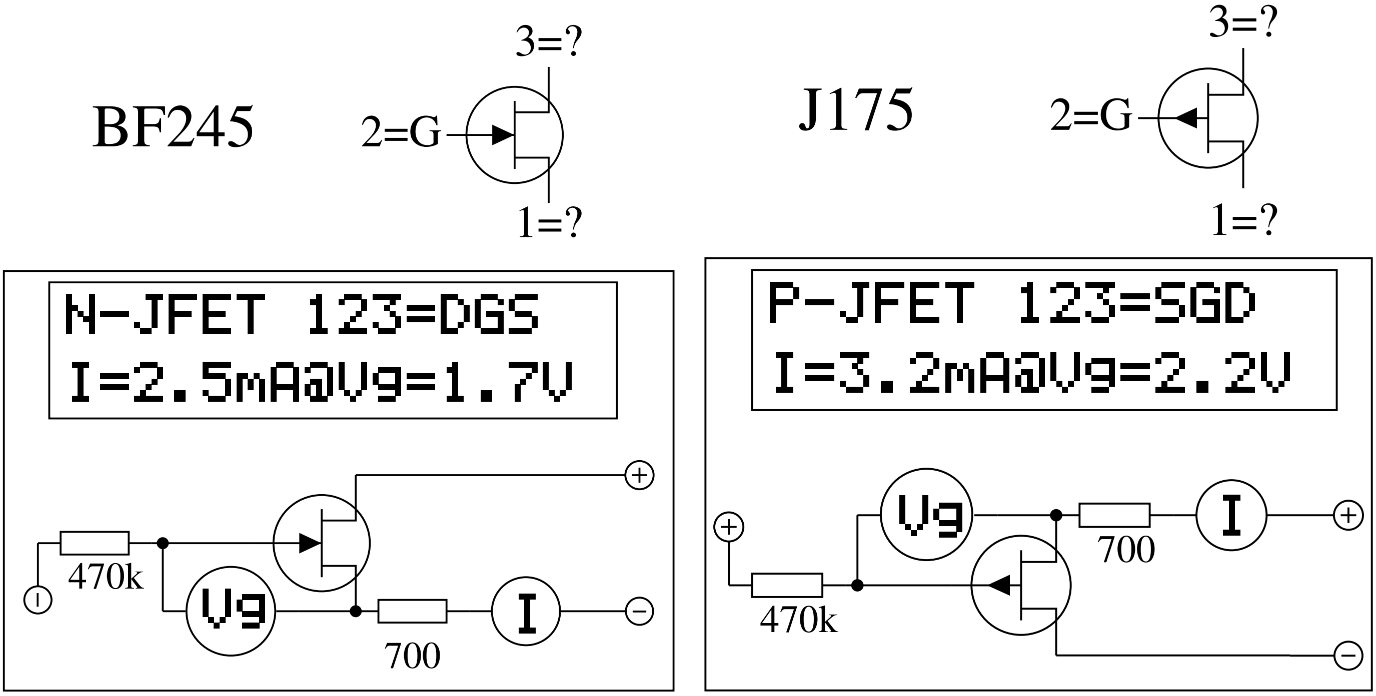
Obr. 2.1. Výkonové MOSFET Tranzistory



```
N-D-MOS 123=SGD▶|
1-▶|-3 Uf=572mV
```

```
N-D-MOS 123=SGD▶|
I=2.6mV@Vg=1.8V
```

Obr. 2.2. N-D-MOSFET



```
N-JFET 123=DGS
I=2.5mA@Vg=1.7V
```

```
P-JFET 123=SGD
I=3.2mA@Vg=2.2V
```

(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 ErlΓ¤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