

Краткое описание процедур тестирования  
используемых ТранзисторТестером  
Version 1.11k

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14 марта 2016 г.

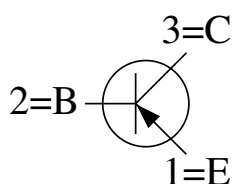
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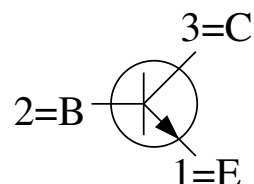
# Глава 1

## Тестирование биполярных транзисторов

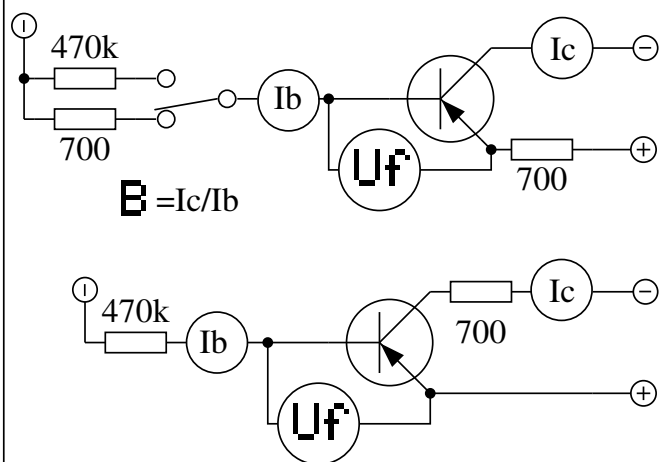
BC640



BC639

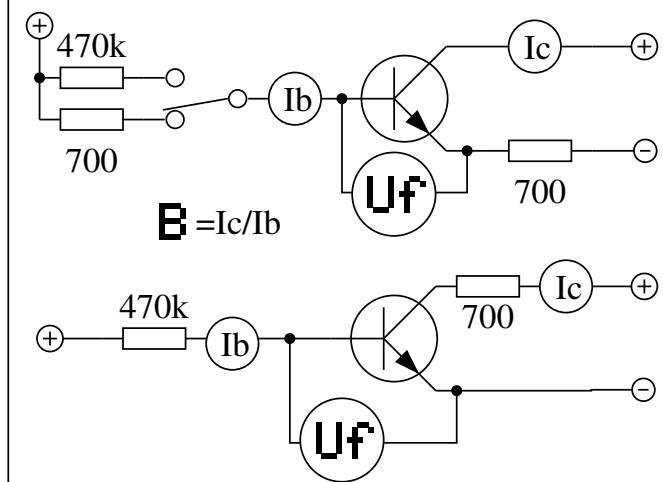


PNP 123=EBC  
B=185 Uf=607mV



(a) PNP

NPN 123=EBC  
B=216 Uf=632mV



(b) NPN

Рис. 1.1. Кремниевые биполярные транзисторы

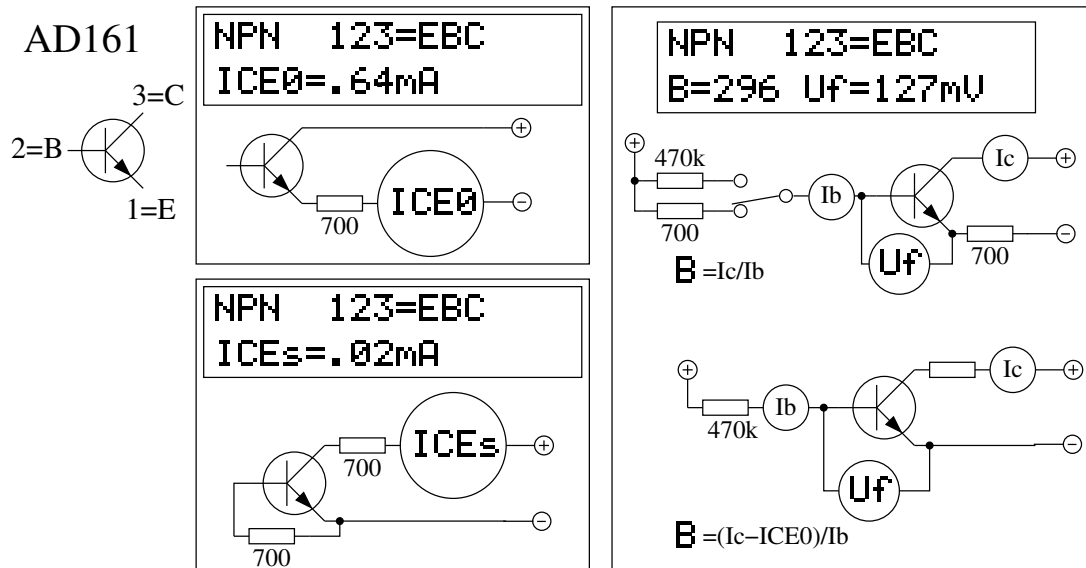


Рис. 1.2. Германиевые NPN-транзисторы

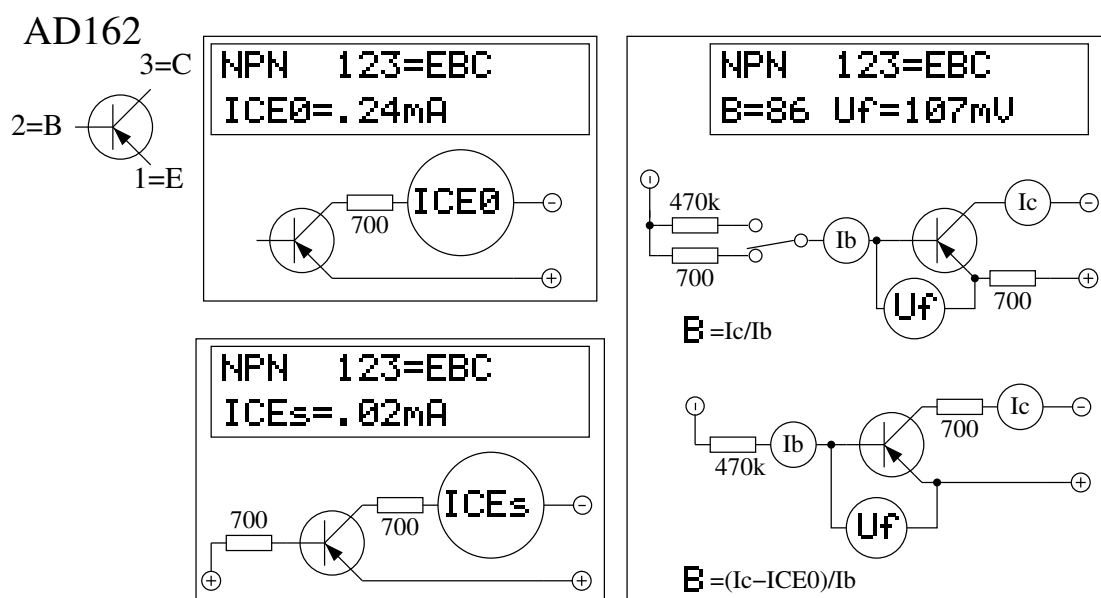
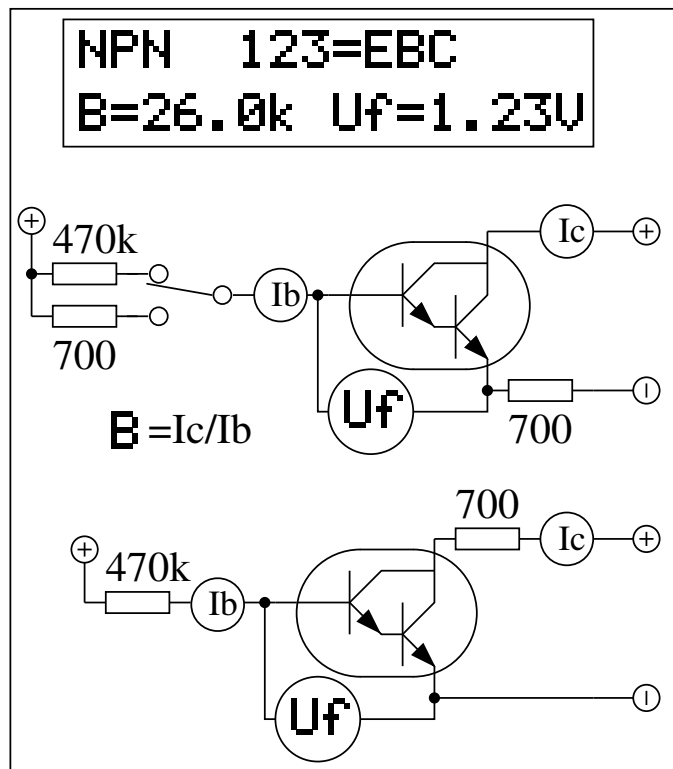
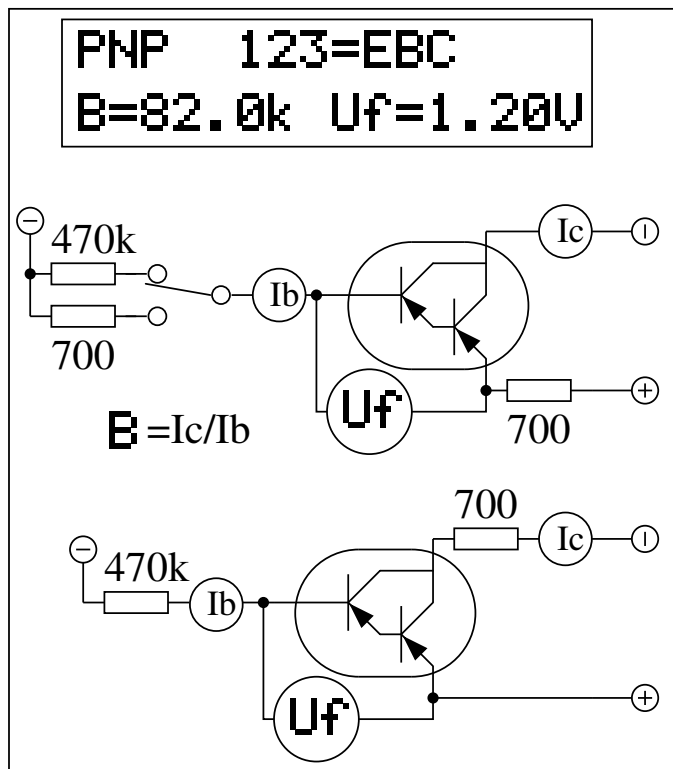
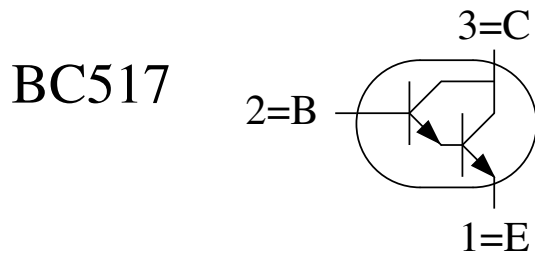
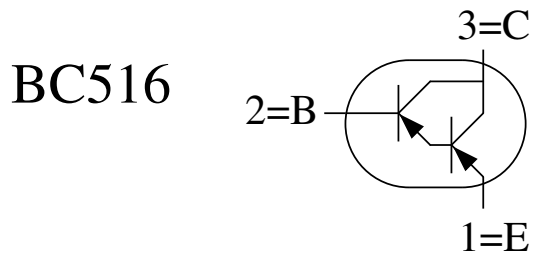


Рис. 1.3. Германиевые PNP-Транзисторы



(a) PNP

(b) NPN

Рис. 1.4. Составные кремниевые транзисторы

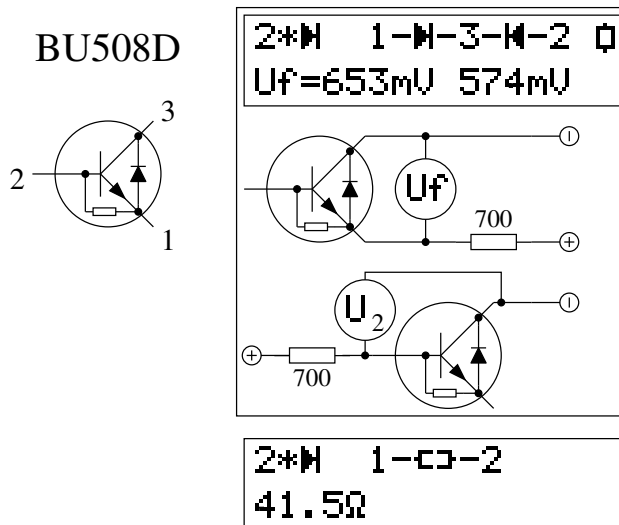
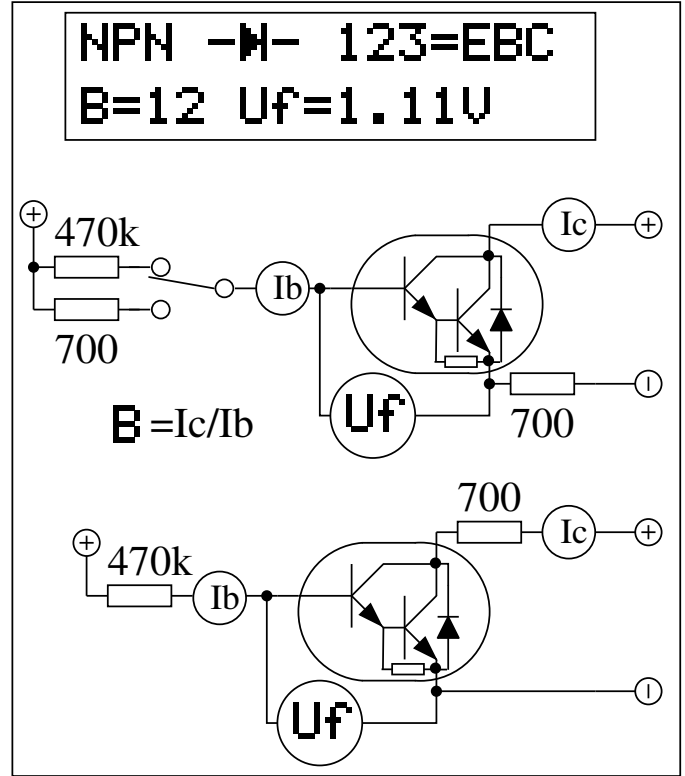
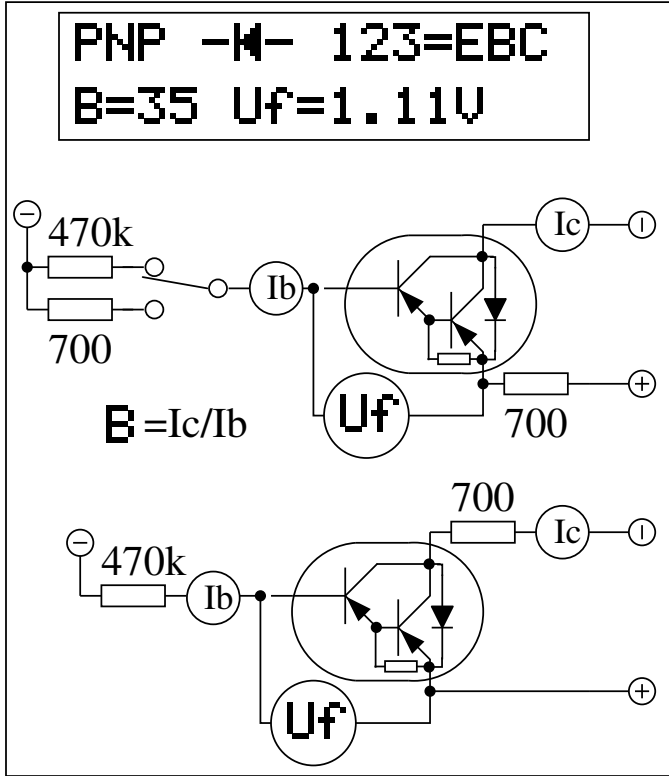
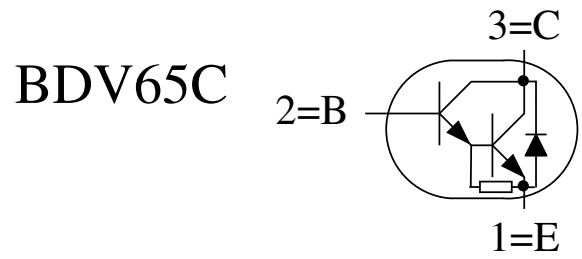
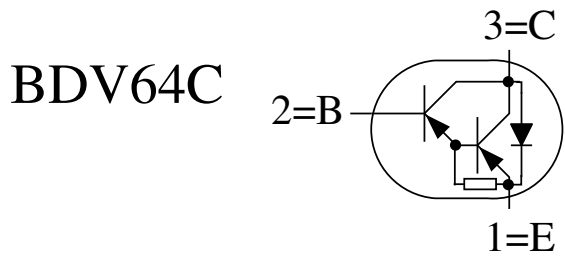


Рис. 1.5. NPN транзисторы с диодом и резистором



(a) PNP

(b) NPN

Рис. 1.6. Составные кремниевые транзисторы

# Глава 2

## Тестирование полевых транзисторов

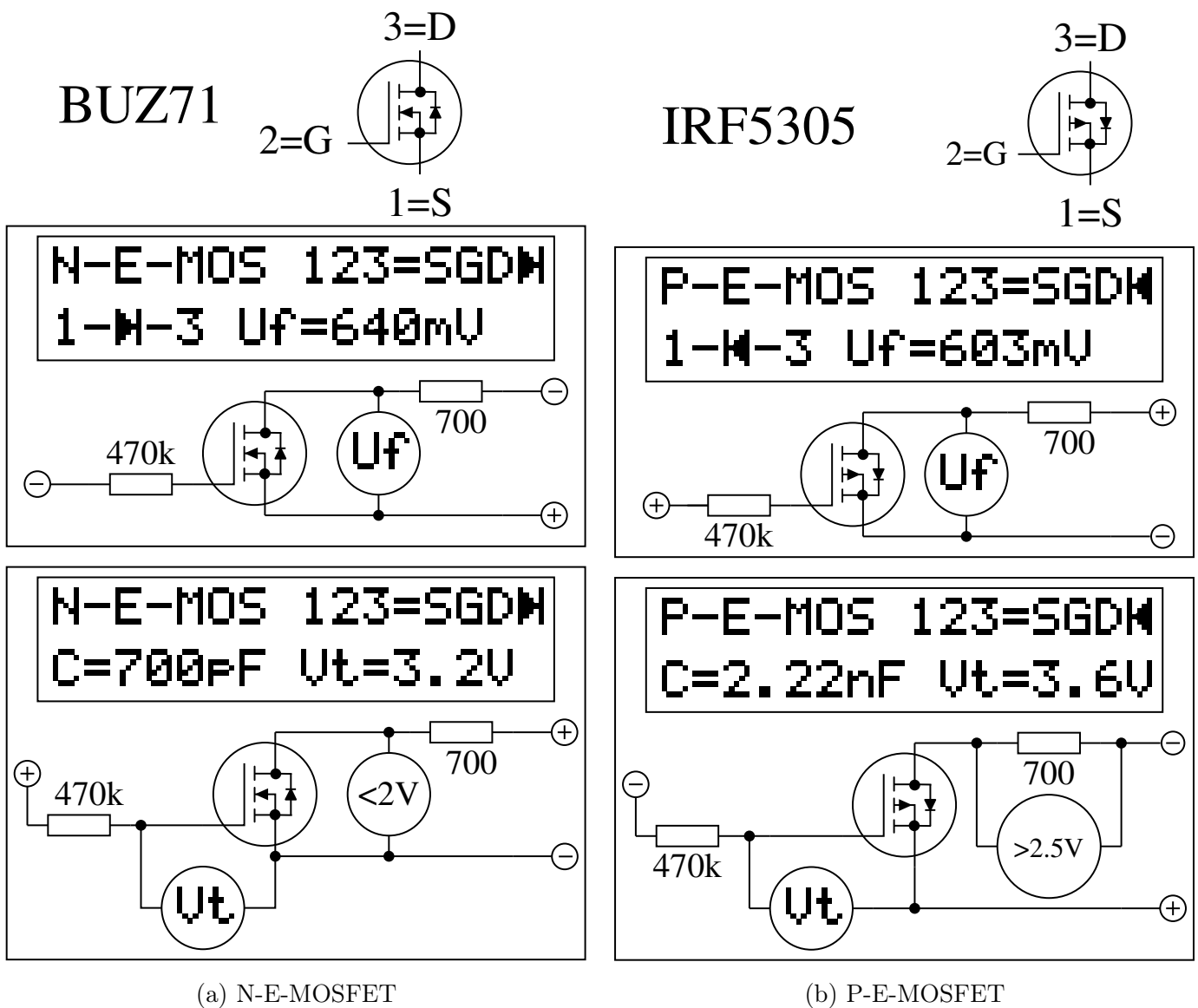


Рис. 2.1. Мощные MOSFET Транзисторы

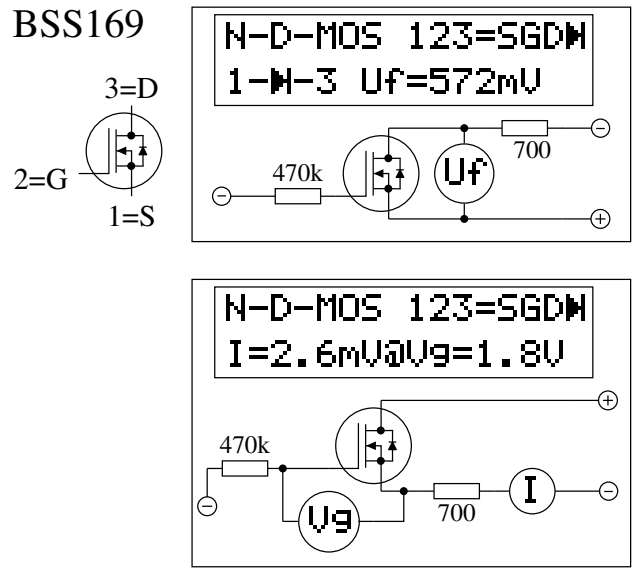
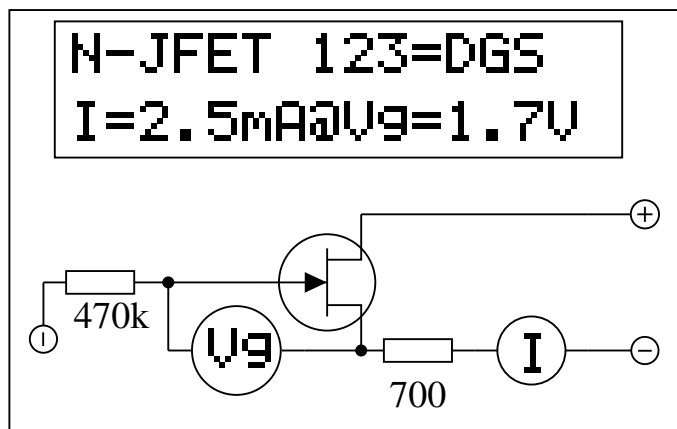
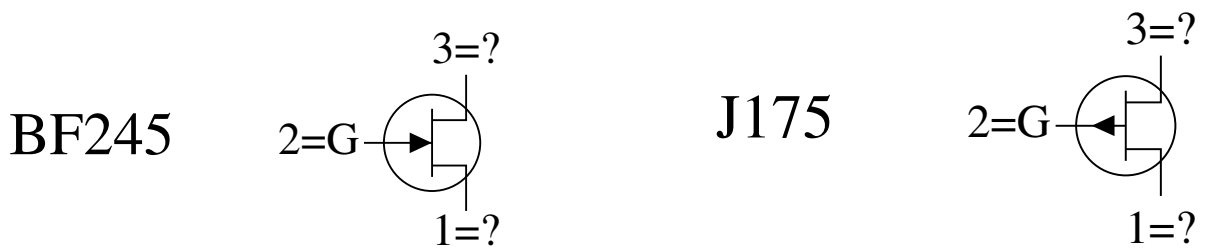
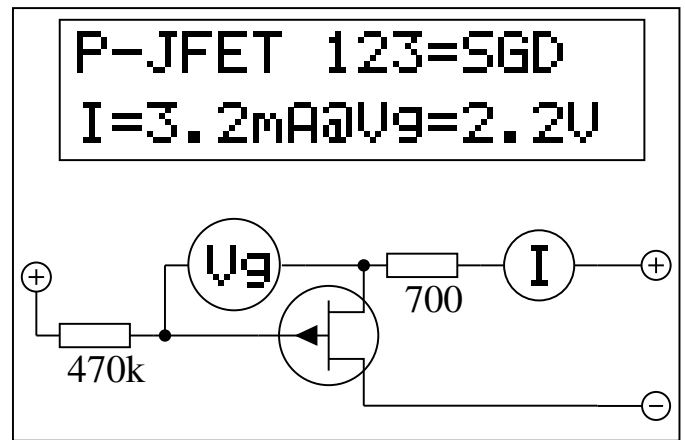


Рис. 2.2. N-D-MOSFET



(a) N-JFET



(b) P-JFET

Рис. 2.3. JFET транзисторы



# Литература

- [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) Erläuterung 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](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