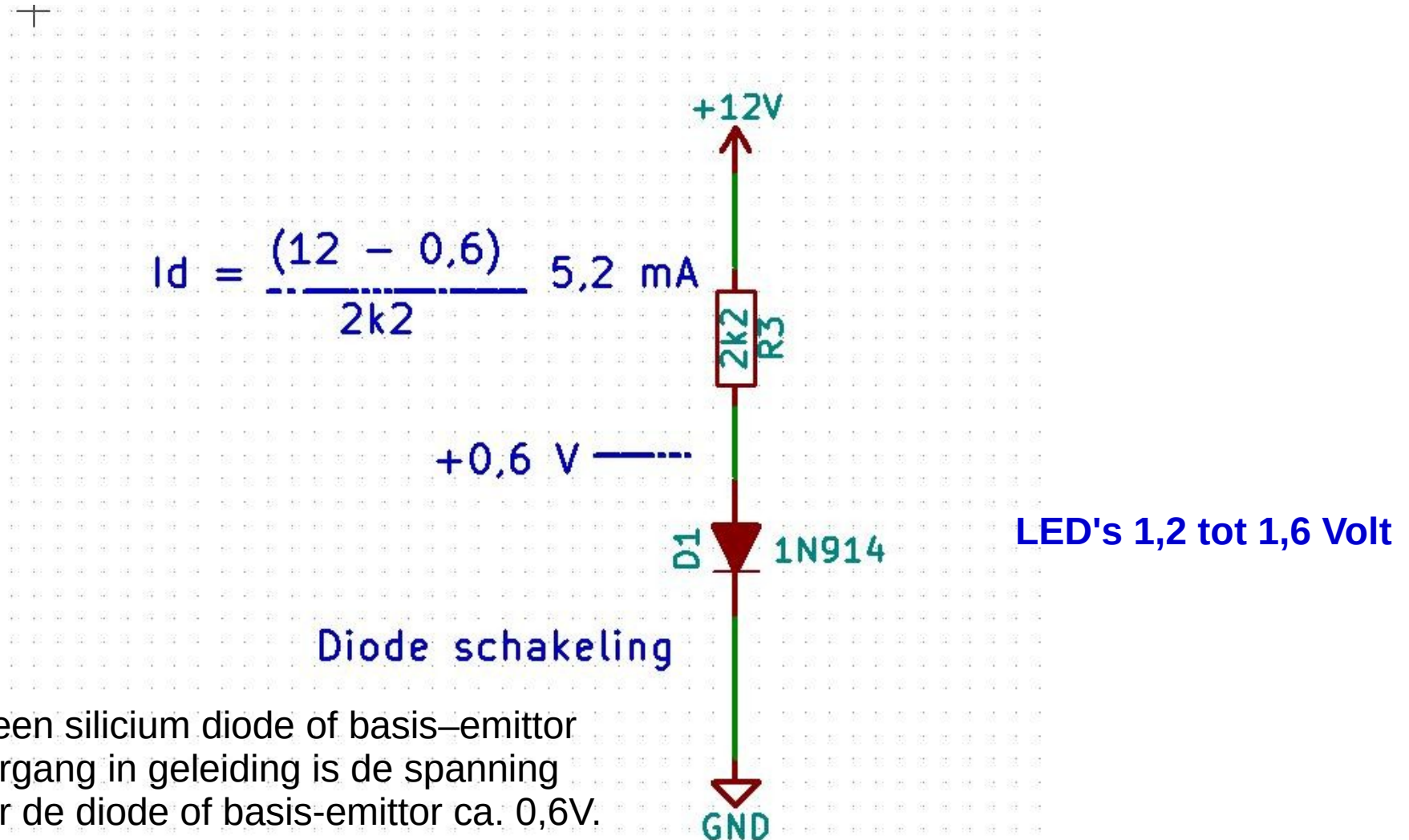


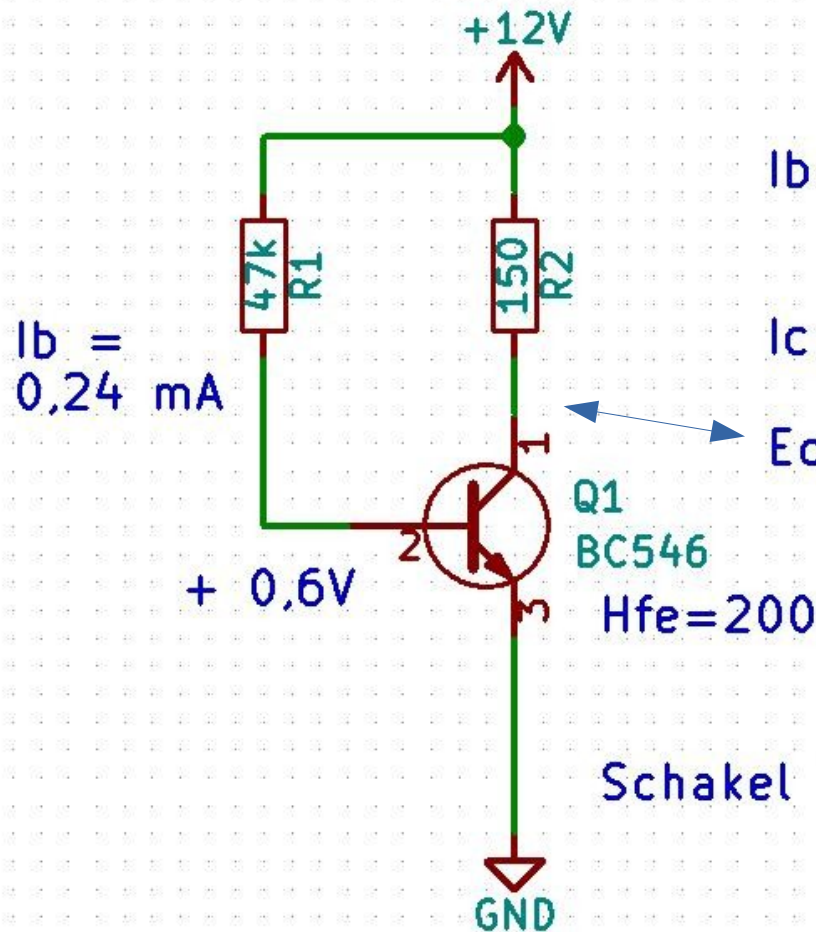
Rekenen aan transistor en diode schakelingen.



Bij een silicium diode of basis-emittor overgang in geleiding is de spanning over de diode of basis-emittor ca. 0,6V.

Weerstand R3 bepaalt de grootte van de stroom door de diode.

Rekenen aan transistors en diodes.



$$I_b = \frac{(12 - 0,6)}{47\text{k}} = 0,24 \text{ mA}$$

$$I_c = 0,24 \times 200 = 48 \text{ mA}$$

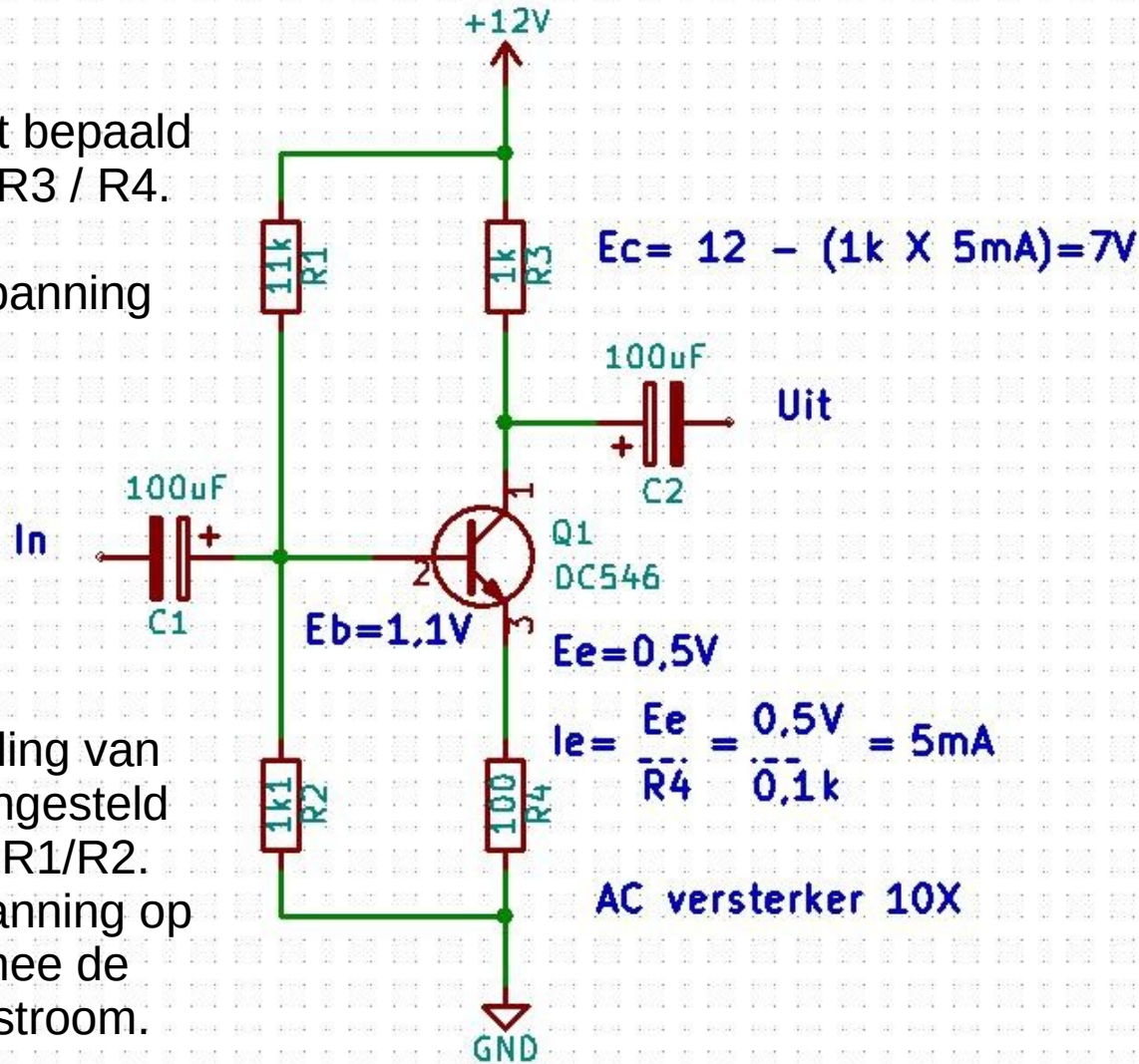
$$E_c = 12 - (48 \times 0,15) = 4,8 \text{ V}$$

Rekenen aan transistors en diodes.

De versterking wordt bepaald door de verhouding $R3 / R4$.

Maximum ingangsspanning 0,8 Volt p-p

De ruststroom instelling van de transistor wordt ingesteld met spanningsdeler $R1/R2$. Deze bepaalt de spanning op de emitter, en daarmee de emitter- en collectorstroom.



Rekenen aan transistors en diodes.

www.ti.com

SNLS372B – JULY 1999 – REVISED MARCH 2013

LM3046 Transistor Array

Check for Samples: [LM3046](#)

FEATURES

- Two Matched Pairs of Transistors
 - V_{BE} Matched ± 5 mV
 - Input Offset Current $2 \mu\text{A}$ Max at $I_C = 1$ mA
- Five General Purpose Monolithic transistors
- Operation from DC to 120 MHz
- Wide Operating Current Range
- Low Noise Figure: 3.2 dB typ at 1 kHz

APPLICATIONS

- General Use in All Types of Signal Processing Systems Operating Anywhere in the Frequency Range from DC to VHF
- Custom Designed Differential Amplifiers
- Temperature Compensated Amplifiers

DESCRIPTION

The LM3046 consists of five general purpose silicon NPN transistors on a common monolithic substrate. Two of the transistors are internally connected to form a differentially-connected pair. The transistors are well suited to a wide variety of applications in low power system in the DC through VHF range. They may be used as discrete transistors in conventional circuits however, in addition, they provide the very significant inherent integrated circuit advantages of close electrical and thermal matching. The LM3046 is supplied in a 14-lead SOIC package.

Schematic and Connection Diagram

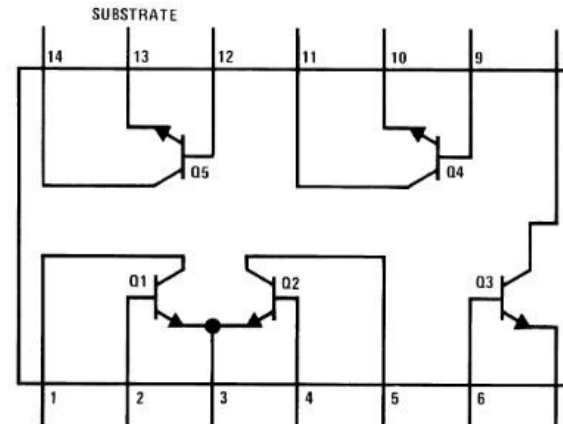


Figure 1. SOIC Package Top View

Voor wie gepruts met losse transistors maar niets vindt, zijn er transistor arrays LM3045, LM3046. Verkrijgbaar in verschillende uitvoeringen, DIL en SOIC.