TSR

Vin GND Vout

12V

1µF 1µF

10µF 05V

Impur → VCC µC

= 1µF

4k7

100Ω

BUZ 11

RL

LED rot

15kΩ br,gr,ün,or

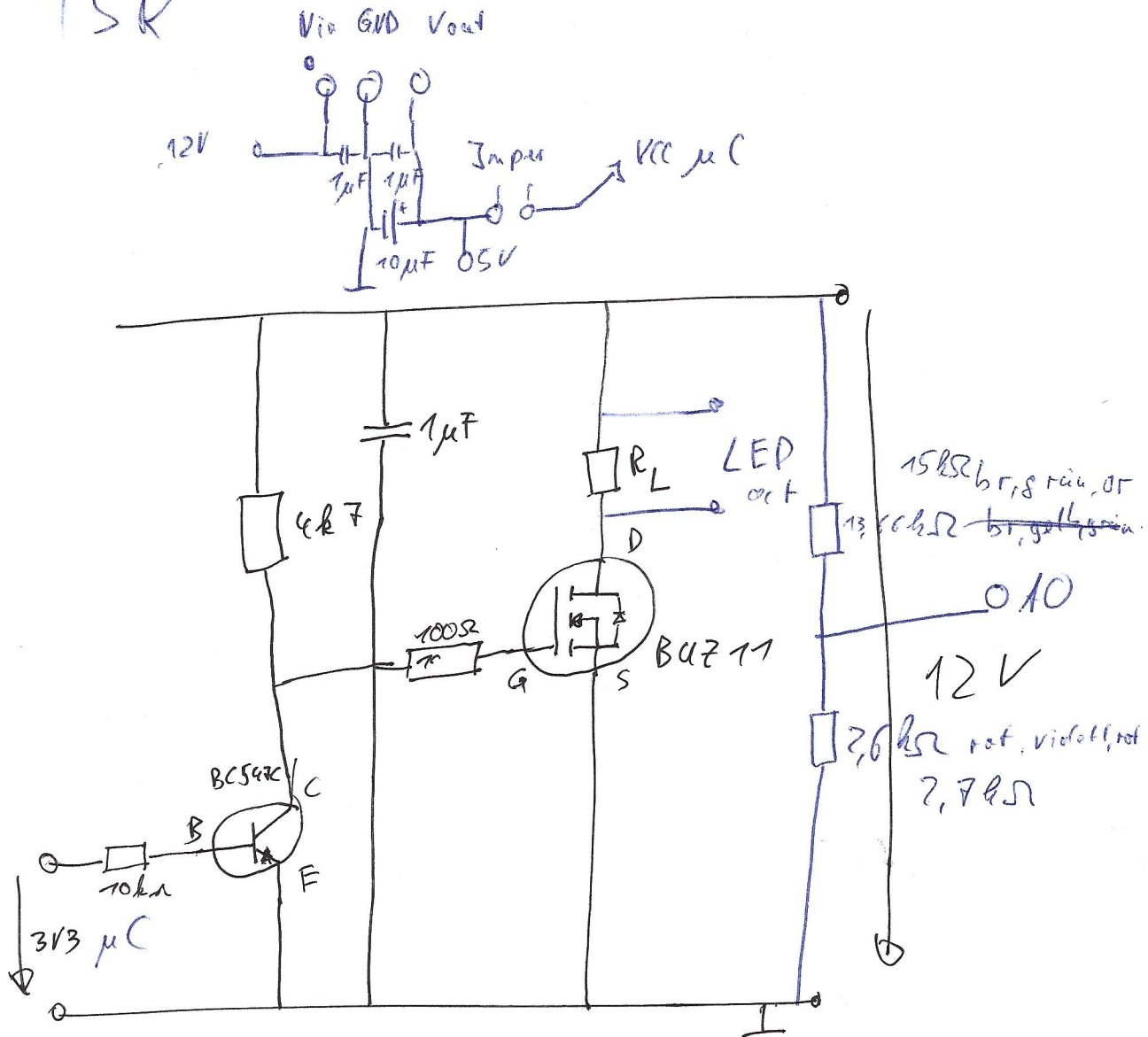13,xkΩ br,gr,or,grün

○10

12 V

2,6kΩ rot, violett, rot
2,7kΩ

BC547C

10kΩ

3V3 µC

$$I_C = (12V - U_{CESAT}) / RL = \frac{(12V - 0,3V)}{4,7k\Omega} = 2,5mA$$

$$I_B = (I_C / B_{min}) \cdot \ddot{u} = (2,5/50) \cdot 7 = 0,3mA$$

500 µC

$$R_V = \frac{3,3 - 0,7}{I_B} = \sim 9k\Omega$$