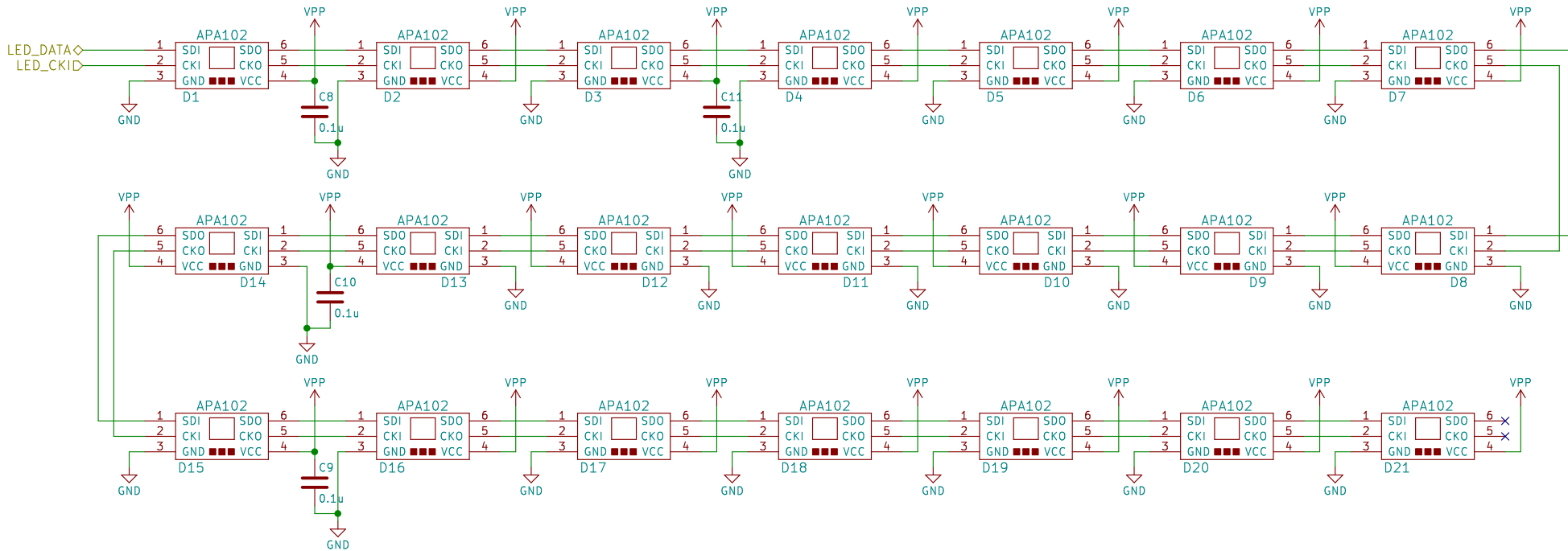


Sheet: LEDs  
 LED\_CKI  
 LED\_DATA  
 File: LEDs.sch

Sheet: Power  
 CHG#  
 VPP\_EN#  
 File: Power.sch

CC-BY Licence Jean Simonet		Unspecified Caps should be rated at 10V
Systemic Games		
Sheet: / File: dice.sch		
<b>Title: Dice V3RevC Flexible PCB</b>		
Size: A4	Date: 2018-03-01	Rev: C
KiCad E.D.A. kicad 4.0.5		Id: 1/3



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Sheet: /LEDs/  
File: LEDs.sch

**Title: Dice V3RevC Flexible PCB**

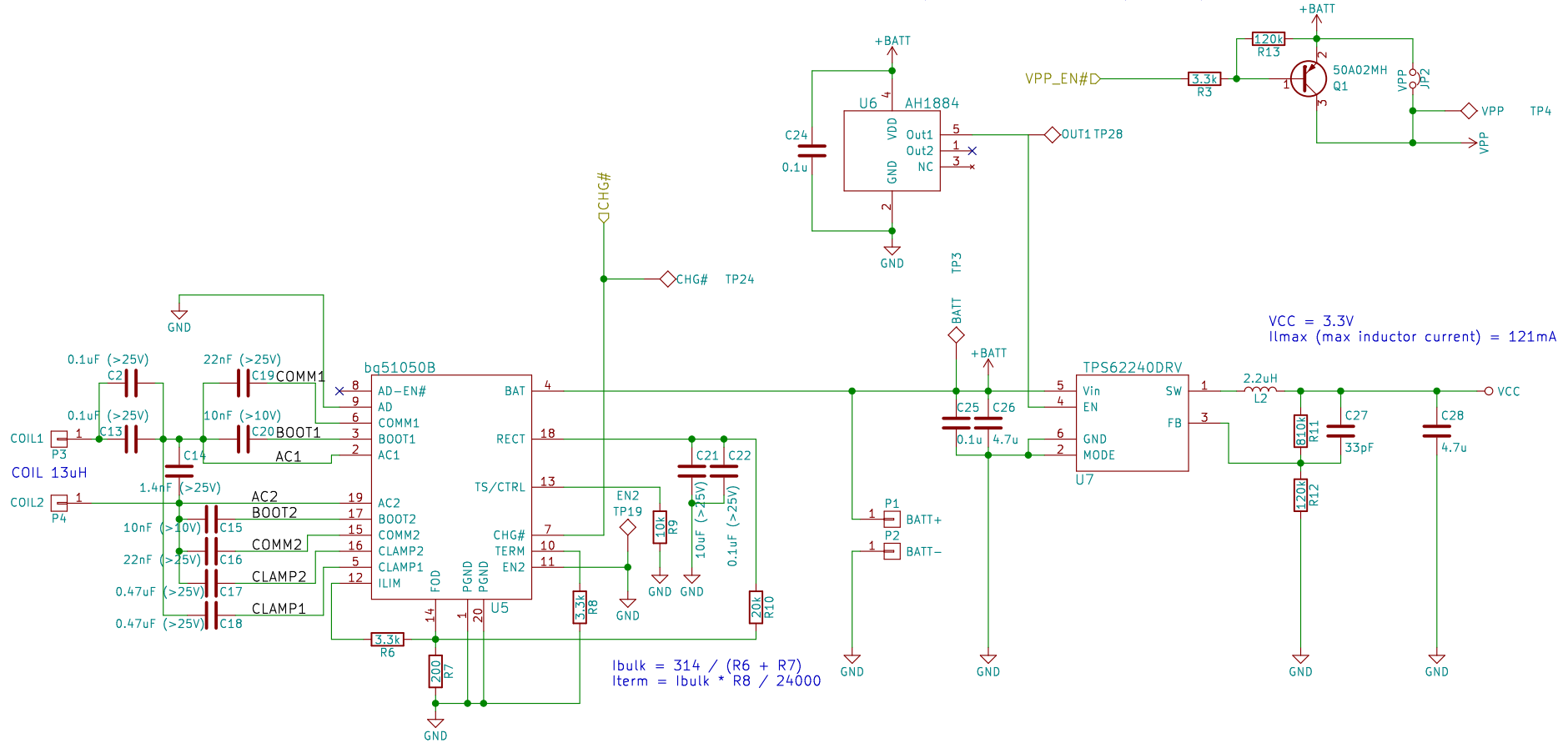
Size: A4 | Date: 2018-03-01

KiCad E.D.A. kicad 4.0.5

Rev: C

Id: 2/3

Compute resistor value correctly, see: [https://www.electronics-tutorials.ws/transistor/tran\\_4.html](https://www.electronics-tutorials.ws/transistor/tran_4.html)



VCC = 3.3V  
I<sub>lmax</sub> (max inductor current) = 121mA

$$I_{bulk} = 314 / (R6 + R7)$$

$$I_{term} = I_{bulk} * R8 / 24000$$

C2, C13 and C14 formula:

$$C2 \times C13 = \frac{1}{(2\pi \times f_s)^2 \times L_s}$$

$$C14 = \left( (f_D \times 2\pi)^2 \times L_s - \frac{1}{C_1} \right)^{-1}$$

f<sub>s</sub> = 100kHz  
f<sub>D</sub> = 1MHz  
L<sub>s</sub> is coil measured inductance

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Sheet: /Power/  
File: Power.sch

**Title: Dice V3RevC Flexible PCB**

Size: A4 Date: 2018-03-01

KiCad E.D.A. kicad 4.0.5

Rev: C

Id: 3/3