

Notes -- Ramos Power

Revision 1 -- Paul Sammut

Sent out 10 boards to be made at ITEAD studio with this design. 6/1/12

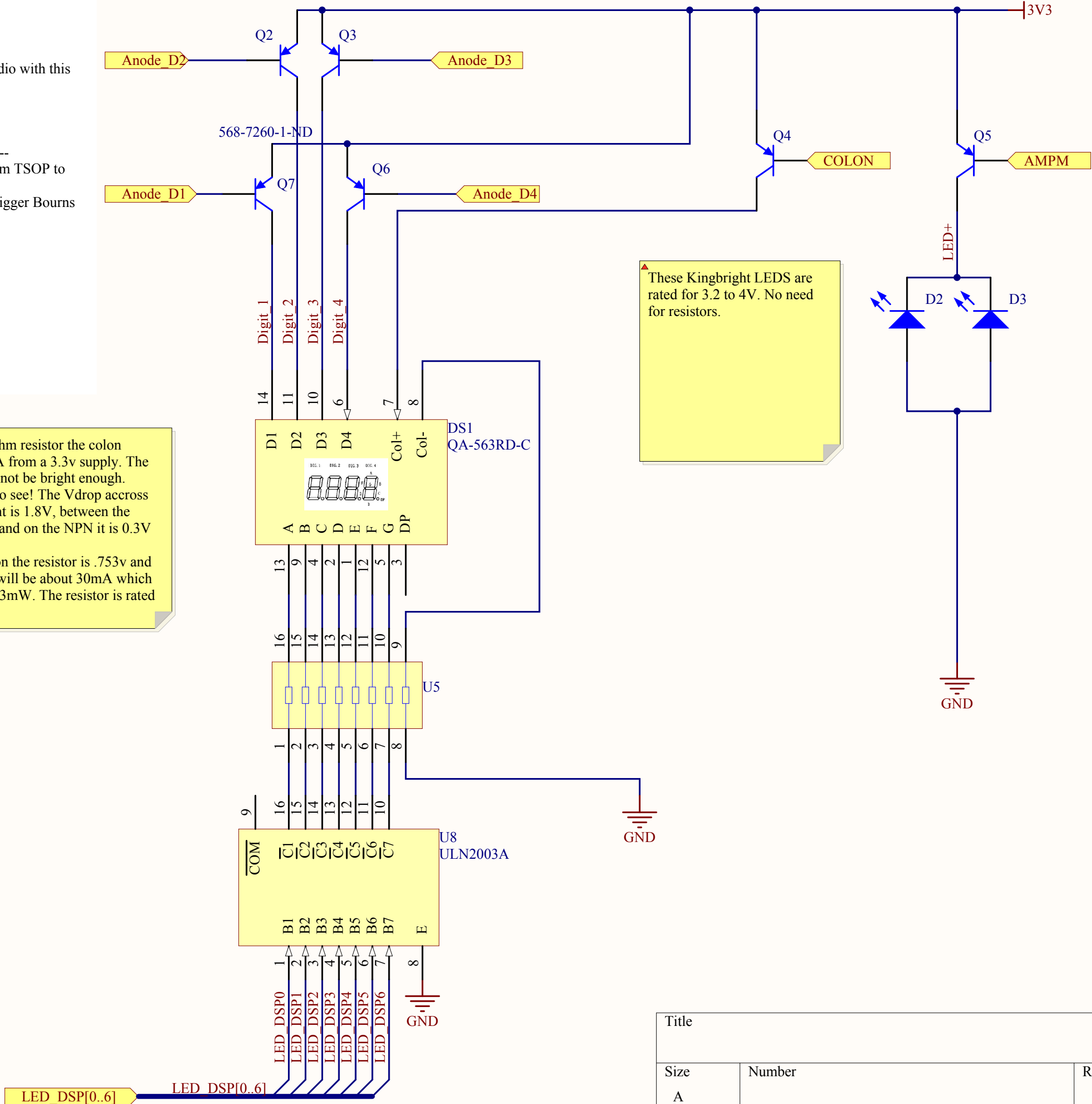
Revision 2 -- Paul Sammut

1. Changed the package of the ULN2003 from TSOP to SOIC, which is the ULN2003AD
2. Changed the Resistor array package to a bigger Bourns resistor array in a SOIC package.

With a 33 ohm resistor the colon draws 37mA from a 3.3v supply. The 7Seg might not be bright enough. We'll have to see! The Vdrop accross each element is 1.8V, between the ULN is 0.7 and on the NPN it is 0.3V

The vdrop on the resistor is .753v and the current will be about 30mA which equates to 23mW. The resistor is rated to 63mW

These Kingbright LEDS are rated for 3.2 to 4V. No need for resistors.



Title		
Size	Number	Revision
A		
Date:	6/26/2012	Sheet of
File:	C:\DataRoom\...\DSP_LED.SchDoc	Drawn By:

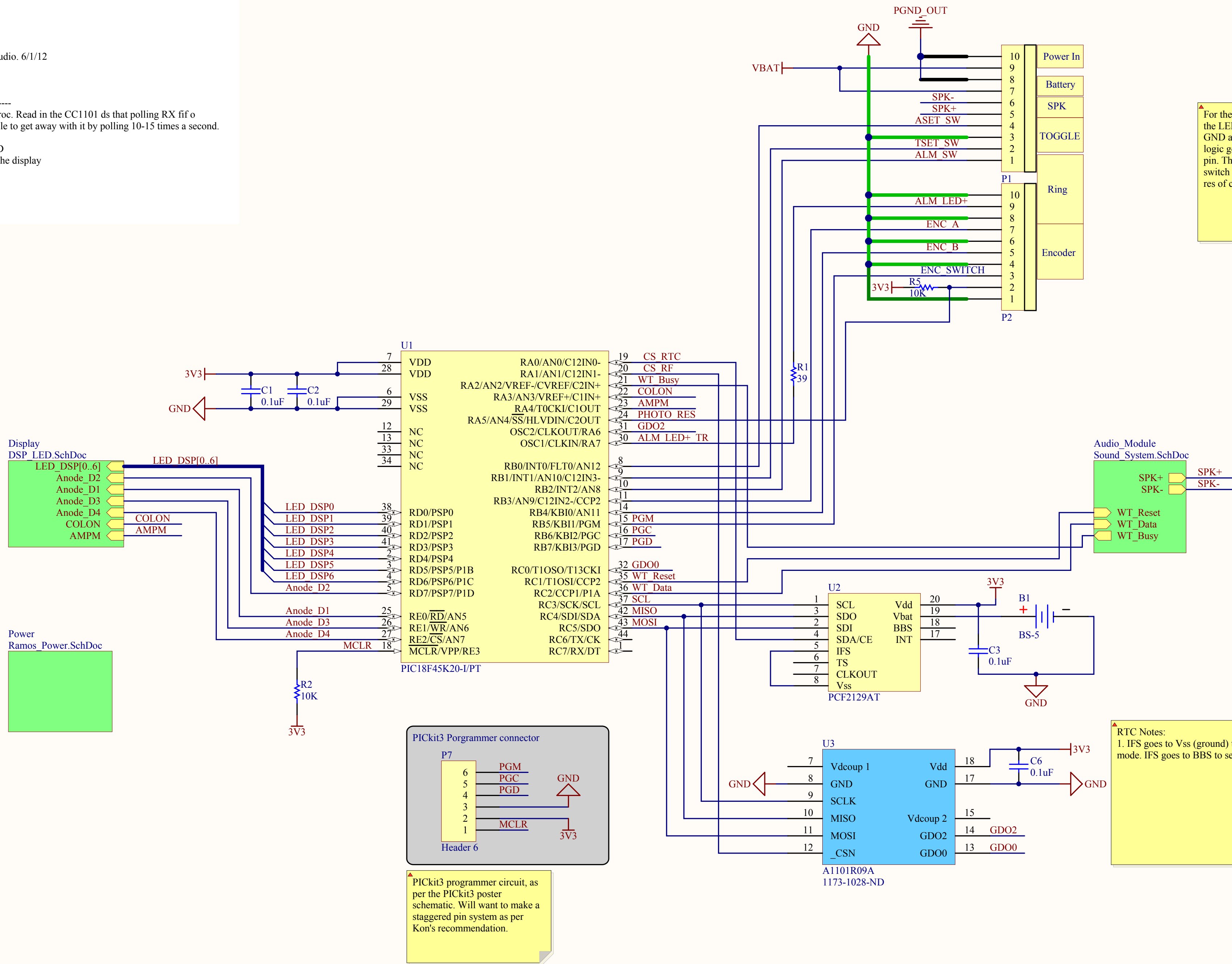
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1. Added GDO1 and GDO2 lines to the uProc. Read in the CC1101 ds that polling RX fif o degrades performace. Should actually be able to get away with it by polling 10-15 times a second.
2. Changed to the A1101R from the A2500
3. Got rid of the transistor on the alarm LED
4. Added some net labels on the anodes of the display



For the Alarm Sw (A_SW), the LED gnd and the switch GND are tied. The switch logic goes to the a pulled up pin. The LED goes to a high switch transistor (with a bias res of course).

RTC Notes:
1. IFS goes to Vss (ground) to set SPI mode. IFS goes to BBS to set I2C mode.

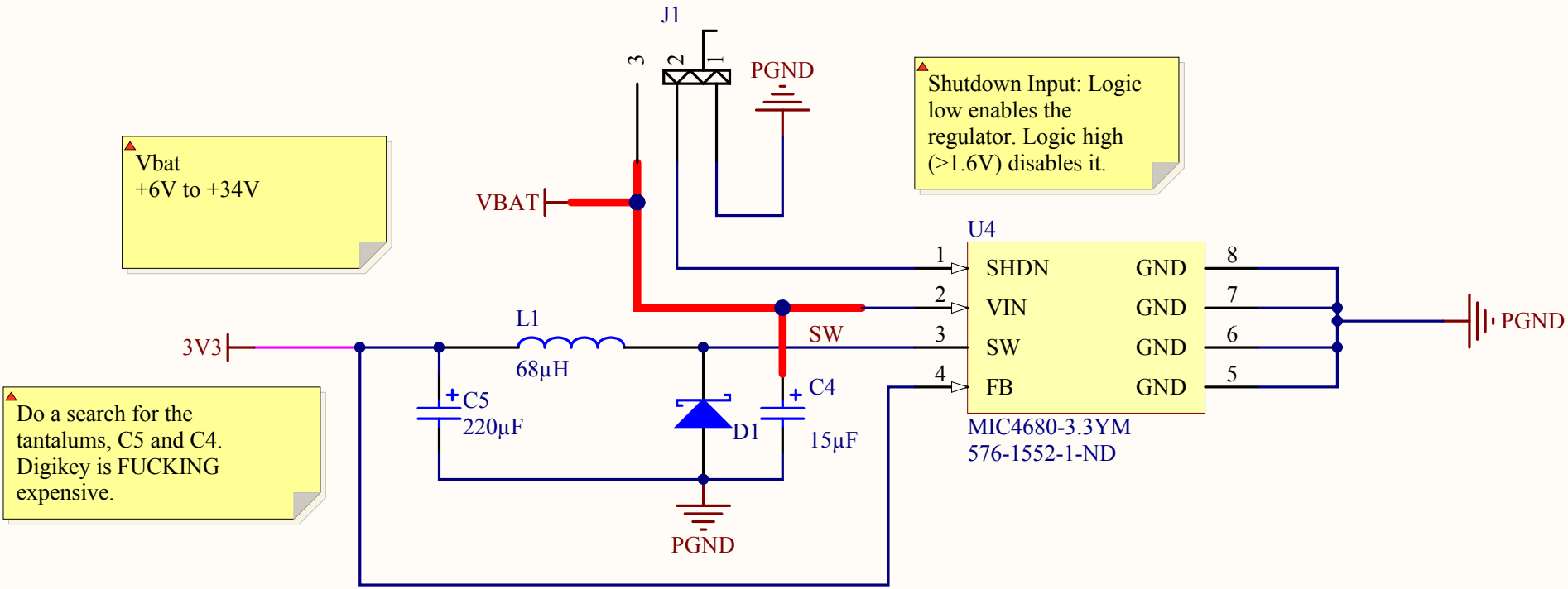
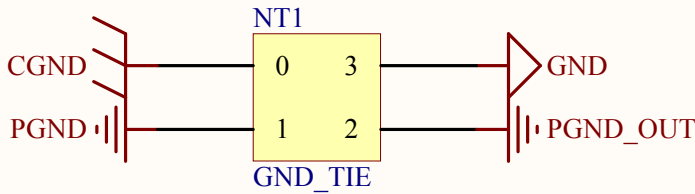
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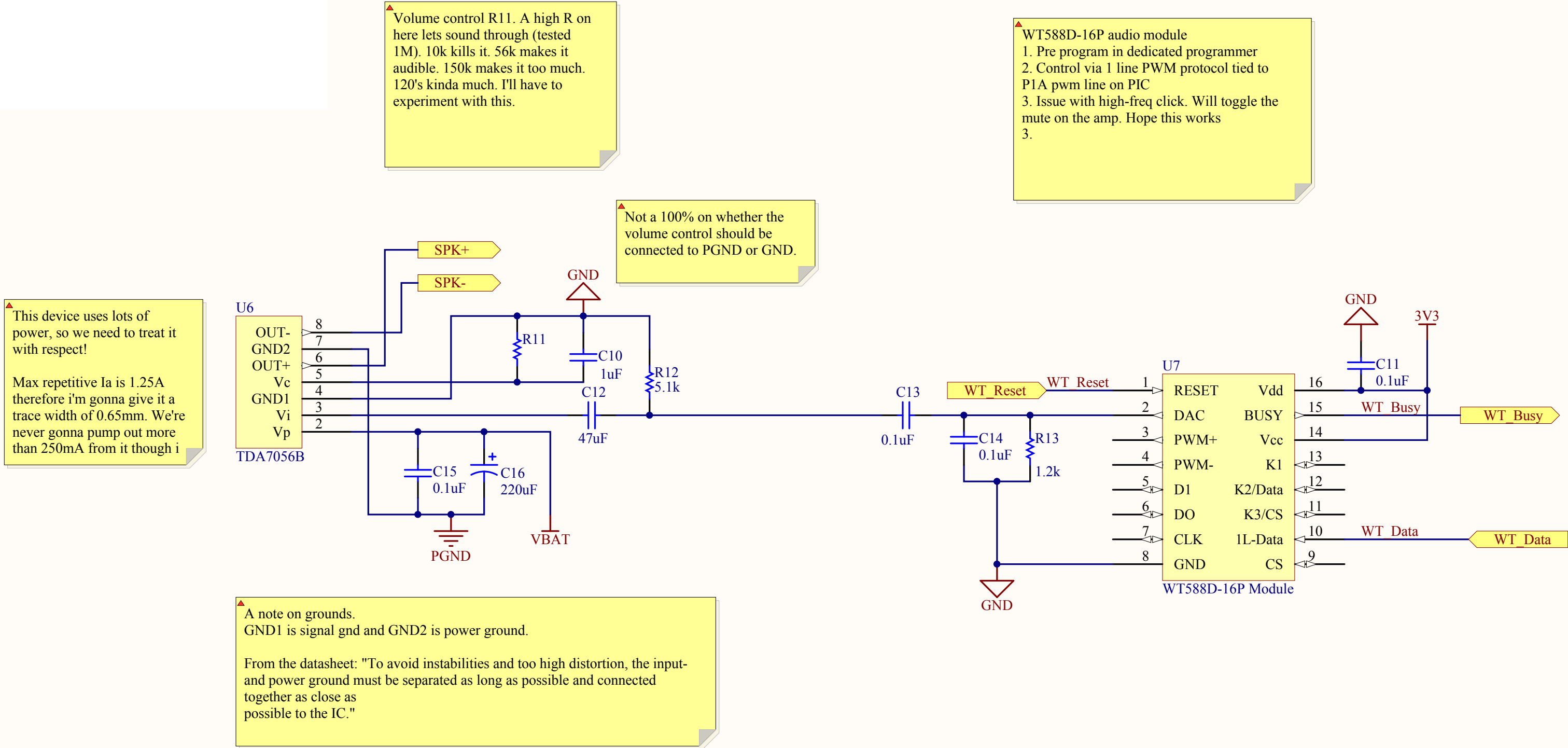
1. Removed the pull up on the shut down switch and configured it differently after I found out that the J1 switch is in fact a SPDT. One throw on gnd and one throw on VBat



- Layout directives:
- Keep D1 close to pin 3 and pins 5 through 8.
 - Keep L1 from sensitive FB. Z
 - Keep C1 close pins 2 and 5 through 8
 - Keep FB far away from switching components C1 and L1

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Rev - 2

- Added polarity mark on C16
- Updated the GND start and made it better with a direct route to mains ground
- Updated the ULN2003 and the Bourns resistor array
- Made the board taller to accomodate the A1101R
- Added tracks to GDO0 and GDO2

