

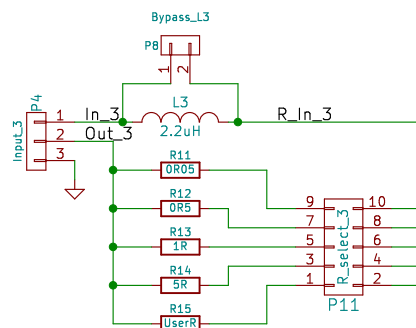
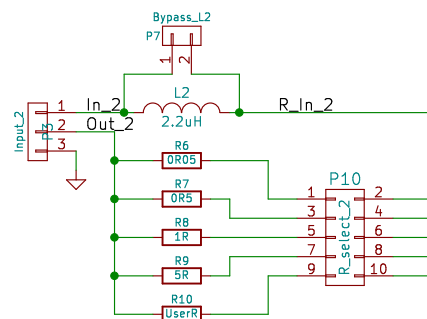
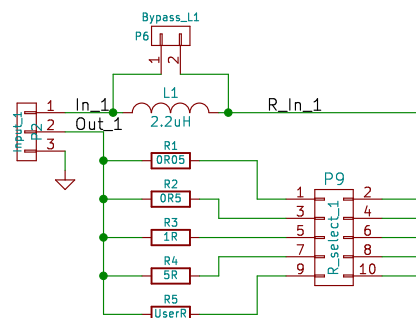
V1 Free pins:

PA3: ADC123  
PC2: ADC123 (may also be used for SPI2)  
PB0: ADC12  
PB1: ADC12

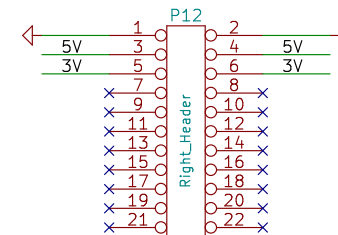
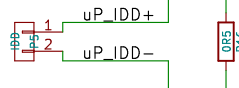
V2 Free pins (all +5V tolerant except PA4,PA5)

PA1 ADC123  
PA2 ADC123  
PA3 ADC123  
PB0 ADC12  
PB1 ADC12  
PC1 ADC123 - SPI2\_MISO  
PC2 ADC123  
PC4 ADC12  
PC5 ADC12

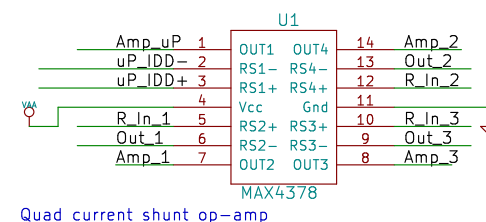
## External Current Measurement Inputs



## STM32F103 IDD Test

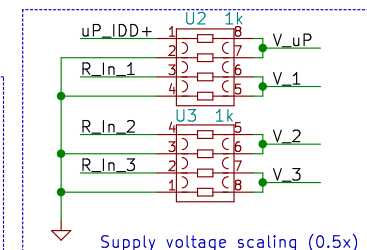
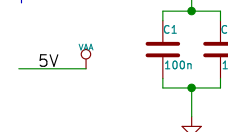


ADC input capacitance is 4pF, External  $R_{AIN\_Max} = 50k\Omega$   
 $R_{ADC} = 6k\Omega$



Quad current shunt op-amp

Amp Supply  
+5V gives higher  
performance



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File: st-powersense-shield.sch

**Title: st-powersense-shield v3 by Simon J. Hollis**

Size: A4 Date: 31 oct 2013

KiCad E.D.A. kicad 4.0.2-stable

Rev:

Id: 1/1