








- S1  LOGO\_CATIE
- S2  LOGO\_6TRON
- S3  TWNS-2-7W TAKACHI

- M11 
  - M12 
  - M13 
- MIRE\_POSITIONING


- SCR1  394112X4
- SCR2  394112X4



Attachment screws

- SCR5  394112X4
- SCR6  394112X4

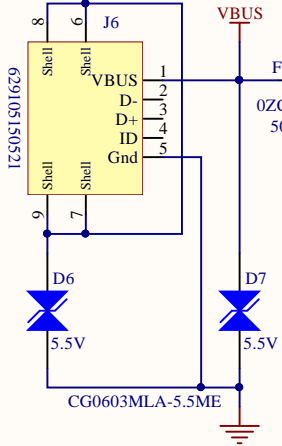
- SCR3  M2 / 0.8mm
- SCR4  M2 / 0.8mm

Washer Nylon

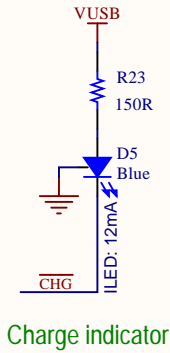
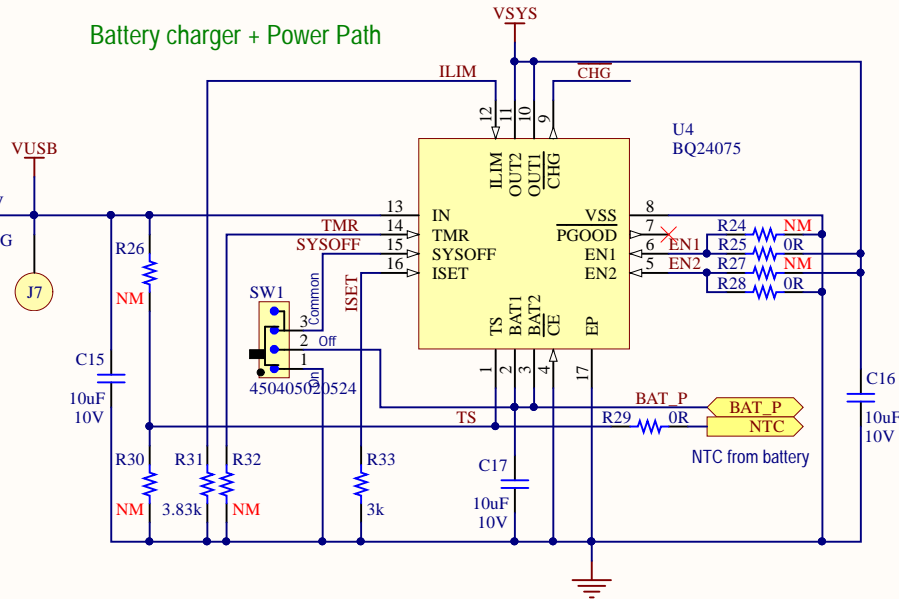
- SCR7  M2 / 0.8mm
- SCR8  M2 / 0.8mm

Title: <i>Block diagram</i>	Version: 1.0.0	
Board: <i>Z_ECG</i>	Size: <i>A4</i>	
Project: <i>MinPulse</i>	Sheet: 1 of 6	
Author: <i>Olivier Chevalerias</i>	Date modified: 06/07/2020	

### micro USB-B charger input

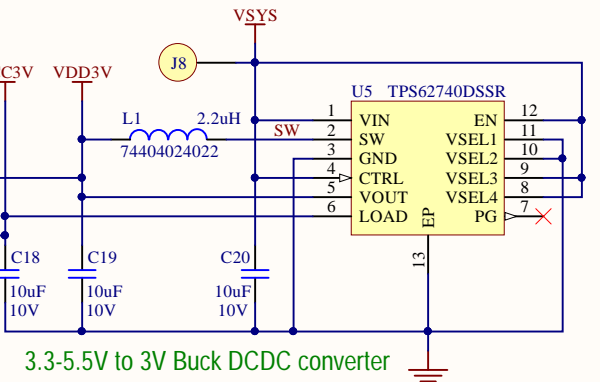


### Battery charger + Power Path

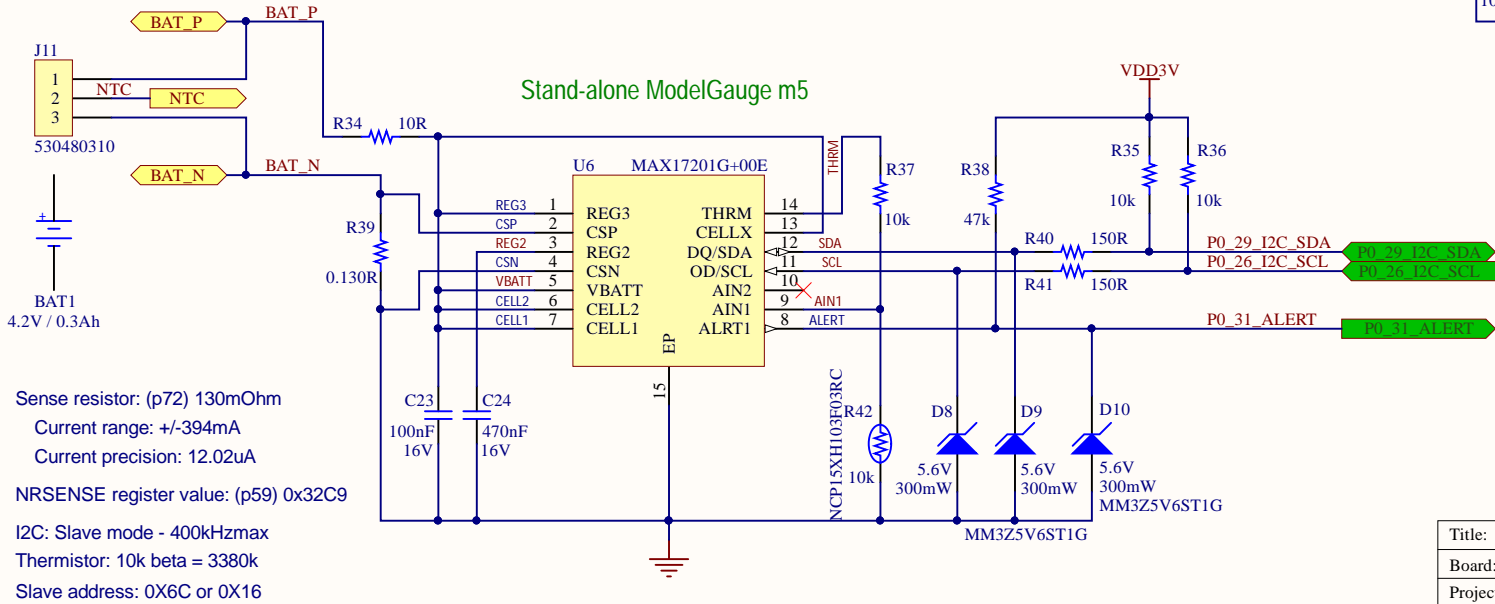


### Charger characteristics

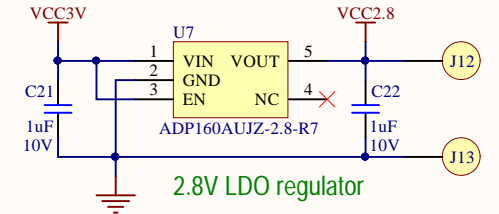
Battery capacity: 300mA.h  
 Fast charge current: 1C => ISET = 300mA  
 $R_{ISET} = K_{ISET} / ISET = 890 \text{ AOhm} / 300\text{mA} = 2967R$   
 DC input current limit: ILIM = 400mA  
 $R_{ILIM} = K_{ILIM} / ILIM = 1525 \text{ AOhm} / 400\text{mA} = 3812R$   
 Power Path:  
 Minimum system regulation Voltage: 3.3V  
 System regulation voltage: 4.4V





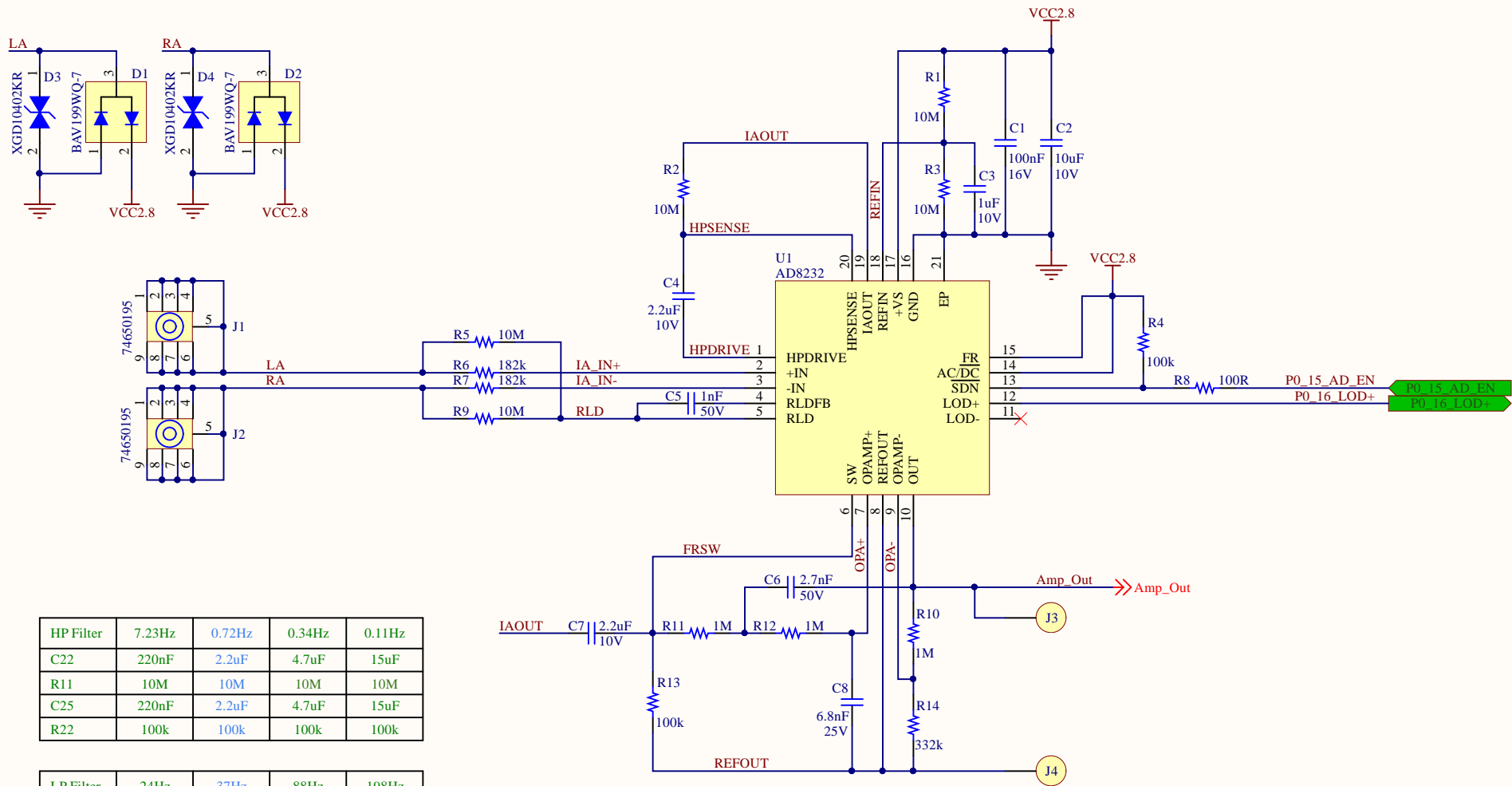
### Stand-alone ModelGauge m5



Sense resistor: (p72) 130mOhm  
 Current range: +/-394mA  
 Current precision: 12.02uA  
 NRSENSE register value: (p59) 0x32C9  
 I2C: Slave mode - 400kHzmax  
 Thermistor: 10k beta = 3380k  
 Slave address: 0X6C or 0X16



Title: <i>Power Supply</i>	Version: <i>1.0.0</i>	
Board: <i>Z_ECG</i>	Size: <i>A4</i>	
Project: <i>MinPulse</i>	Sheet: <i>2 of 6</i>	
Author: <i>Olivier Chevalerias</i>	Date modified: <i>06/07/2020</i>	

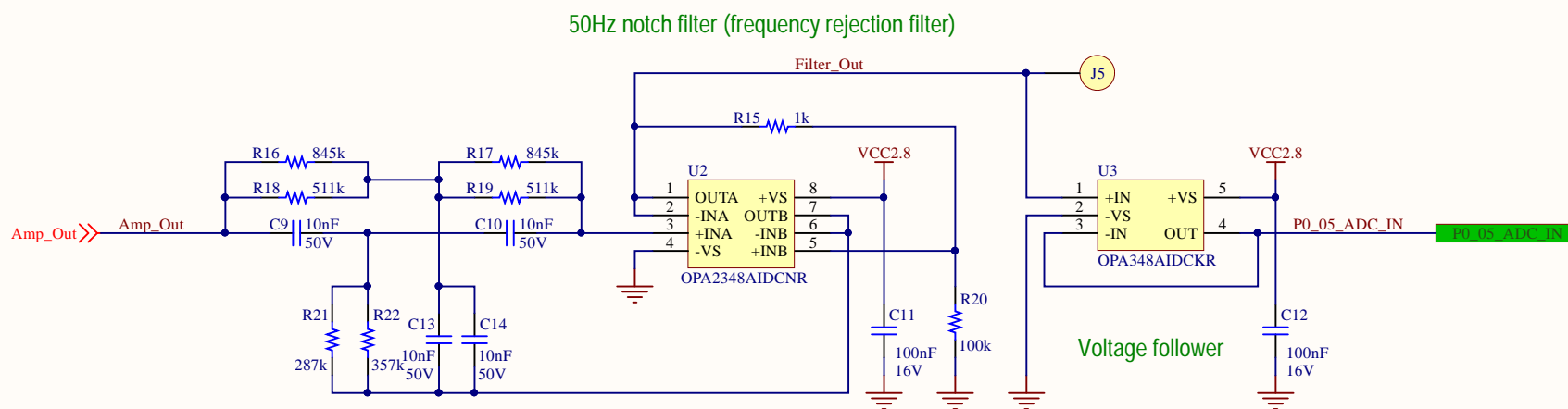


HP Filter	7.23Hz	0.72Hz	0.34Hz	0.11Hz
C22	220nF	2.2uF	4.7uF	15uF
R11	10M	10M	10M	10M
C25	220nF	2.2uF	4.7uF	15uF
R22	100k	100k	100k	100k

LP Filter	24Hz	37Hz	88Hz	198Hz
R20	220k	1M	360k	150k
C26	22nF	6.8nF	10nF	10nF
R21	1M	1M	270k	130k
C24	10nF	2.7nF	3.3nF	3.3nF

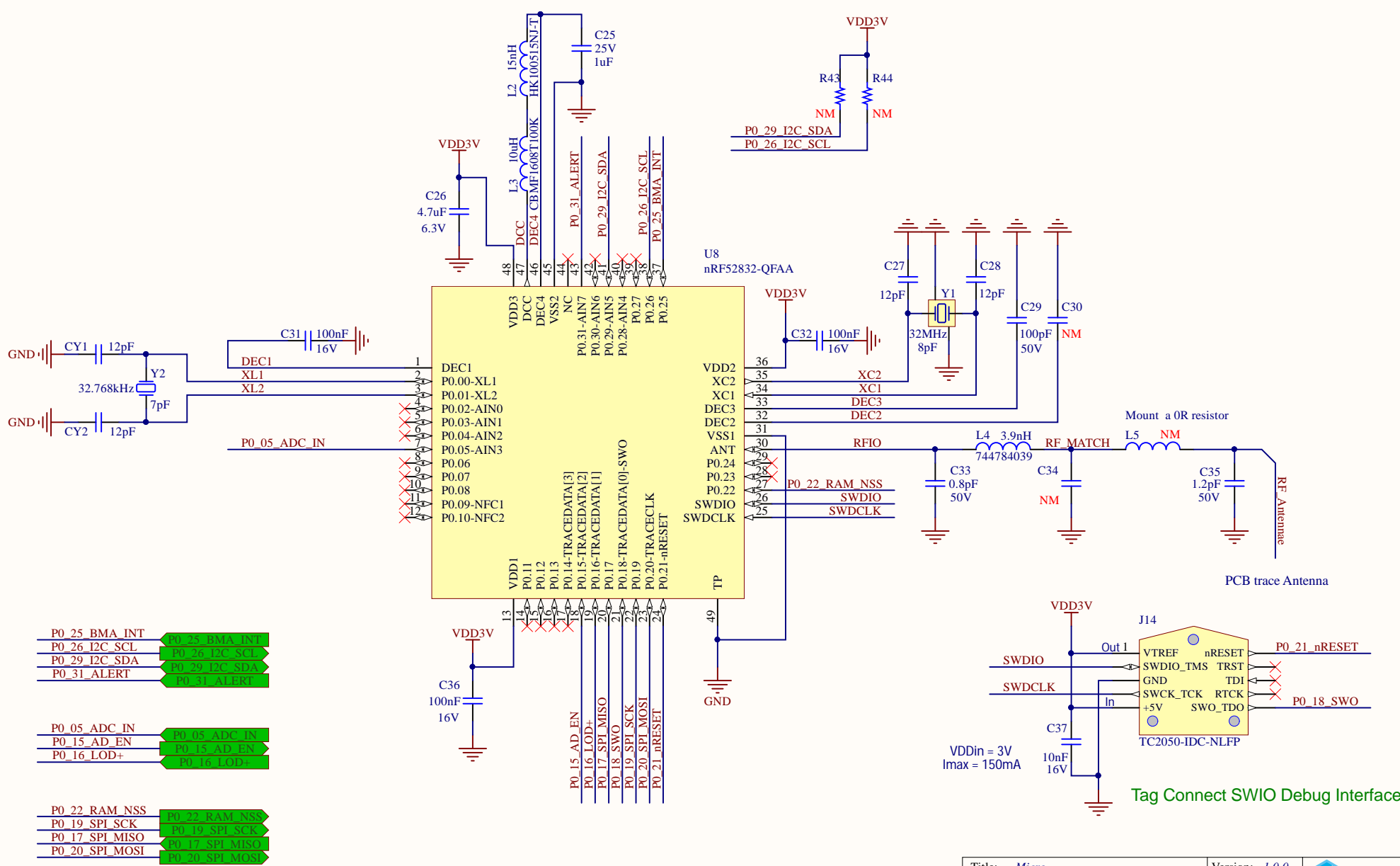
Gain	10	6.6	4
R19	1M	1M	1M
R23	100k	180k	332k

Title: <i>Analogue front-end - AD8232</i>	Version: 1.0.0	
Board: <i>Z_ECG</i>	Size: A4	
Project: <i>MinPulse</i>	Sheet: 3 of 6	
Author: <i>Olivier Chevalerias</i>	Date modified: 06/07/2020	



Title: <i>Frequency reject (Notch) Filter</i>		Version: 1.0.0	
Board: <i>Z_ECG</i>		Size: A4	
Project: <i>MinPulse</i>		Sheet: 4 of 6	
Author: <i>Olivier Chevalerias</i>		Date modified: 06/07/2020	





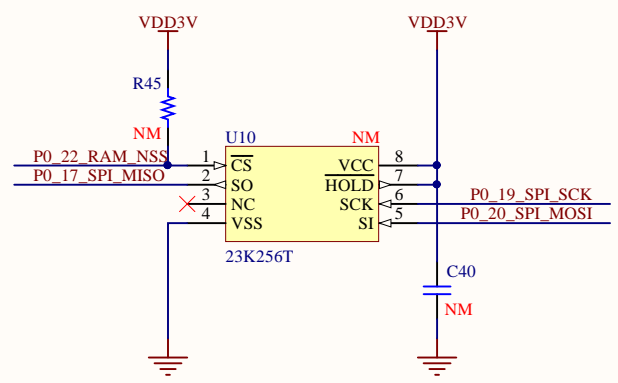
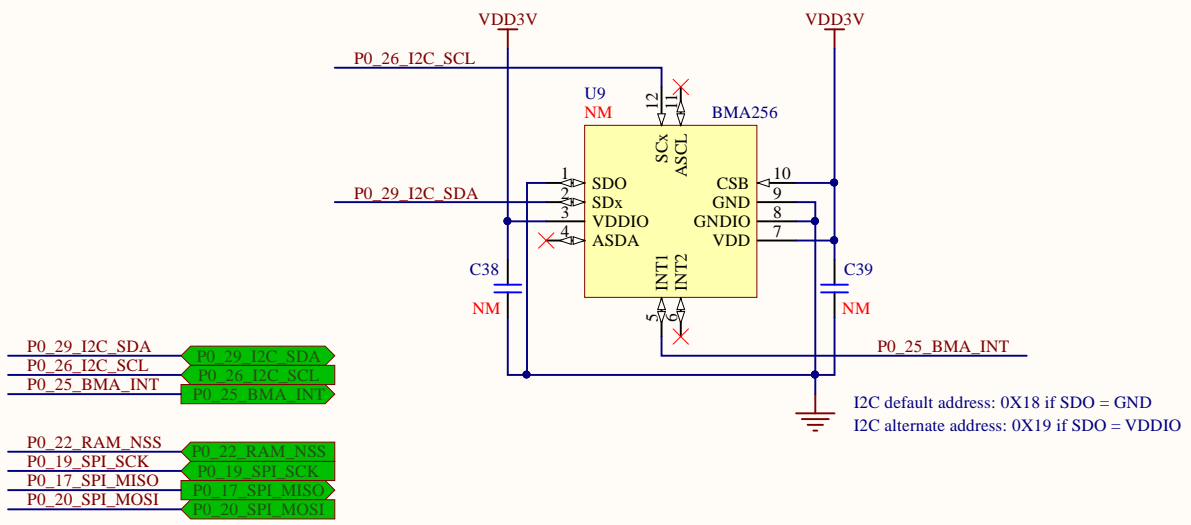
P0\_25\_BMA\_INT → P0\_25\_BMA\_INT  
 P0\_26\_I2C\_SCL → P0\_26\_I2C\_SCL  
 P0\_29\_I2C\_SDA → P0\_29\_I2C\_SDA  
 P0\_31\_ALERT → P0\_31\_ALERT

P0\_05\_ADC\_IN → P0\_05\_ADC\_IN  
 P0\_15\_AD\_EN → P0\_15\_AD\_EN  
 P0\_16\_LOD+ → P0\_16\_LOD+

P0\_22\_RAM\_NSS → P0\_22\_RAM\_NSS  
 P0\_19\_SPL\_SCK → P0\_19\_SPL\_SCK  
 P0\_17\_SPL\_MISO → P0\_17\_SPL\_MISO  
 P0\_20\_SPL\_MOSI → P0\_20\_SPL\_MOSI

Title: <i>Micro</i>	Version: <i>1.0.0</i>	
Board: <i>Z_ECG</i>	Size: <i>A4</i>	
Project: <i>MinPulse</i>	Sheet: <i>5 of 6</i>	
Author: <i>Olivier Chevalerias</i>	Date modified: <i>06/07/2020</i>	





Title: <i>Sensors</i>	Version: <i>1.0.0</i>	
Board: <i>Z_ECG</i>	Size: <i>A4</i>	
Project: <i>ETM Marine</i>	Sheet: <i>6 of 6</i>	
Author: <i>Olivier Chevalerias</i>	Date modified: <i>06/07/2020</i>	