


BATTERY CONNECTIONS

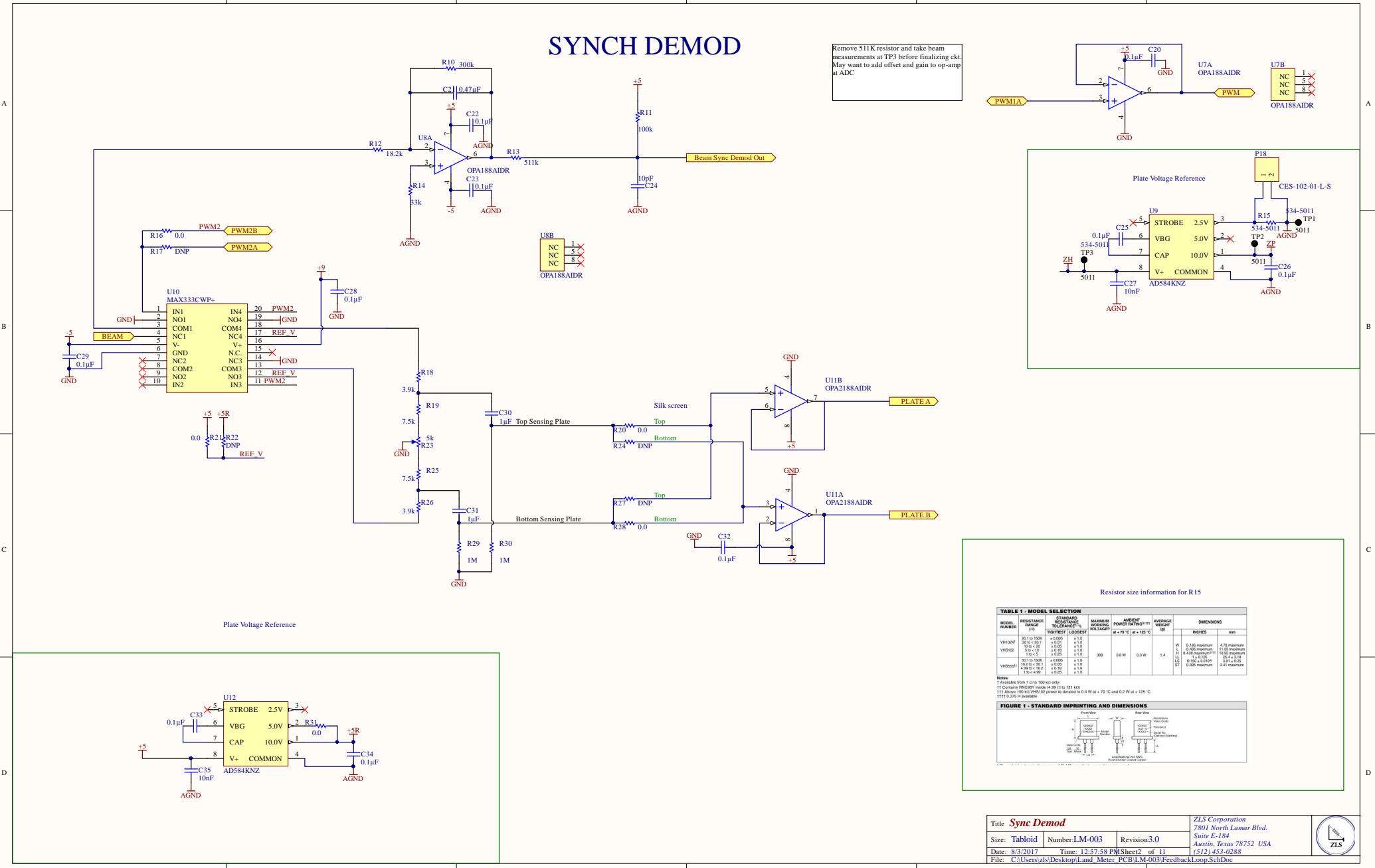
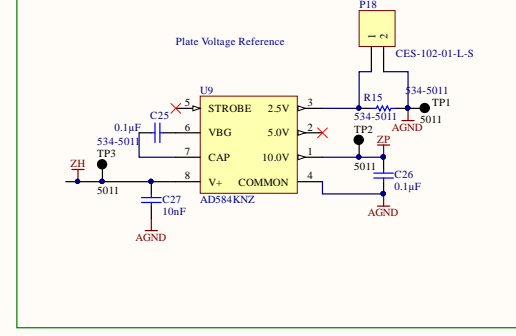
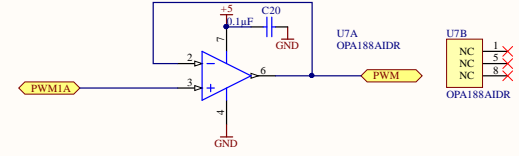
P1	BATTERY
2	A - NEGATIVE
3	B - TEMPERATURE
4	C - DATA
5	D - CLOCK
1	E - POSITIVE
N/C	F - KEY

Mating Pigtail: LIKE MMSST-02-20-F-12.00-S-K

Title Power			ZLS Corporation 7801 North Lamar Blvd. Suite E-184 Austin, Texas 78752 USA (512) 453-0288	
Size: Tabloid	Number: LM-003	Revision: 3.0		
Date: 8/3/2017	Time: 12:57:58 PM		Sheet: of 11	
File: C:\Users\zls\Desktop\Land Meter PCB\LM-003\Power.SchDoc				

SYNCH DEMOD

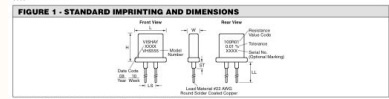
Remove 511K resistor and take beam measurements at TP3 before finalizing ckt. May want to add offset and gain to op-amp at ADC.



Resistor size information for R15

MODEL NUMBER	RESISTANCE RANGE (Ω)	STANDARD RESISTANCE TOLERANCE %	TIGHTEST TOLERANCE %	MAXIMUM WORKING VOLTAGE	AVERAGE POWER RATING (W)	AVERAGE CURRENT (mA)	AVERAGE VOLTAGE (V)	DIMENSIONS (mm)
VH0100T	10 to 100k	±0.05%	±0.1%	100	0.05	0.05	1.4	W: 0.185 maximum L: 0.400 maximum D: 0.050 maximum
VH0100	10 to 100k	±0.05%	±0.1%	100	0.05	0.05	1.4	W: 0.185 maximum L: 0.400 maximum D: 0.050 maximum
VH0100T	10 to 100k	±0.05%	±0.1%	100	0.05	0.05	1.4	W: 0.185 maximum L: 0.400 maximum D: 0.050 maximum

Notes:
T: Available from 1 to 100 kΩ only.
TT: Contains precision resistors 0.05% to 100 kΩ.
TTT: Above 100 kΩ, VH0100 power is derated to 0.4 W at +75 °C and 0.2 W at +125 °C.
TTT: 0.25% available.



A

B

C

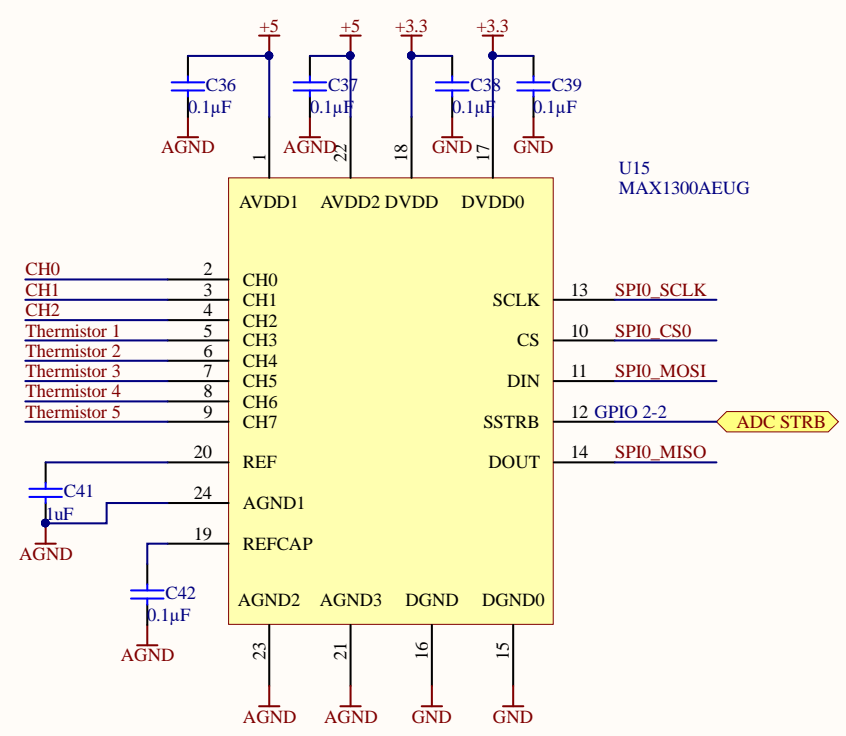
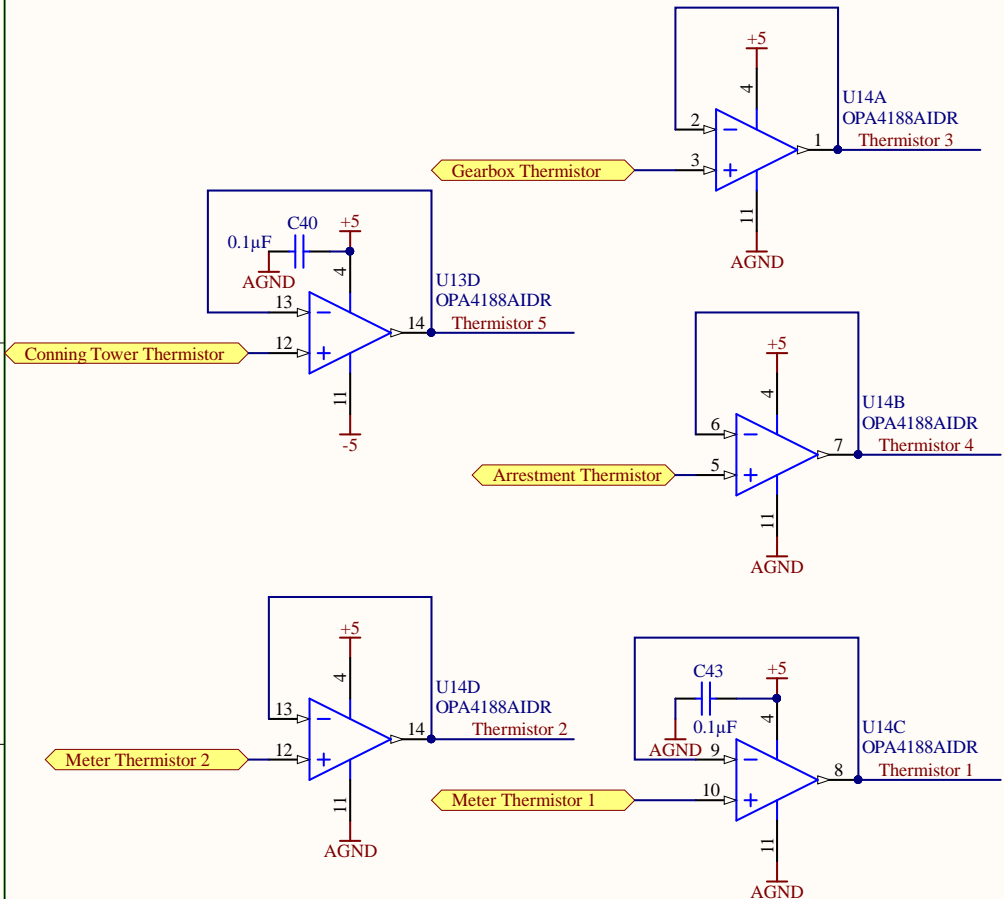
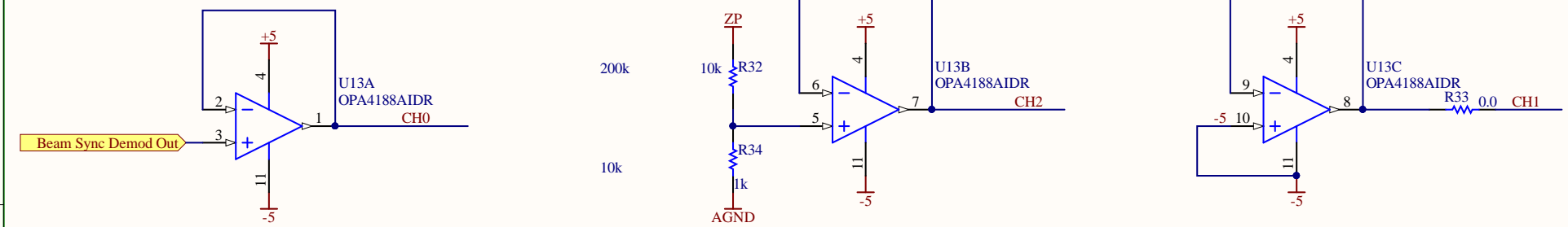
D

A

B


C

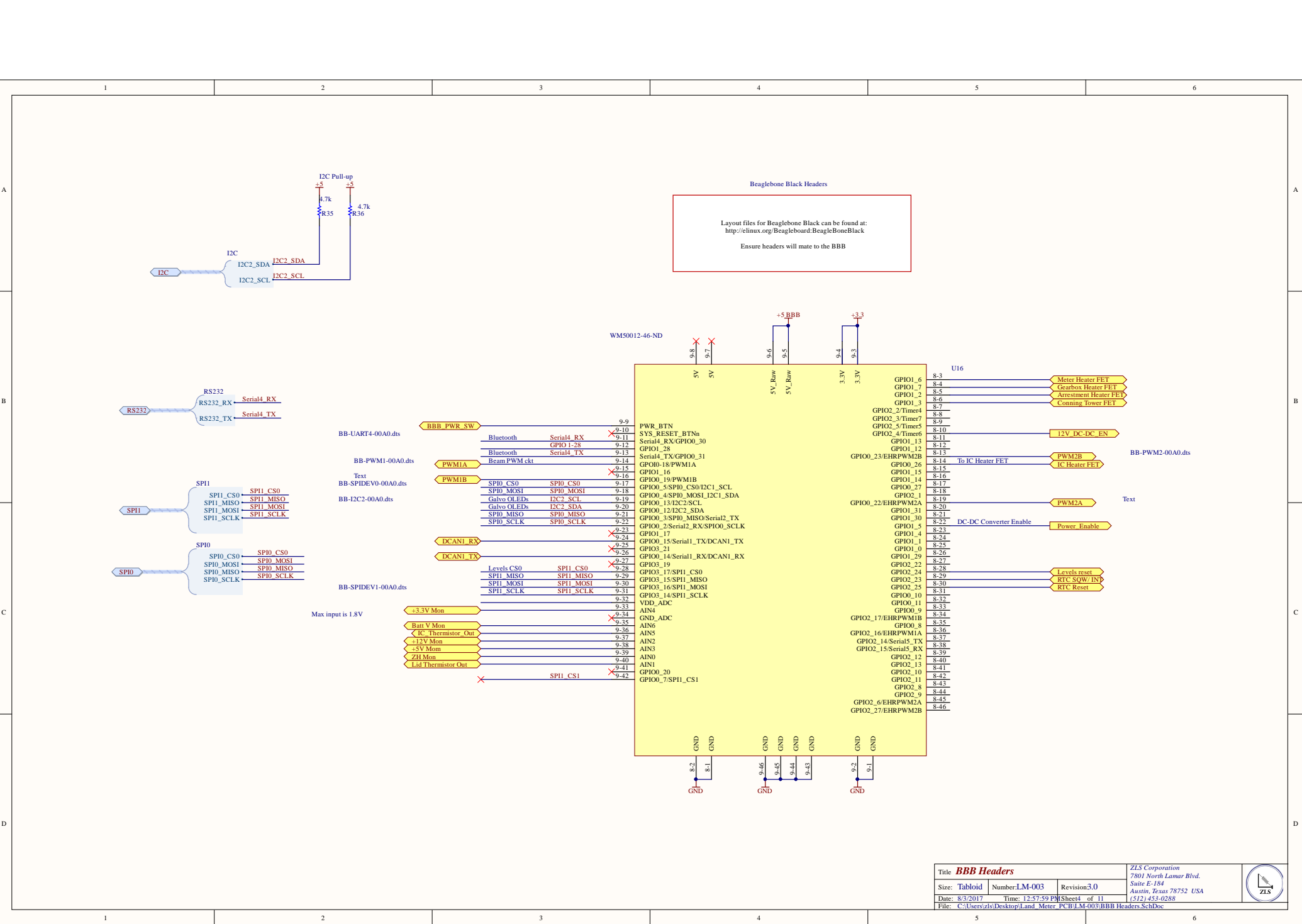
D



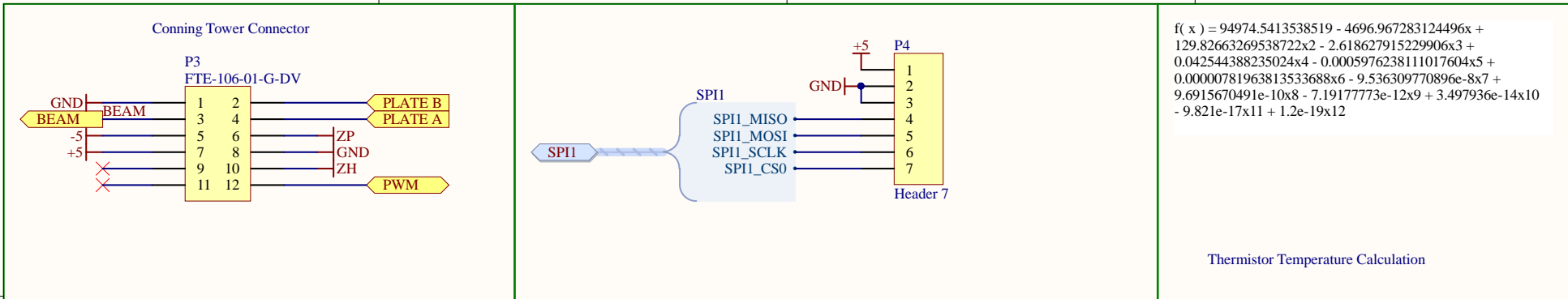
Voltage to freq conversion: $Y = 11.27 * X - 32.95$
Freq to voltage conversion: $Y = 0.08873 * X + 2.924$



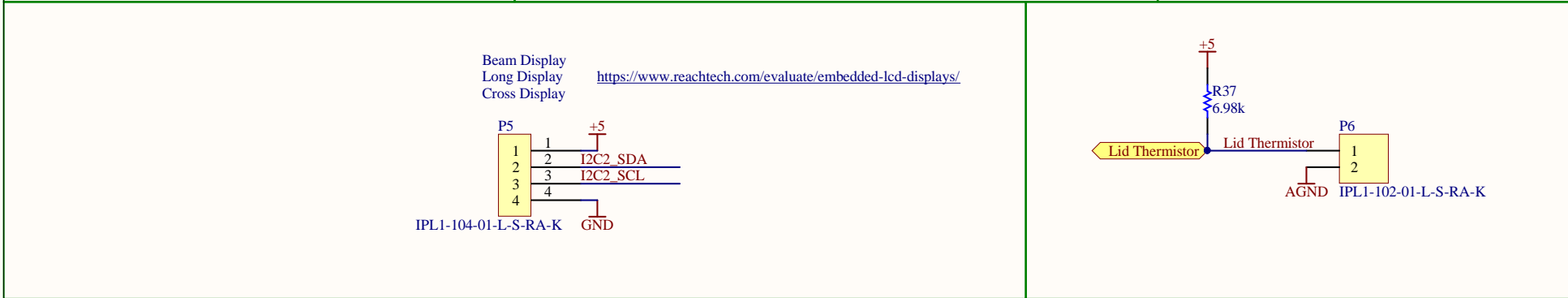
Title ADC			ZLS Corporation 7801 North Lamar Blvd. Suite E-184 Austin, Texas 78752 USA (512) 453-0288	
Size: Orcad A	Number: LM-003	Revision: 3.0		
Date: 8/3/2017	Time: 12:57:59 PM	Sheet 3 of 11		
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-003\ADC.SchDoc				



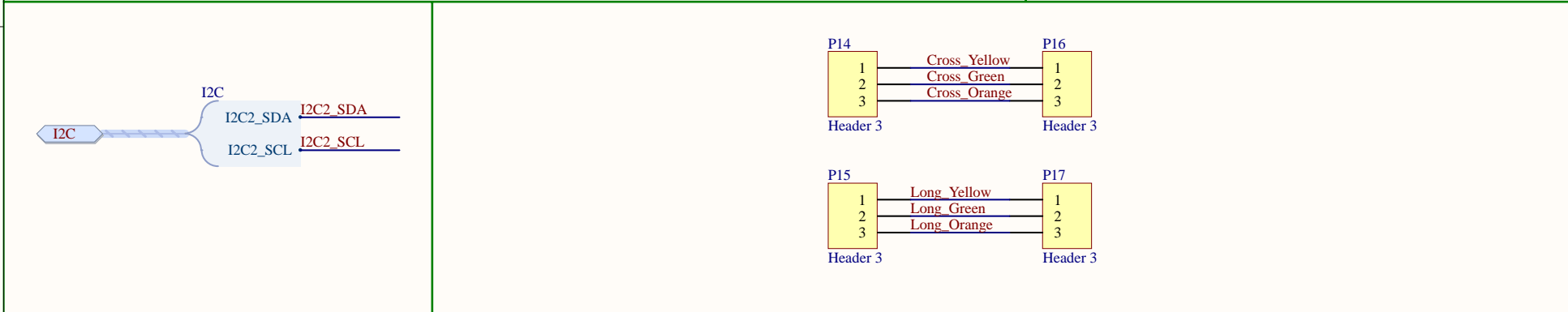
A




B

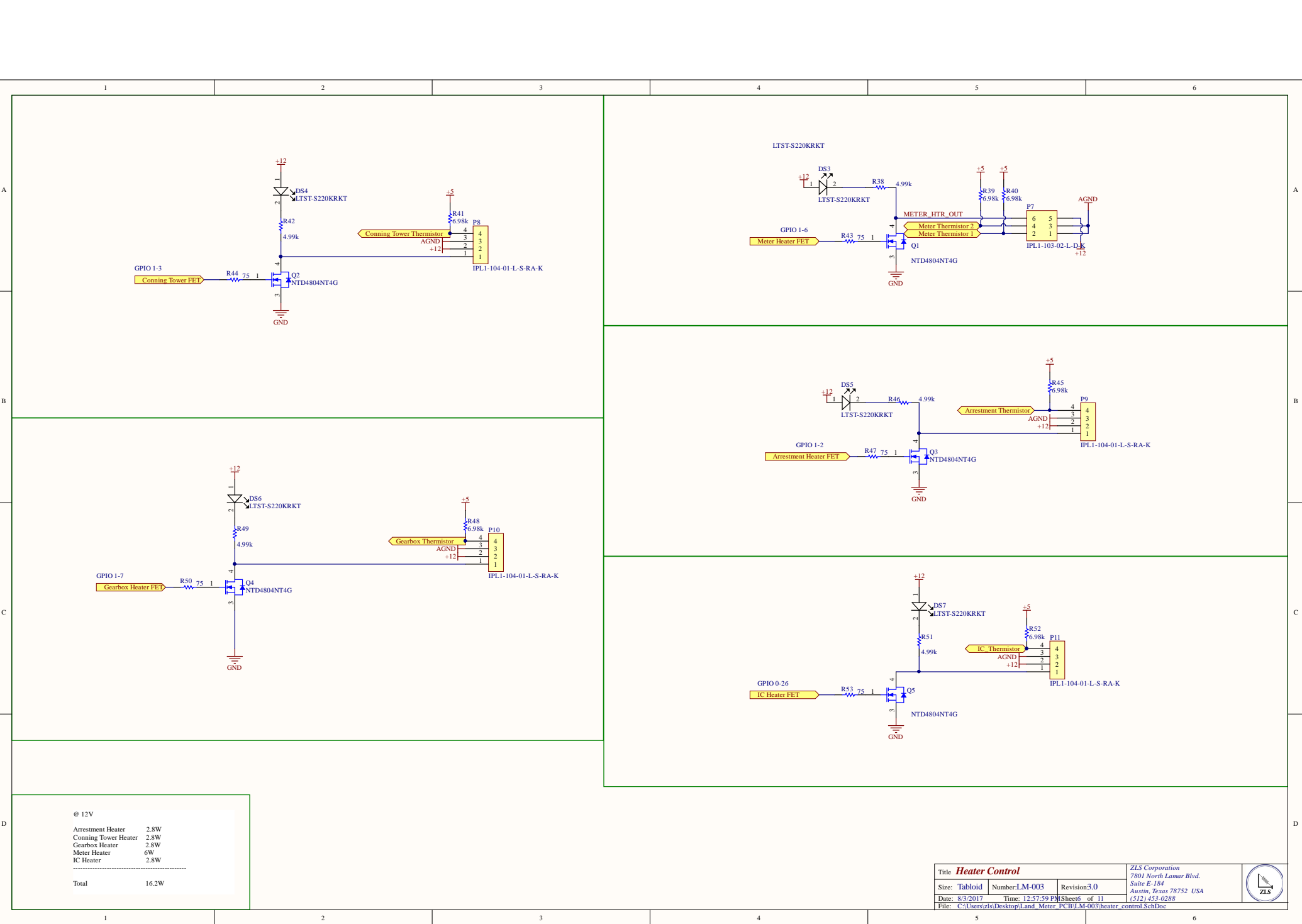


C

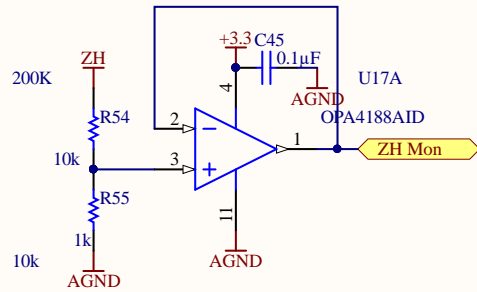


D

Title <i>Connectors</i>			 <i>ZLS Corporation</i> <i>7801 North Lamar Blvd.</i> <i>Suite E-184</i> <i>Austin, Texas 78752 USA</i> <i>(512) 453-0288</i>
Size: Orcad A	Number: LM-003	Revision: 3.0	
Date: 8/3/2017 Time: 12:57:59 PM Sheet 5 of 11			
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-003\Connectors.SchDoc			

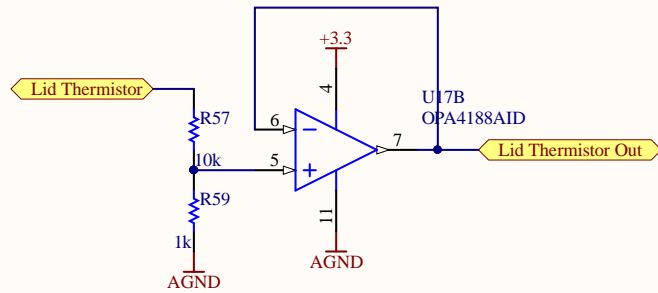


A



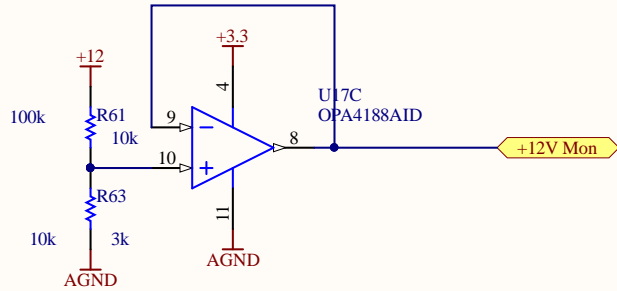
A

B



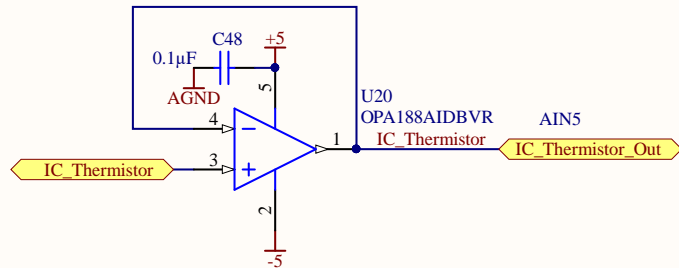
B

C

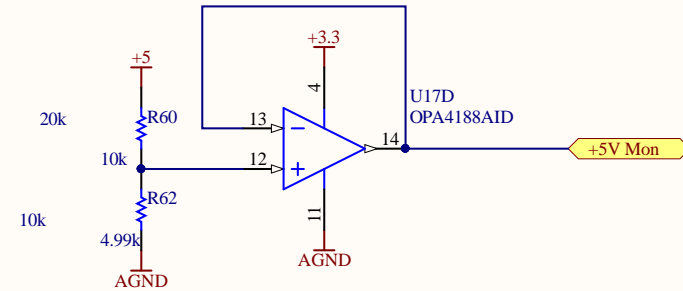
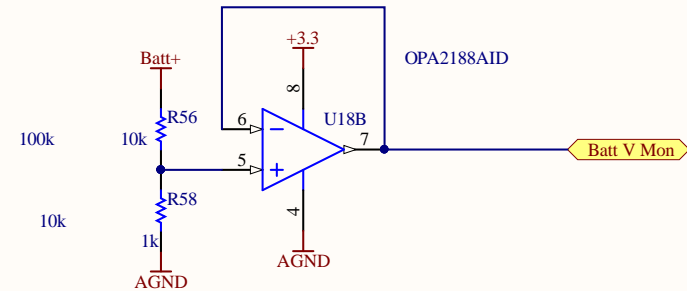
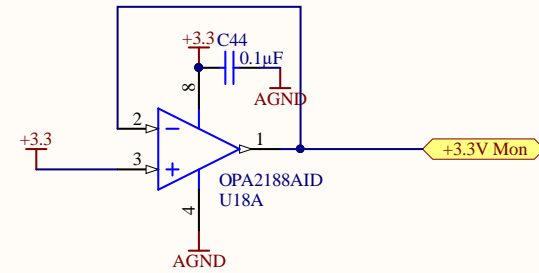


C

D



D

Title **Power Monitor**

Size: Orcad A

Number: LM-003

Revision: 3.0

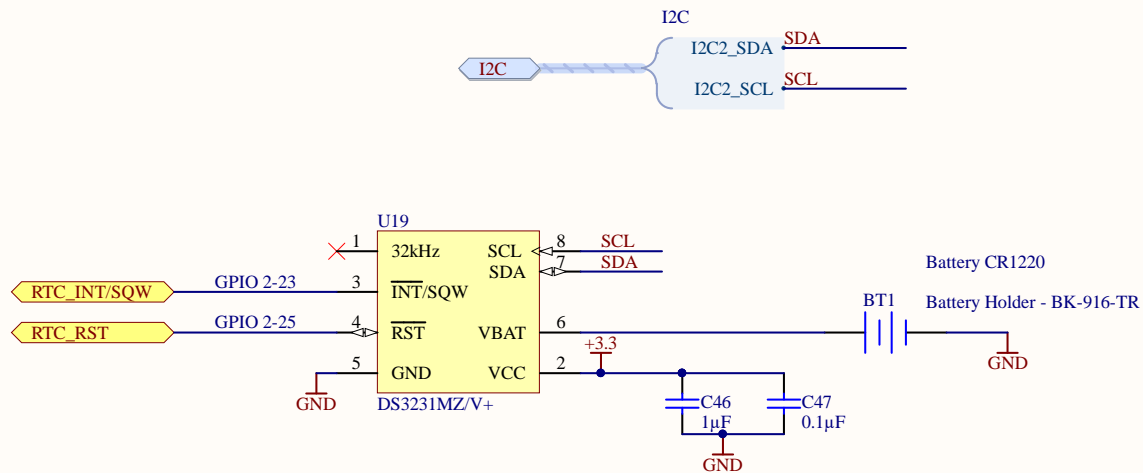
Date: 8/3/2017

Time: 12:57:59 PM Sheet 7 of 11


File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-003\Power Monitor.SchDoc

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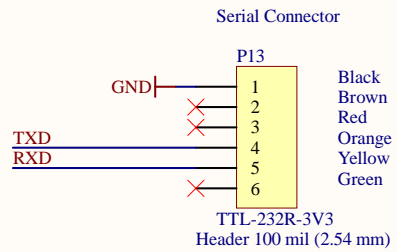
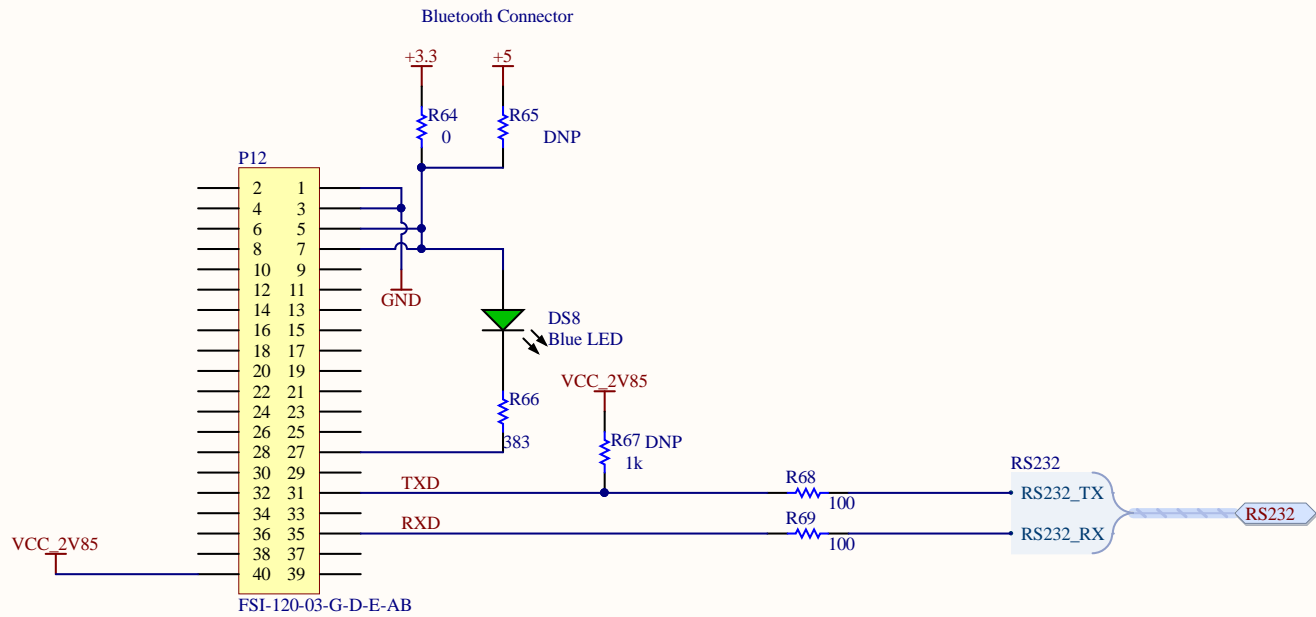




<https://learn.adafruit.com/adafruit-ds3231-precision-rtc-breakout/overview>

Title <i>Real Time Clock</i>			
Size: Orcad A	Number: LM-003	Revision: 3.0	
Date: 8/3/2017 Time: 12:57:59 PM Sheet 8 of 11			
File: C:\Users\zls\Desktop\Land_Meter_PCB\LM-003\Real Time Clock.SchDoc			

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Title **RS232**

Size: **Orcad A**

Number: **LM-003**

Revision: **3.0**

Date: **8/3/2017**

Time: **12:58:00 PM**

Sheet **9** of **11**

File: **C:\Users\zls\Desktop\Land_Meter_PCB\LM-003\RS232.SchDoc**

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