
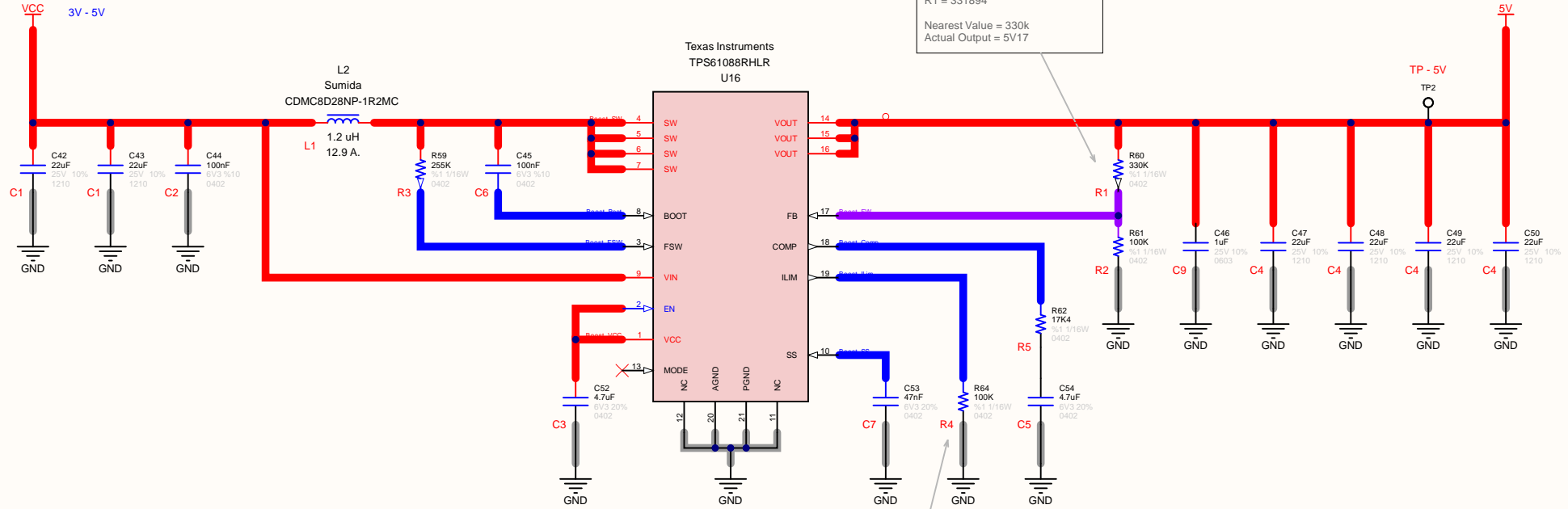

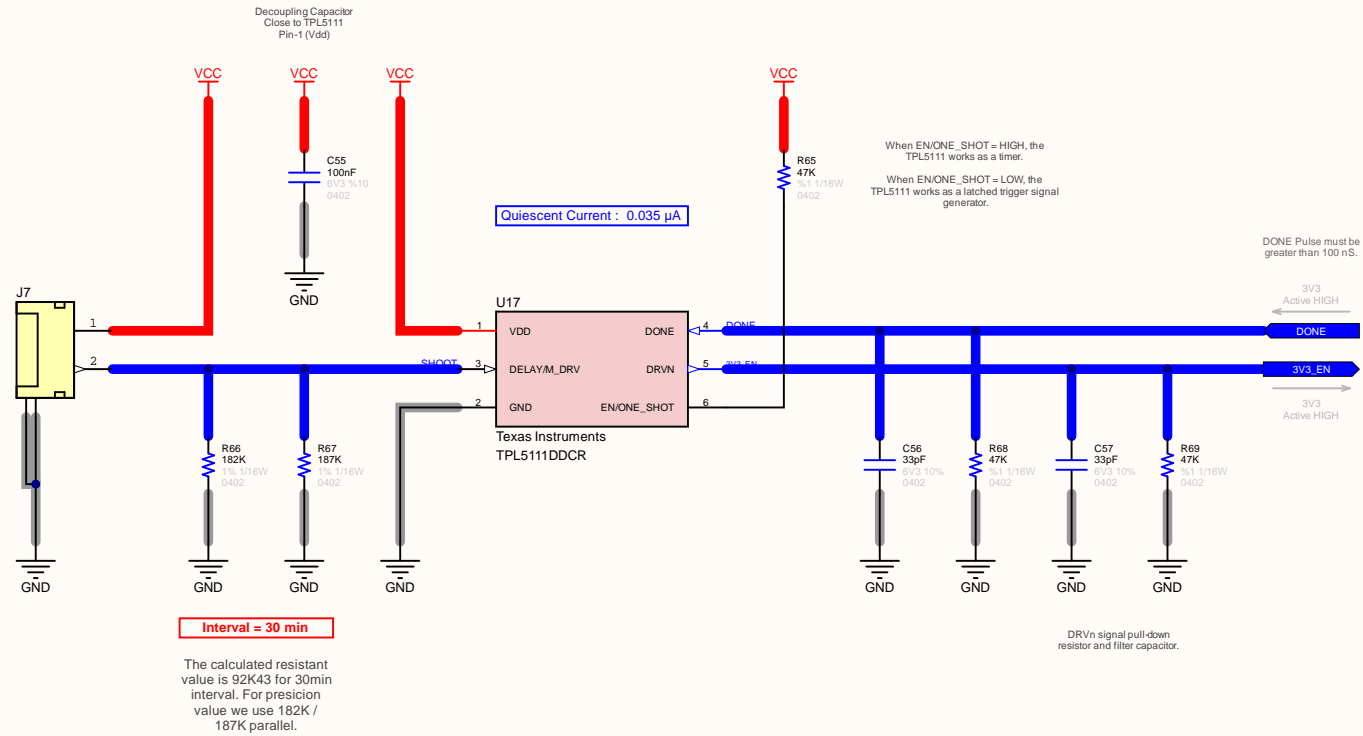



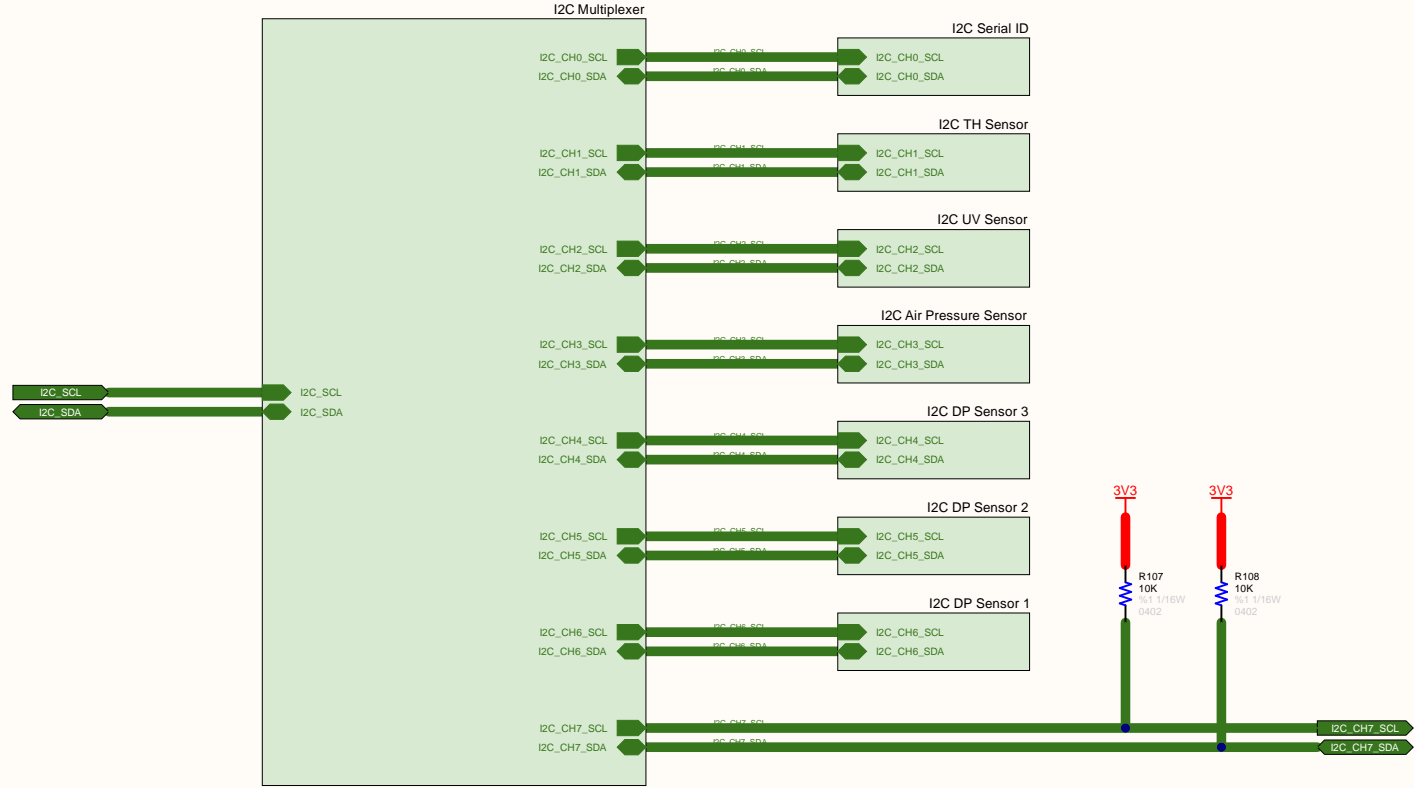
Battery Measurement			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
			Customer : STF Labs		
Size : A4	Project : WeatherStat V4		Product ID : -		
			Module ID : B108AA		
Date : 9.06.2023	Time : 15:46:07	Page : 3 / 40	Version : R1		
File : Power Battery Measurement.SchDoc			Revision : 01.00.00		




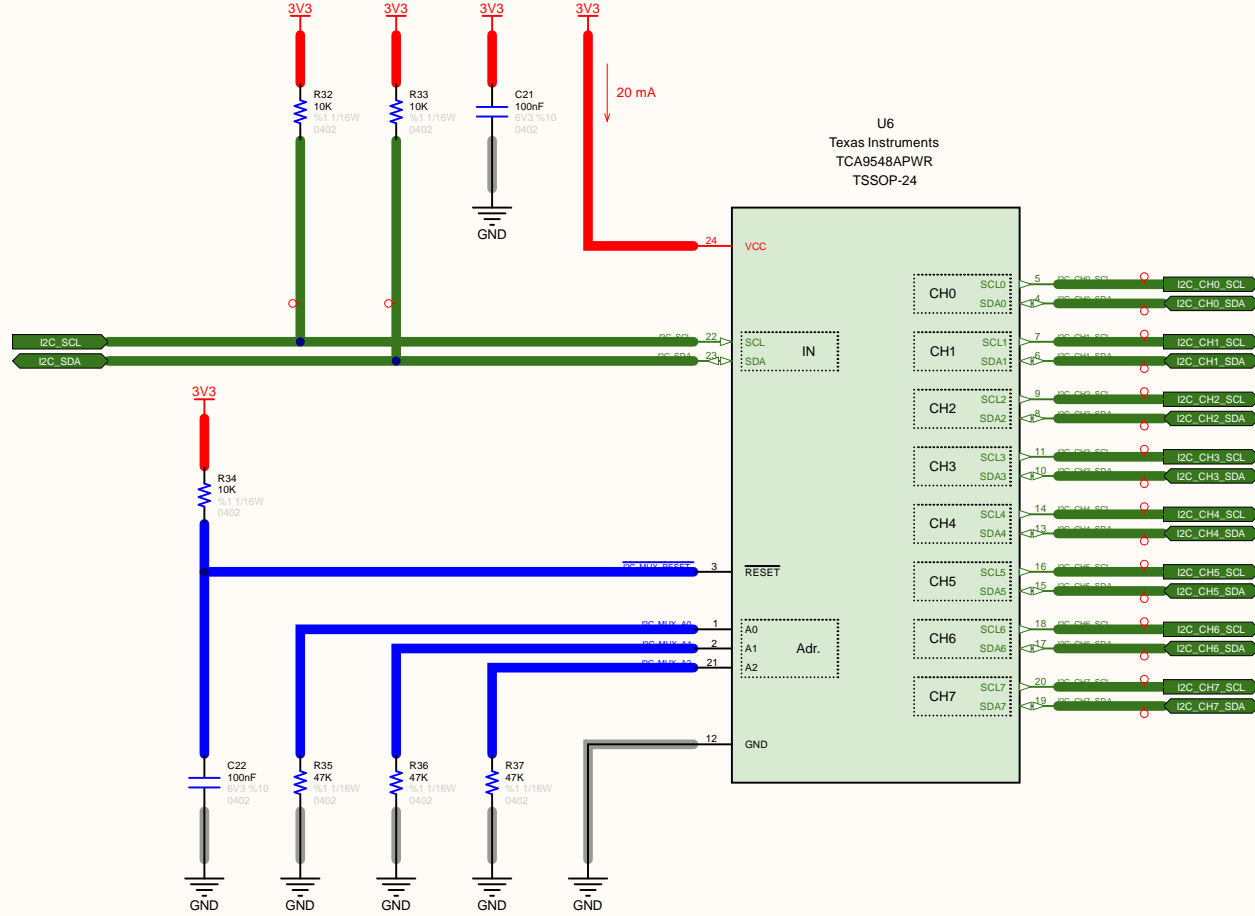
5V Buck/Boost Converter			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye	
			Customer : STF Labs		
Size : A4			Product ID : -		
Project : WeatherStat V4			Module ID : B108AA		
Date : 9.06.2023	Time : 15:46:07	Page : 5 / 40	Version : R1		
File : Power 5V Boost Converter.SchDoc			Revision : 01.00.00		




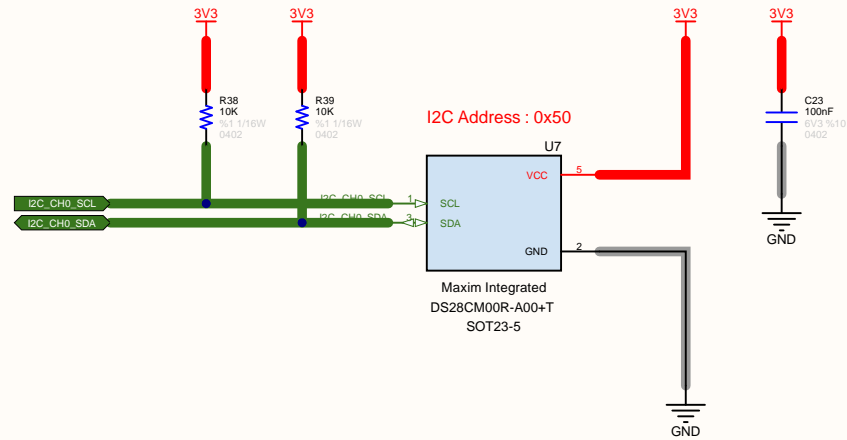
Sleep Timer			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye	
Size : A4	Project : WeatherStat V4		Customer : STF Labs		
Date : 9.06.2023	Time : 15:46:07	Page : 6 / 40	Product ID : -		
File : Power Sleep Timer.SchDoc			Module ID : B108AA		
			Version : R1		
			Revision : 01.00.00		




I2C Network			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
Size : A4		Project : WeatherStat V4	Customer : STF Labs		
Date : 9.06.2023		Time : 15:46:07	Product ID : -		
File : I2C Network.SchDoc		Page : 8 / 40	Module ID : B108AA		
			Version : R1		
			Revision : 01.00.00		



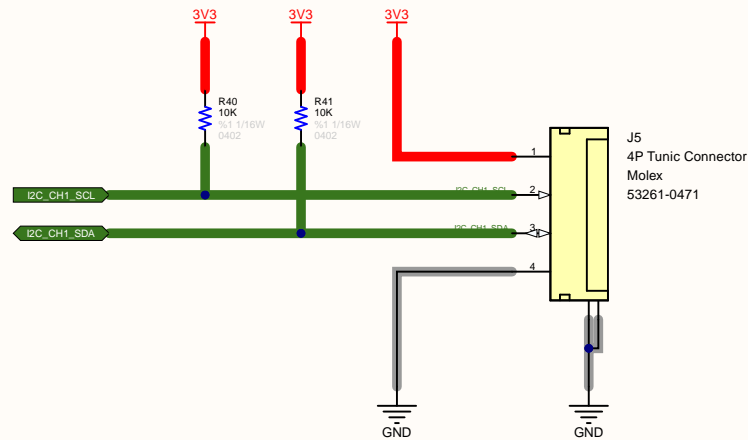
I2C Multiplexer			Engineer : Günc Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye 
Size : A4			Customer : STF Labs	
Project : WeatherStat V4			Product ID : -	
Date : 9.06.2023			Module ID : B108AA	
Time : 15:46:07			Version : R1	
Page : 9 / 40			Revision : 01.00.00	
File : I2C Multiplexer.SchDoc				




Serial ID			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye 
Size : A4		Project : WeatherStat V4	Customer : STF Labs	
Date : 9.06.2023		Time : 15:46:07	Product ID : -	
File : I2C Serial ID.SchDoc		Page : 10 / 40	Module ID : B108AA	
			Version : R1	
			Revision : 01.00.00	

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Engineer contact : akkoyun@me.com

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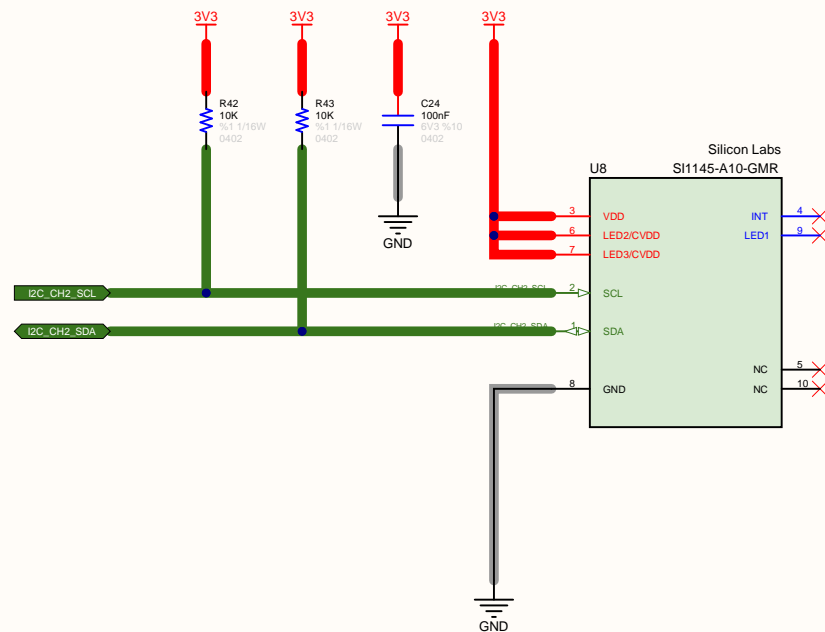
www.github.com/akkoyun/B108AA


T/H Sensor Socket			Engineer : Günc Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye 
Size : A4			Customer : STF Labs	
Date : 9.06.2023			Product ID : -	
Time : 15:46:07			Module ID : B108AA	
Page : 11 / 40			Version : R1	
File : I2C TH Sensor Socket.SchDoc			Revision : 01.00.00	

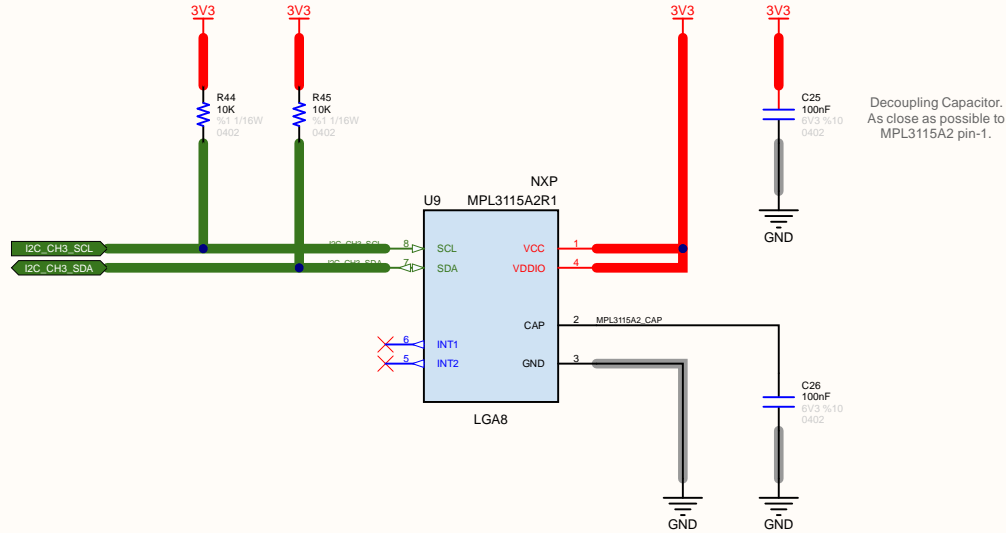
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By-Pass Capacitor
Close to
SI1145-A10-GMR
Pin-3 (Vdd)



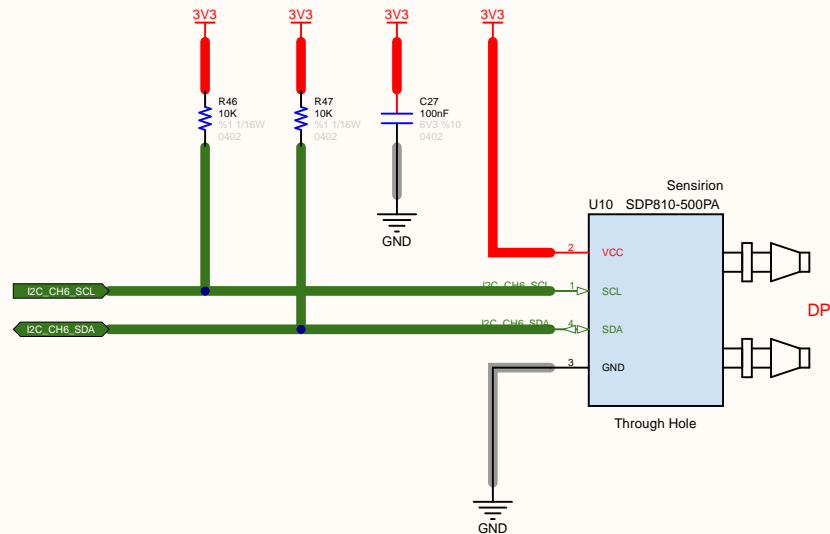
UV Sensor			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
			Customer : STF Labs		
			Product ID : -		
			Module ID : B108AA		
			Version : R1		
Size : A4	Project : WeatherStat V4		Revision : 01.00.00		
Date : 9.06.2023	Time : 15:46:07	Page : 12 / 40			
File : I2C UV Sensor.SchDoc					




Air Pressure Sensor				Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacak Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye 
				Customer : STF Labs	
Size : A4		Project : WeatherStat V4		Product ID : -	
Date : 9.06.2023				Module ID : B108AA	
Time : 15:46:07		Page : 13 / 40		Version : R1	
File : I2C Air Pressure Sensor.SchDoc				Revision : 01.00.00	

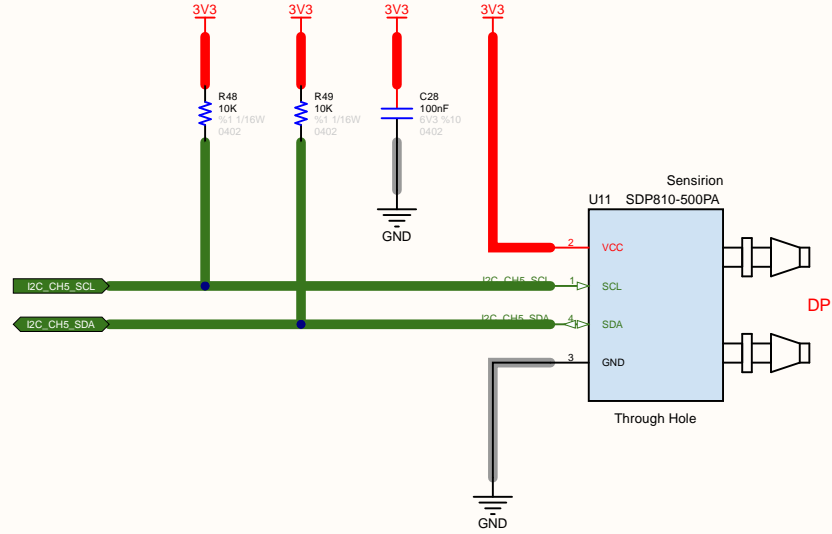
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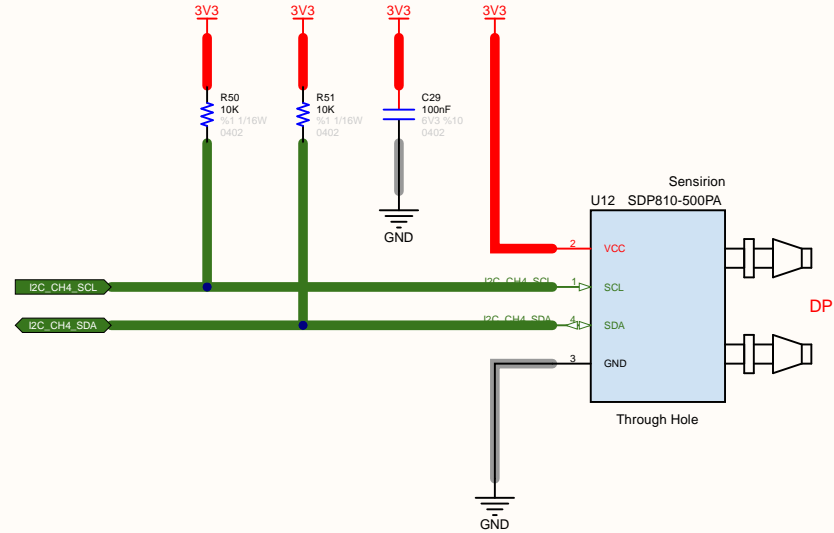



[www.github.com/akkoyun/B108AA](https://github.com/akkoyun/B108AA)

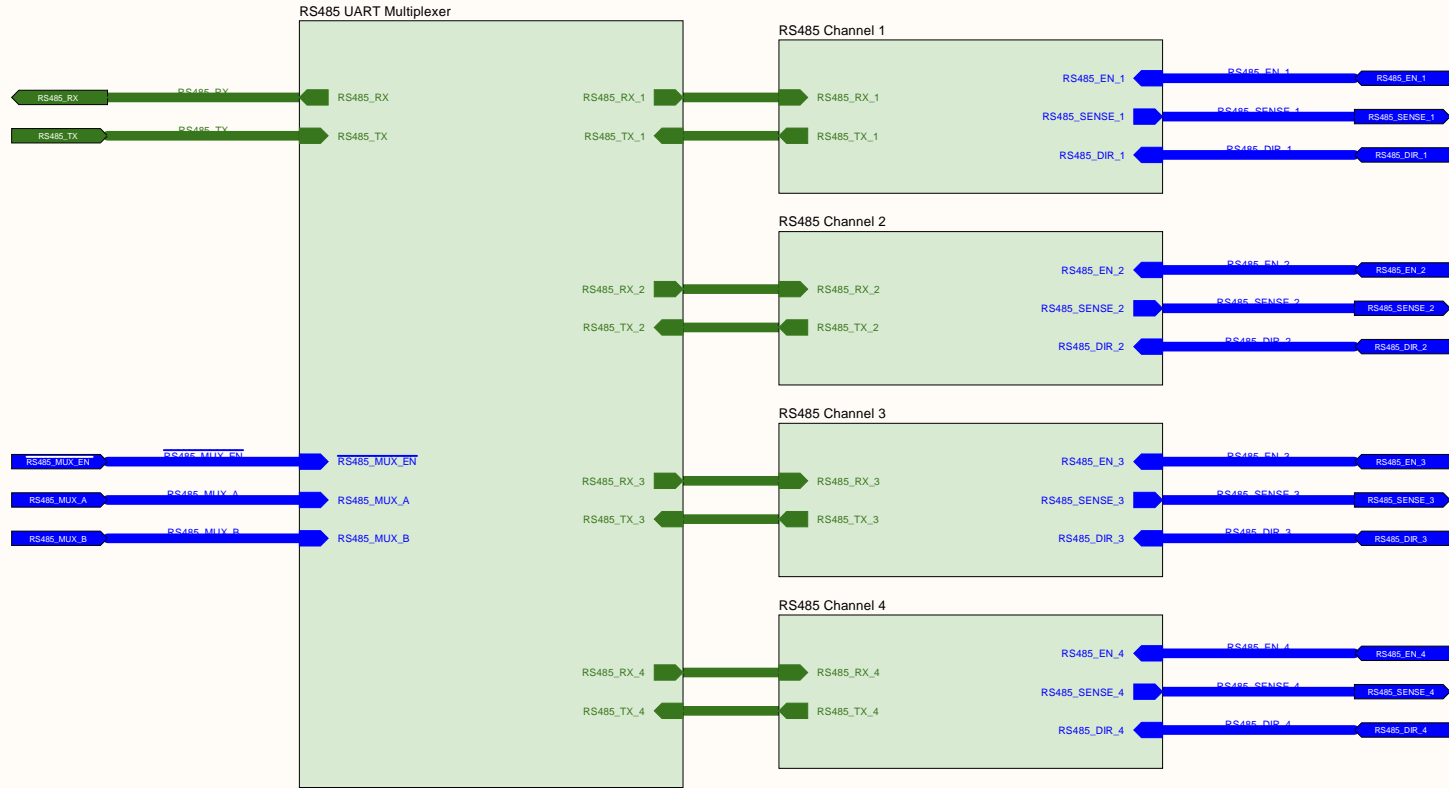
Delta Pressure Sensor 1			Engineer : Güne Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye 
Size : A4		Project : WeatherStat V4	Customer : STF Labs	
Date : 9.06.2023		Time : 15:46:07	Product ID : -	
File : I2C DP Sensor 1.SchDoc		Page : 14 / 40	Module ID : B108AA	
			Version : R1	
			Revision : 01.00.00	




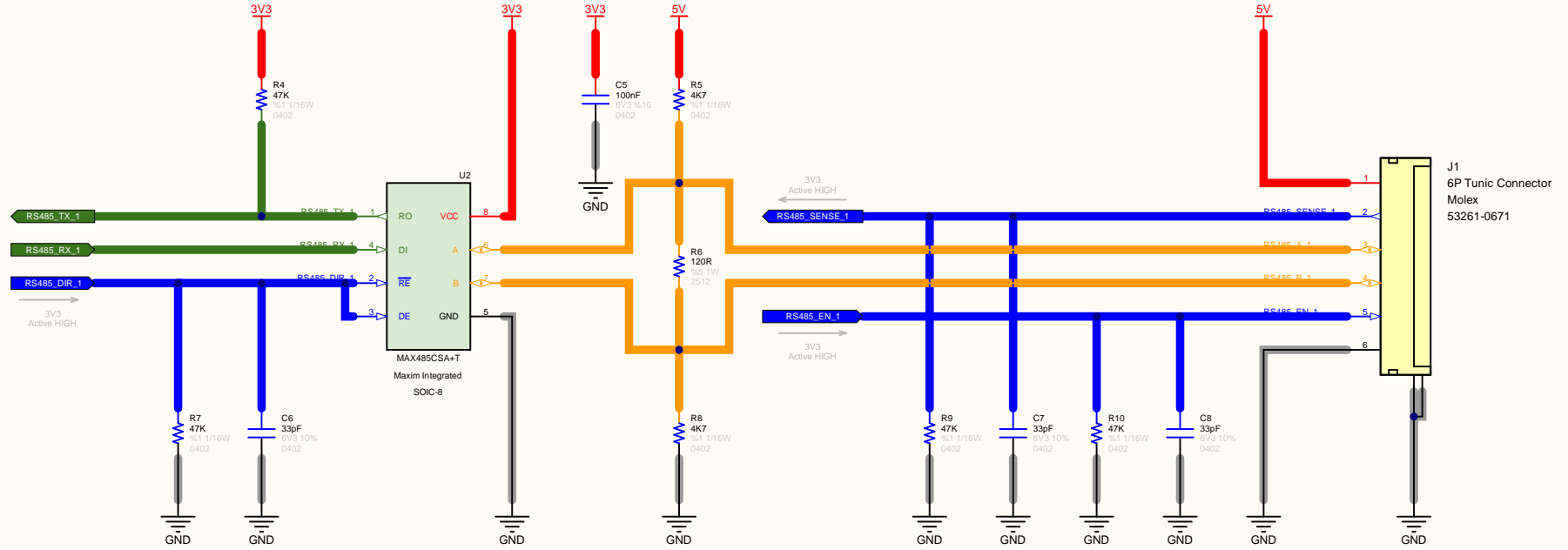
Delta Pressure Sensor 2			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
Size : A4			Customer : STF Labs		
Date : 9.06.2023			Product ID : -		
Time : 15:46:07			Module ID : B108AA		
Page : 15 / 40			Version : R1		
File : I2C DP Sensor 2.SchDoc			Revision : 01.00.00		




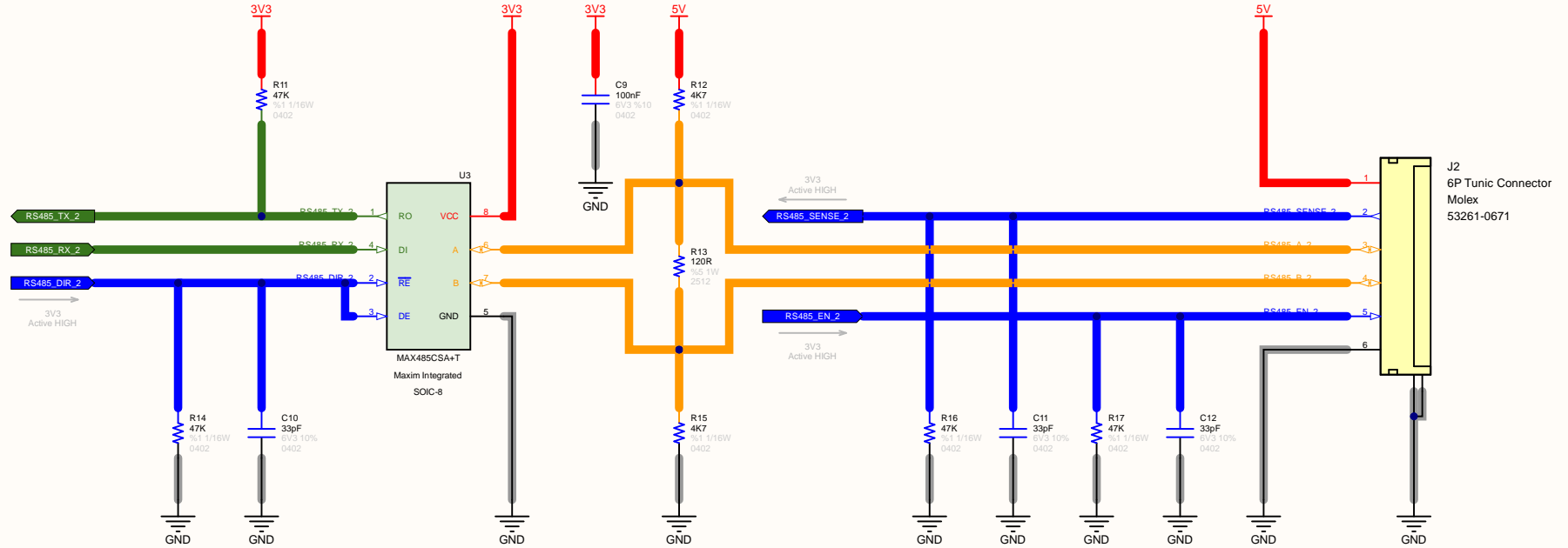
Delta Pressure Sensor 3			Engineer : Güne Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye	
Size : A4			Customer : STF Labs		
Date : 9.06.2023			Product ID : -		
Time : 15:46:07			Module ID : B108AA		
Page : 16 / 40			Version : R1		
File : I2C DP Sensor 3.SchDoc			Revision : 01.00.00		




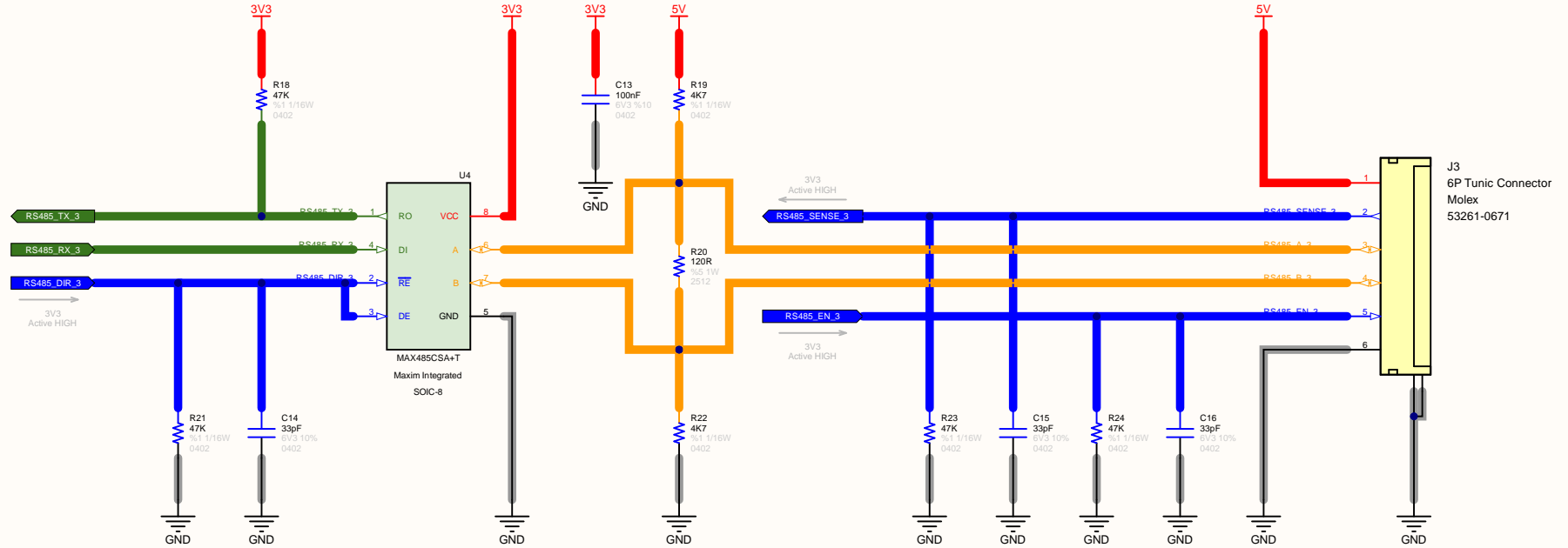
RS485 Outputs			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
			Customer : STF Labs		
			Product ID : -		
			Module ID : B108AA		
			Version : R1		
			Revision : 01.00.00		
File : RS485 Outputs.SchDoc					
Size : A4	Project : WeatherStat V4				
Date : 9.06.2023	Time : 15:46:07	Page : 17 / 40			




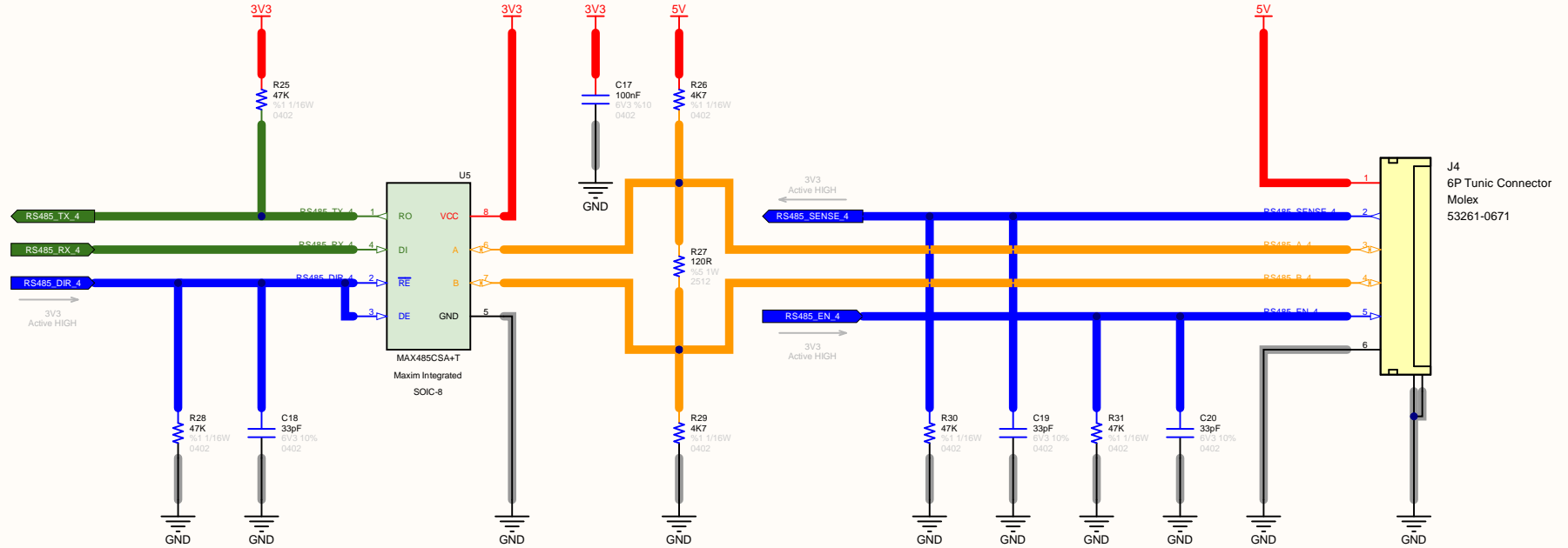
RS485 Channel-1			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacak Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye	
			Customer : STF Labs		
Size : A4	Project : WeatherStat V4		Product ID : -		
Date : 9.06.2023	Time : 15:46:07	Page : 19 / 40	Module ID : B108AA		
File : RS485 Channel 1.SchDoc			Version : R1		
			Revision : 01.00.00		




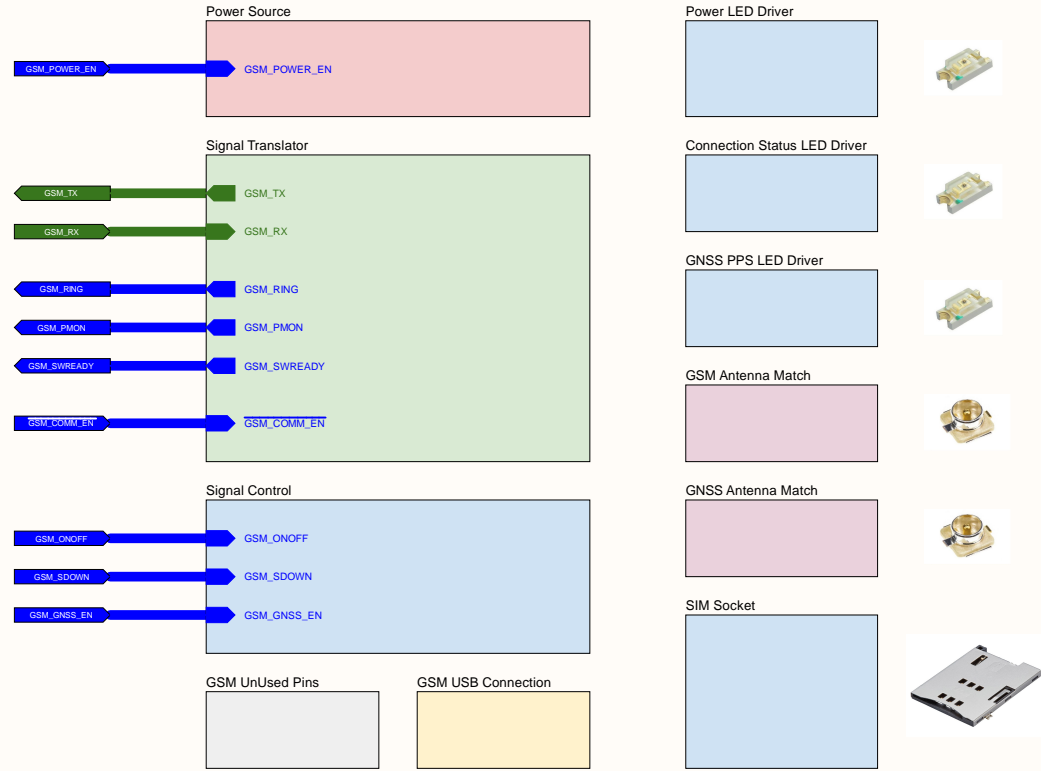
RS485 Channel-2			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
Size : A4		Project : WeatherStat V4	Customer : STF Labs		
Date : 9.06.2023		Time : 15:46:07	Product ID : -		
Page : 20 / 40		Version : R1	Module ID : B108AA		
File : RS485 Channel 2.SchDoc		Revision : 01.00.00			

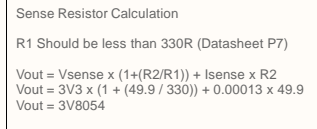


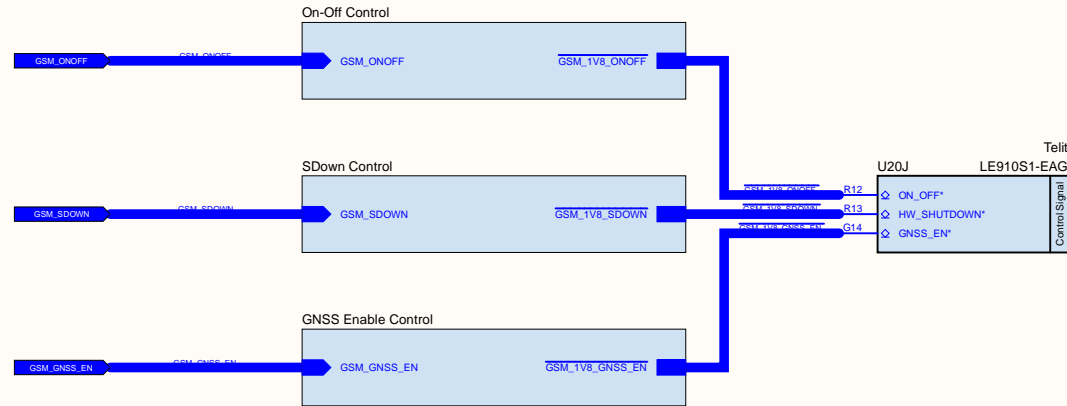
RS485 Channel-1			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacak Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye	
			Customer : STF Labs		
Size : A4	Project : WeatherStat V4		Product ID : -		
Date : 9.06.2023	Time : 15:46:07	Page : 21 / 40	Module ID : B108AA		
File : RS485 Channel 3.SchDoc			Version : R1		
			Revision : 01.00.00		




RS485 Channel-1			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
Size : A4		Project : WeatherStat V4	Customer : STF Labs		
Date : 9.06.2023		Time : 15:46:07	Product ID : -		
Page : 22 / 40		Module ID : B108AA			
File : RS485 Channel 4.SchDoc		Version : R1			
			Revision : 01.00.00		



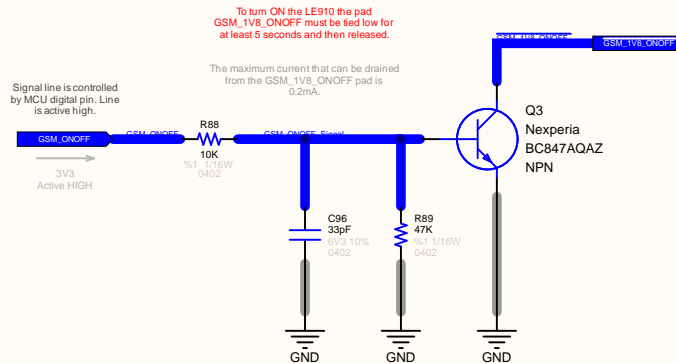





Signal Control Block Diagram			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
			Customer : STF Labs		
			Product ID : -		
			Module ID : B108AA		
			Version : R1		
			Revision : 01.00.00		
File : GSM Signal Block Diagram.SchDoc					

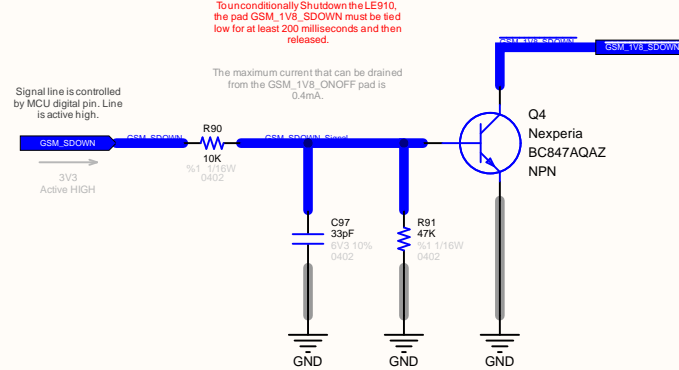
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www.github.com/akkoyun/B108AA

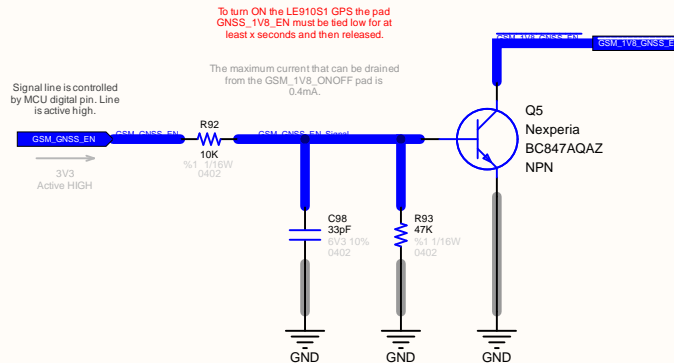
On/Off Signal Control			Engineer : Güne Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye 
Size : A4			Customer : STF Labs	
Date : 9.06.2023			Product ID : -	
Time : 15:46:08			Module ID : B108AA	
Page : 26 / 40			Version : R1	
File : GSM On-Off Signal Control.SchDoc			Revision : 01.00.00	




Shut Down Signal Control			Engineer : Günce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye 
Size : A4			Customer : STF Labs	
Date : 9.06.2023			Product ID : -	
Time : 15:46:08			Module ID : B108AA	
Page : 27 / 40			Version : R1	
File : GSM Shut Down Signal Control.SchDoc			Revision : 01.00.00	

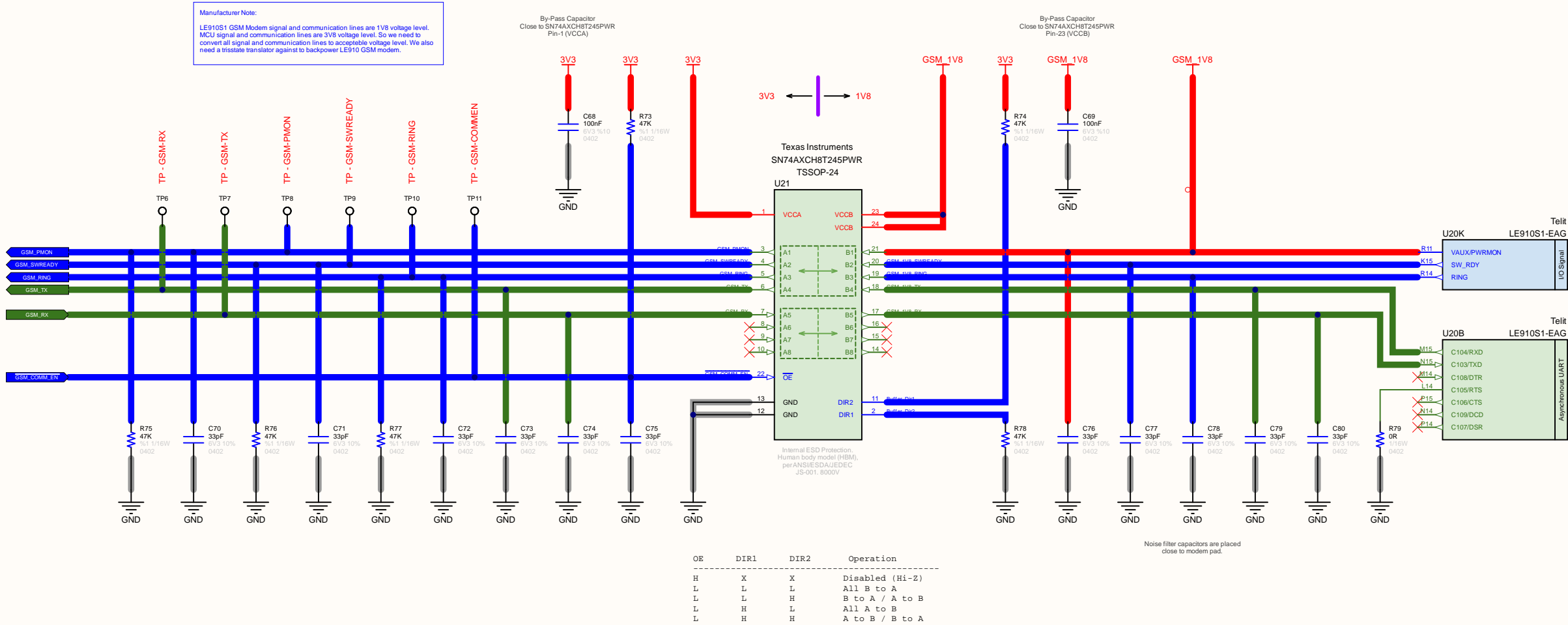
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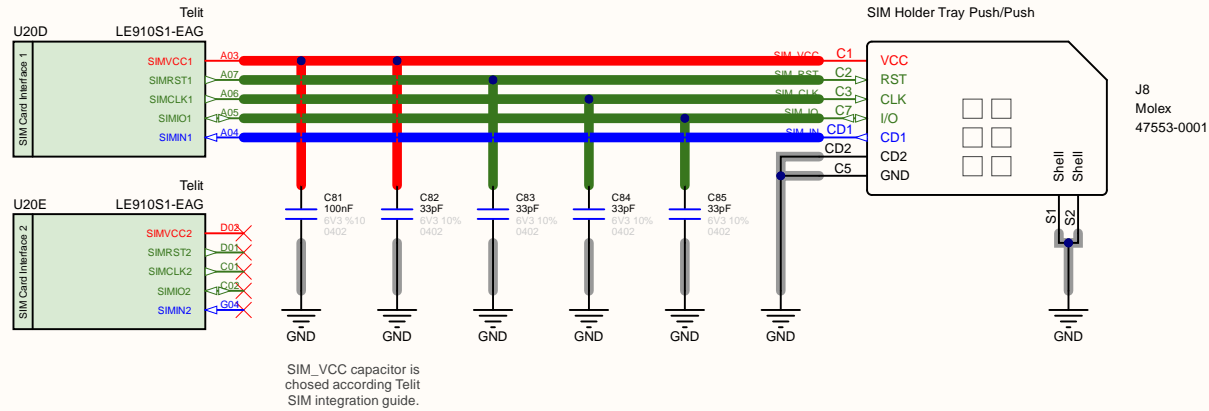
Property of **STF Labs**




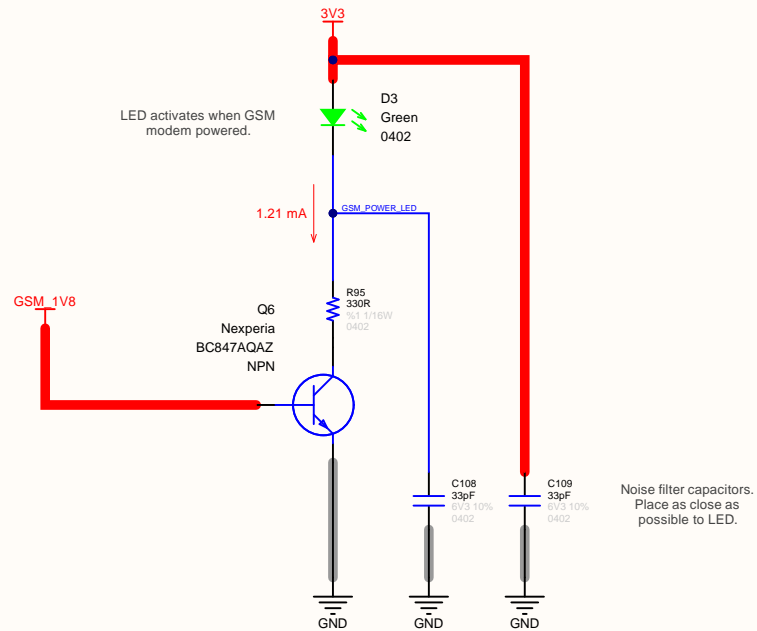
www.github.com/akkoyun/B108AA


GNSS En Signal Control			Engineer : Güne Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye 
Size : A4			Customer : STF Labs	
Date : 9.06.2023			Product ID : -	
Time : 15:46:08			Module ID : B108AA	
Page : 28 / 40			Version : R1	
File : GSM GNSS En Signal Control.SchDoc			Revision : 01.00.00	

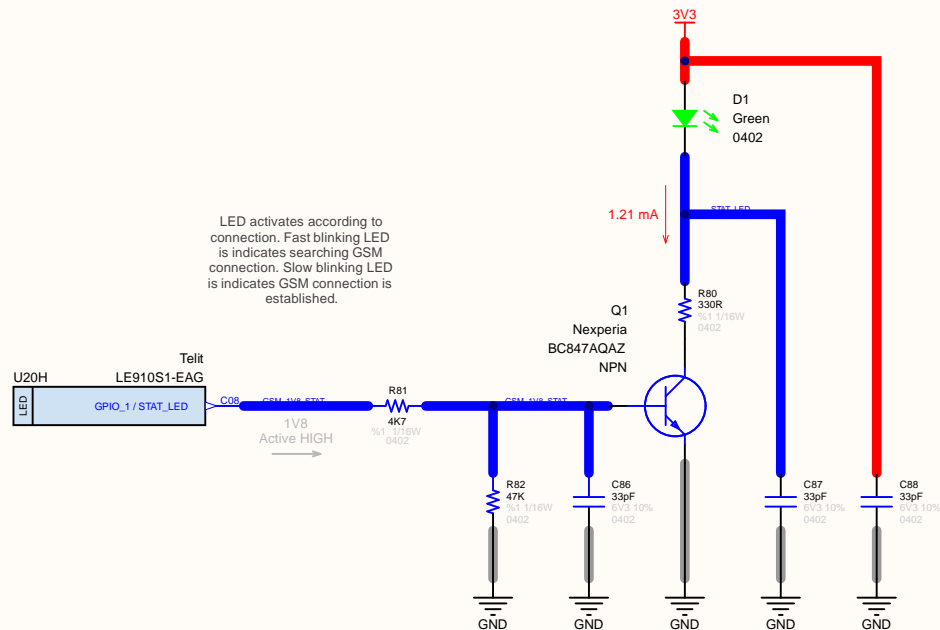





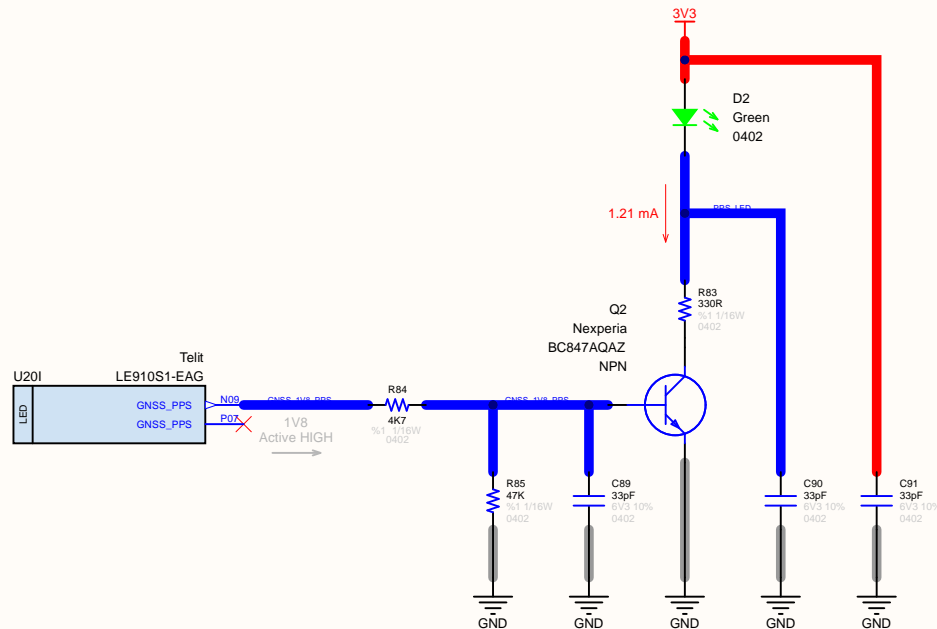
GSM SIM Socket			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
			Customer : STF Labs		
Size : A4	Project : WeatherStat V4		Product ID : -		
Date : 9.06.2023	Time : 15:46:08	Page : 30 / 40	Module ID : B108AA		
			Version : R1		
File : GSM SIM Socket.SchDoc			Revision : 01.00.00		




GSM Power LED Driver			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye 
Size : A4			Customer : STF Labs	
Date : 9.06.2023			Product ID : -	
Time : 15:46:08			Module ID : B108AA	
Page : 31 / 40			Version : R1	
File : GSM Power LED Driver.SchDoc			Revision : 01.00.00	

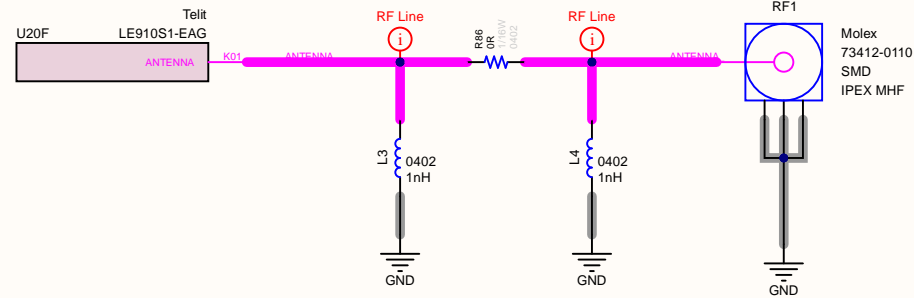



Status LED Driver			Engineer : Güncce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye 
Size : A4	Project : WeatherStat V4		Customer : STF Labs	
Date : 9.06.2023	Time : 15:46:08	Page : 32 / 40	Product ID : -	
File : GSM Status LED Driver.SchDoc			Module ID : B108AA	
			Version : R1	
			Revision : 01.00.00	

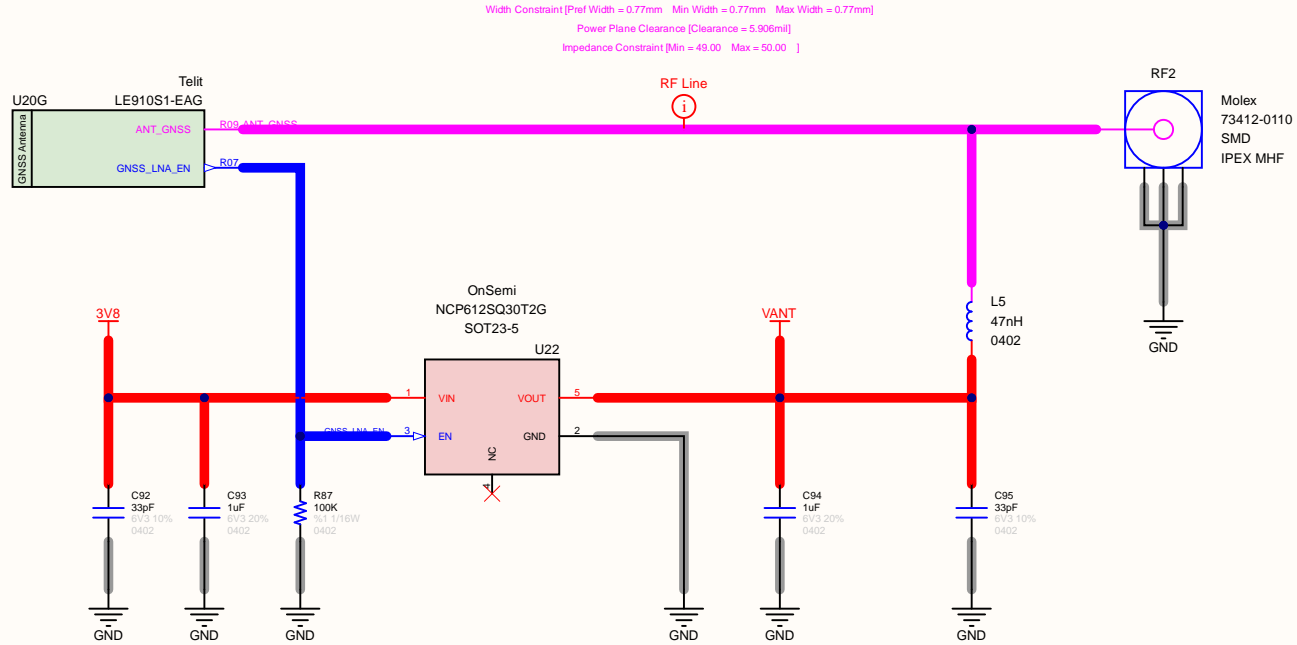



Noise filter capacitors.
Place as close as
possible to LED.

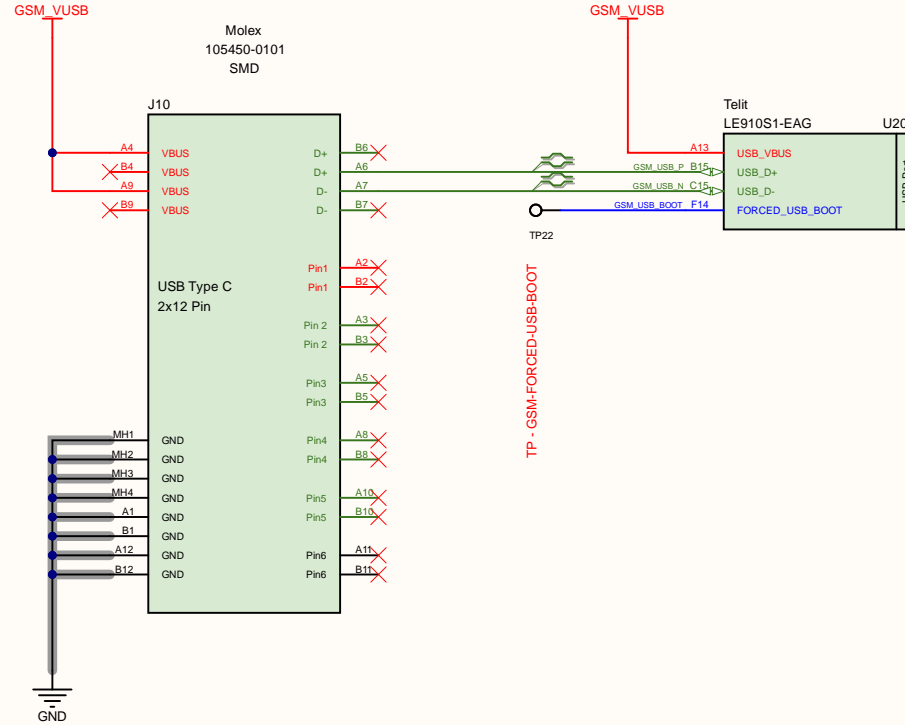
GNSS PPS LED Driver			Engineer : Güncce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selçuklu / Konya Türkiye	
Size : A4	Project : WeatherStat V4		Customer : STF Labs		
Date : 9.06.2023	Time : 15:46:08	Page : 33 / 40	Product ID : -		
File : GSM PPS LED Driver.SchDoc			Module ID : B108AA		
			Version : R1		
			Revision : 01.00.00		




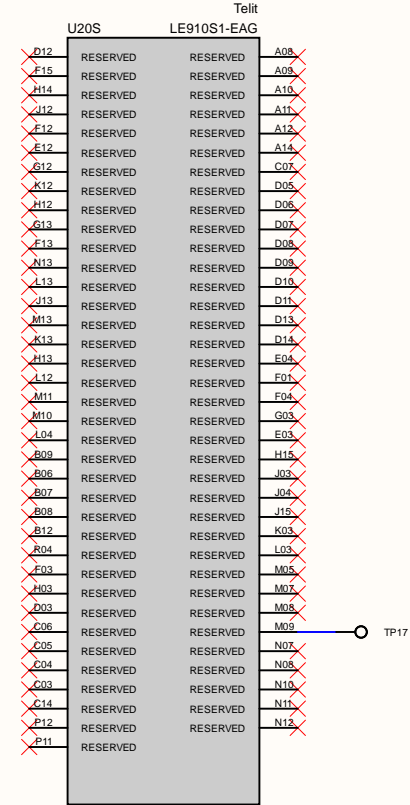
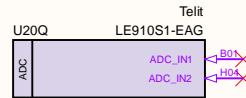
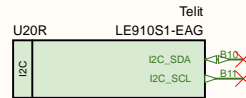
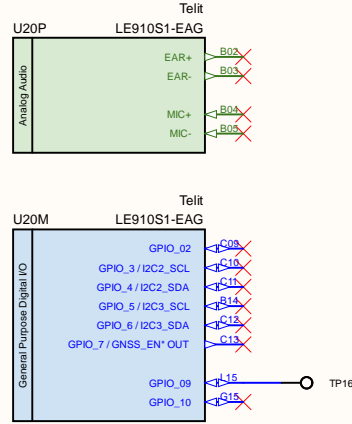
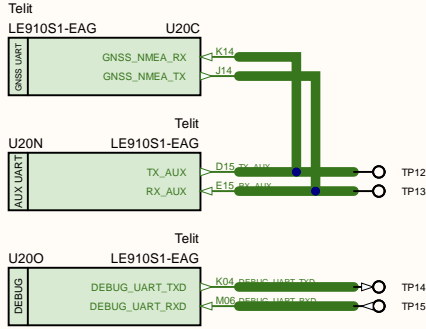
GSM 2G Antenna Filter			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayalık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
			Customer : STF Labs		
			Product ID : -		
			Module ID : B108AA		
			Version : R1		
File : GSM Modem Antenna.SchDoc			Revision : 01.00.00		
Size : A4	Project : WeatherStat V4				
Date : 9.06.2023	Time : 15:46:08	Page : 34 / 40			



GNSS Antenna & LNA			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye	
			Customer : STF Labs		
Size : A4	Project : WeatherStat V4		Product ID : -		
			Module ID : B108AA		
Date : 9.06.2023	Time : 15:46:08	Page : 35 / 40	Version : R1		
File : GNSS Antenna.SchDoc			Revision : 01.00.00		



GSM USB Port			Engineer : Gunce Akkoyun	STF Irrigation 4. O.S.B. Büyük Kayacık Mh. 103. Cd. No:12 Selcuklu / Konya Türkiye 
Size : A4		Project : WeatherStat V4	Customer : STF Labs	
Date : 9.06.2023		Time : 15:46:08	Product ID : -	
File : GSM USB Port.SchDoc		Page : 36 / 40	Module ID : B108AA	
			Version : R1	
			Revision : 01.00.00	



Decoupling
capacitor as close as
possible to MCU Vcc
pins.

Decoupling
capacitor as close as
possible to MCU
AVcc pin.

U13Q
Microchip Technology / Atmel
ATMEGA2560V-8AU
TQFP100

MicroController
External Oscillator

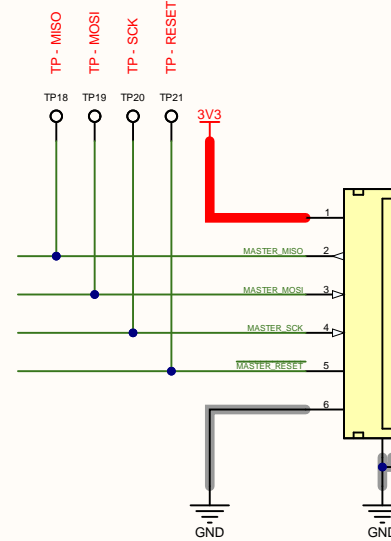
ABRACON
ABMM2-7.3728MHZ-E2-T
7.3728 MHz

MCU is working at 7.3728 Mhz
for minimise UART
communication errors
(115200bps).

U13R
Microchip Technology / Atmel
ATMEGA2560V-8AU
TQFP100



ICSP / SPI Communication



J9
6P Tunic Connector
Molex
53261-0671

