

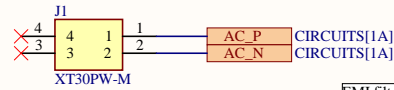
# INPUT



Sola E300 0.300KVA 240X480-120



R5ABLKBLKFF0

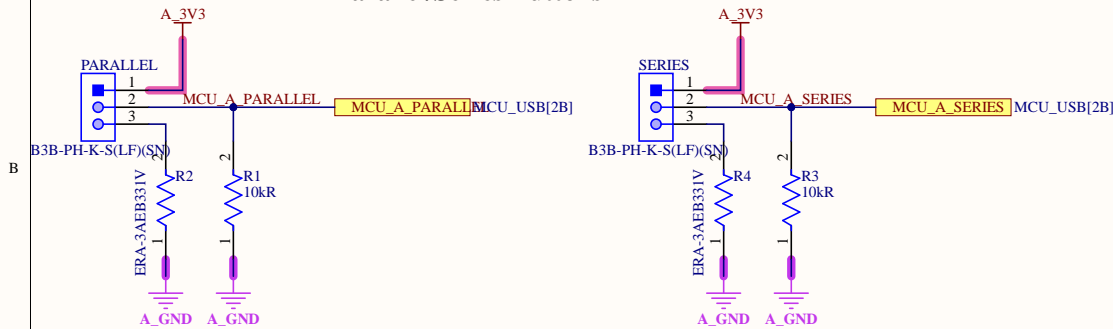


EMI filter, transformer, and rocker switch connected before the XT30 connector.

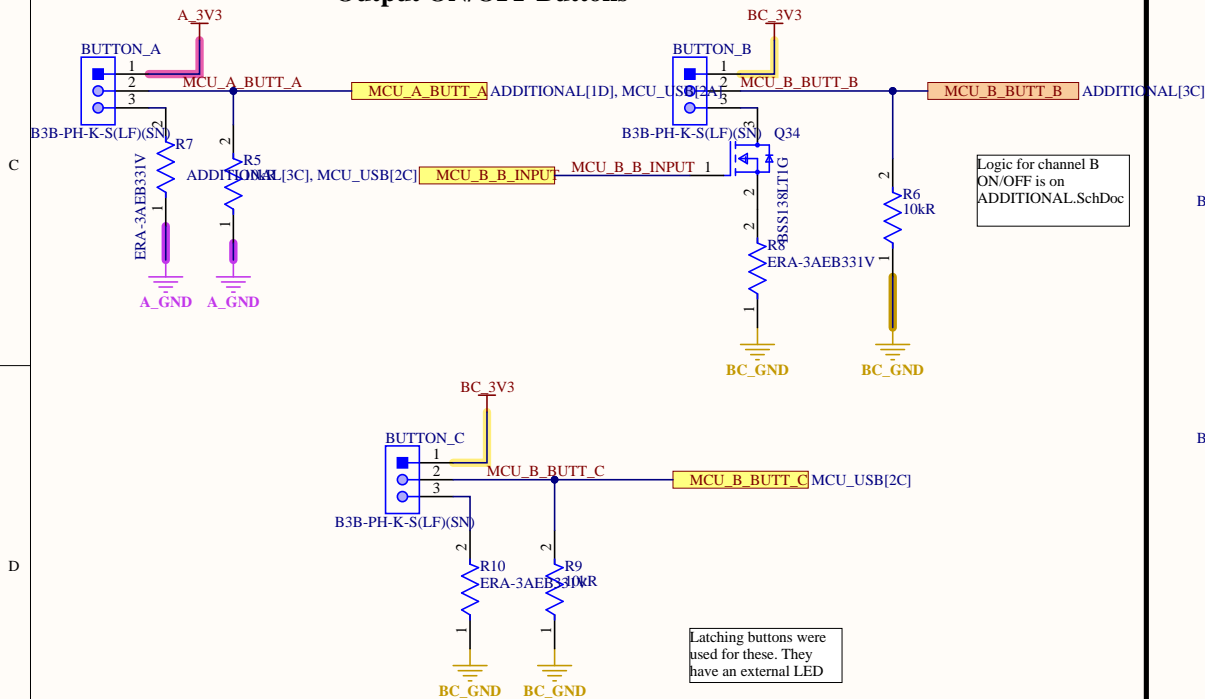
# BUTTONS

## Parallel/Series Buttons

Button Link:  
<https://www.mouser.com/ProductDetail/485-1476>



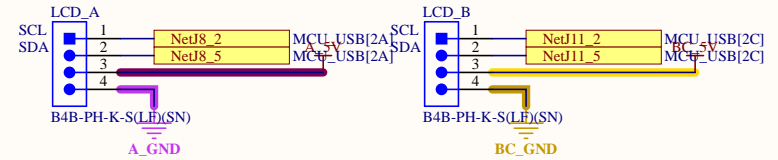
## Output ON/OFF Buttons



Latching buttons were used for these. They have an external LED

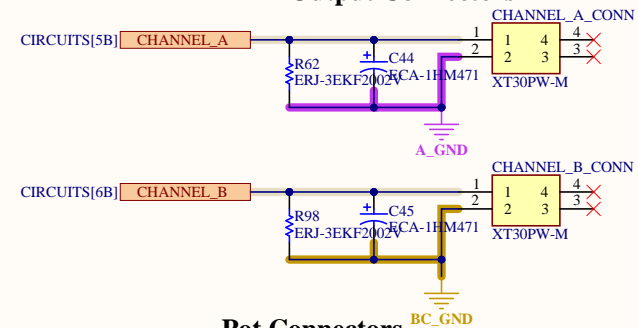
# OUTPUT CONNECTORS

## LCD Connectors

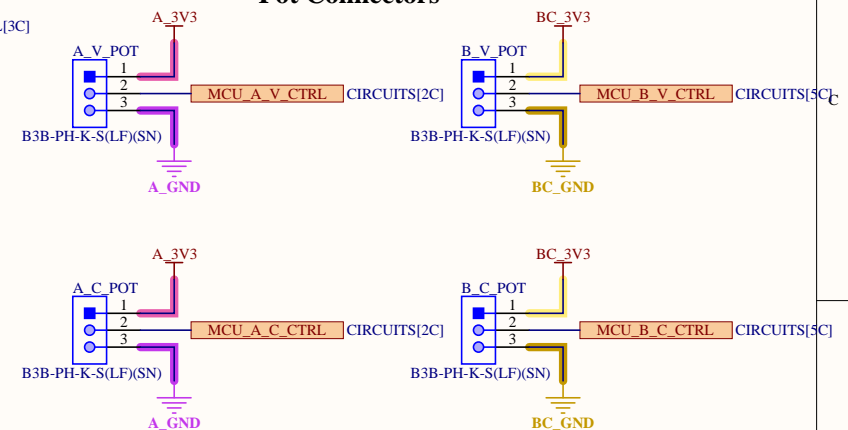


LCD Display:  
<http://amazon.com/gp/product/B0BWTFN9WF?smid=A1PKC2PUMNR8VD&th=1>

## Output Connectors

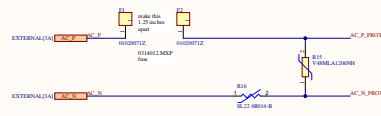


## Pot Connectors

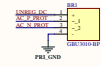


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## INPUT PROTECTION

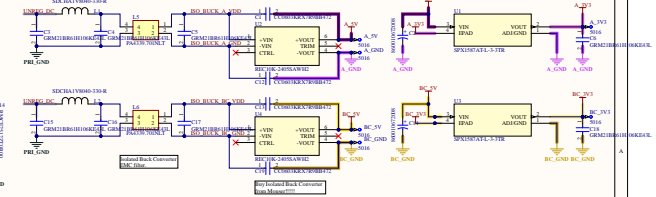


## BRIDGE RECTIFIER

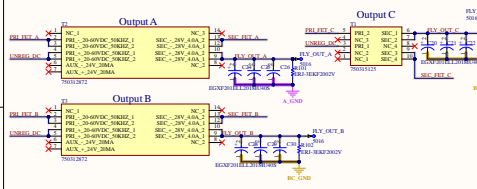


Any possible design for the bridge rectifier.  
Best design will be found by only one of them will be.

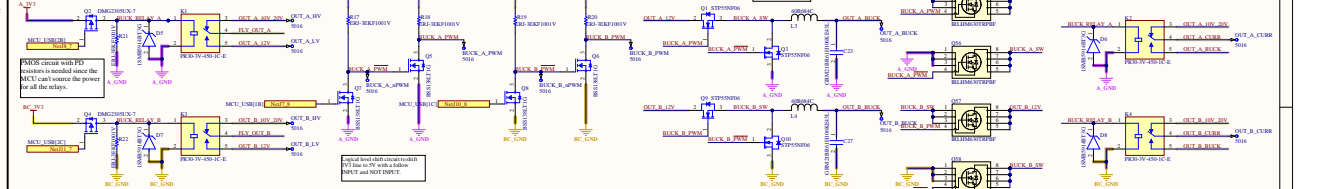
## ISOLATED BUCK 5V & LDO 3.3V



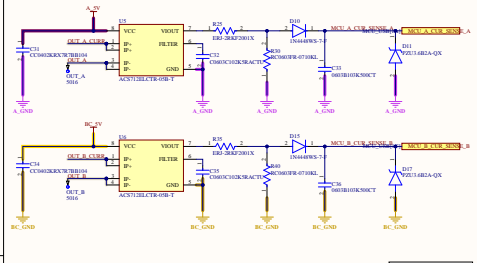
## FLYBACK TRANSFORMER



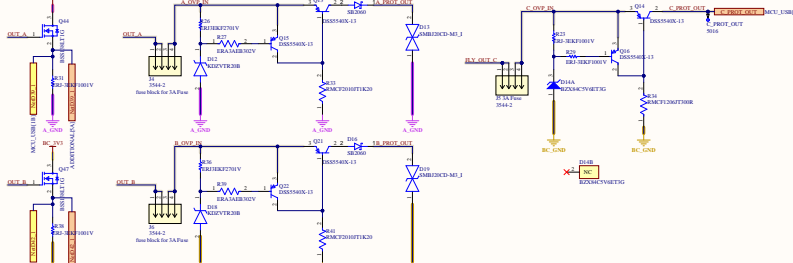
## OUTPUTS 1V-20V



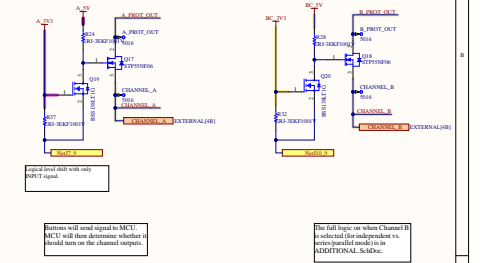
## CURRENT SENSE



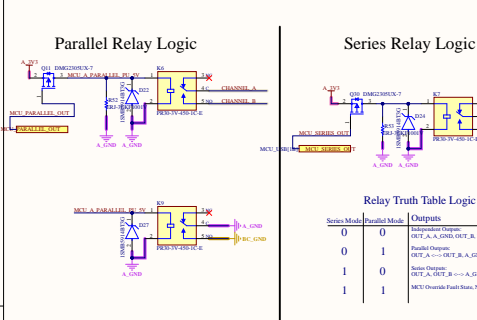
## OVP



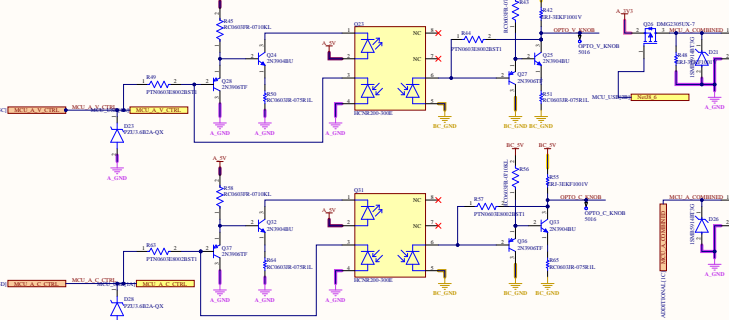
## Output A & B Enable



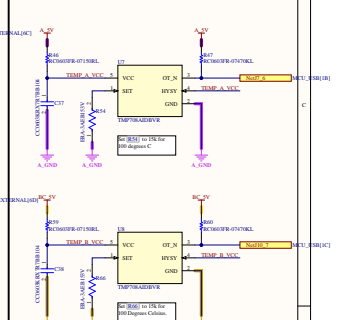
## PARALLEL/SERIES MODE CIRCUITS



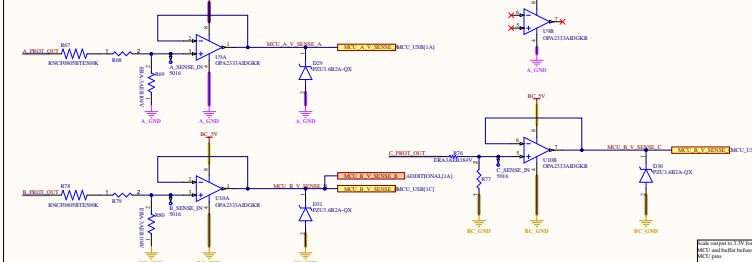
## Voltage/Current Control Knobs



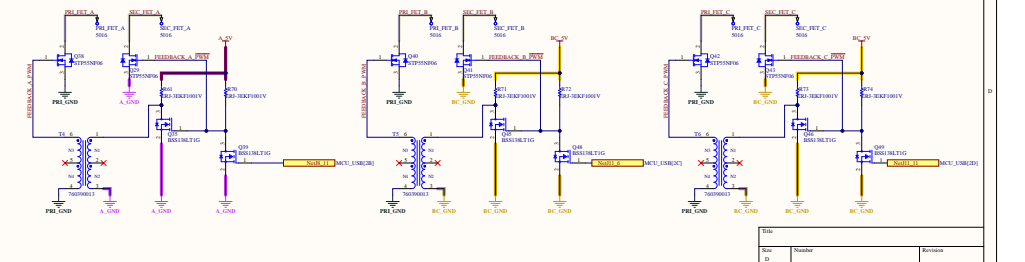
## Temperature Sense



## FEEDBACK CIRCUIT



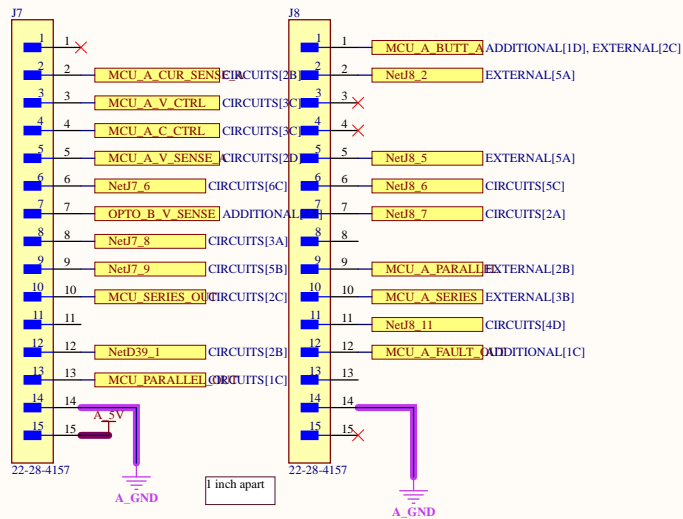
## DRIVE CIRCUIT



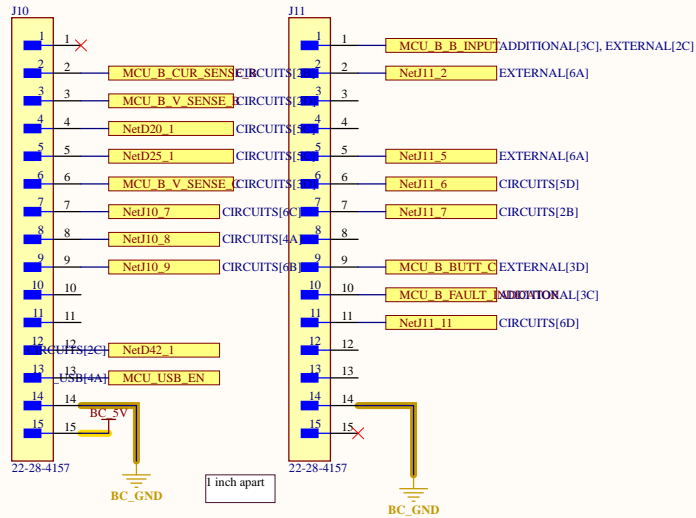
Rev	Number	Revision
1	1.0	Initial Release
2	1.1	Minor Rev
3	1.2	Minor Rev
4	1.3	Minor Rev
5	1.4	Minor Rev
6	1.5	Minor Rev
7	1.6	Minor Rev
8	1.7	Minor Rev
9	1.8	Minor Rev
10	1.9	Minor Rev
11	2.0	Major Rev

# ESP32-WROOM

## MCU A

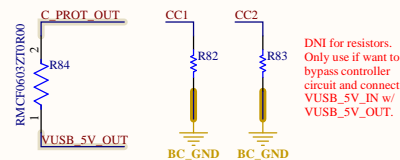
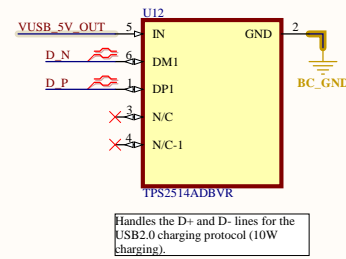
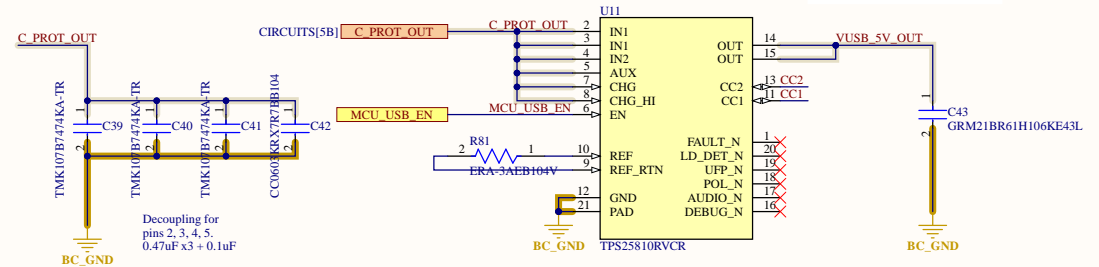


## MCU B



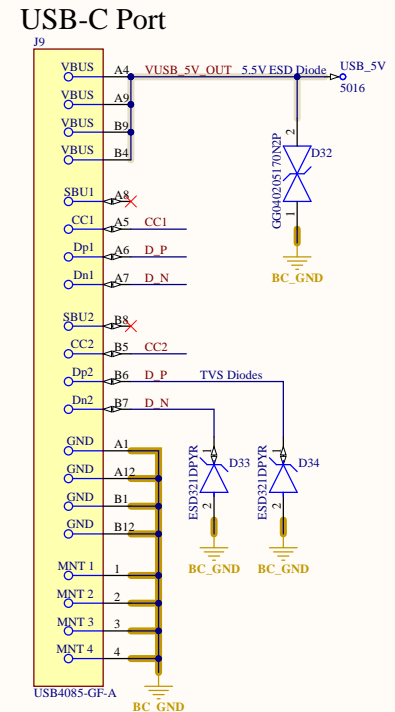
## USB-C Output

Planning to do USB2.0  
slow charging (5V, 3A  
max, 10W expected)  
using USB-C port.



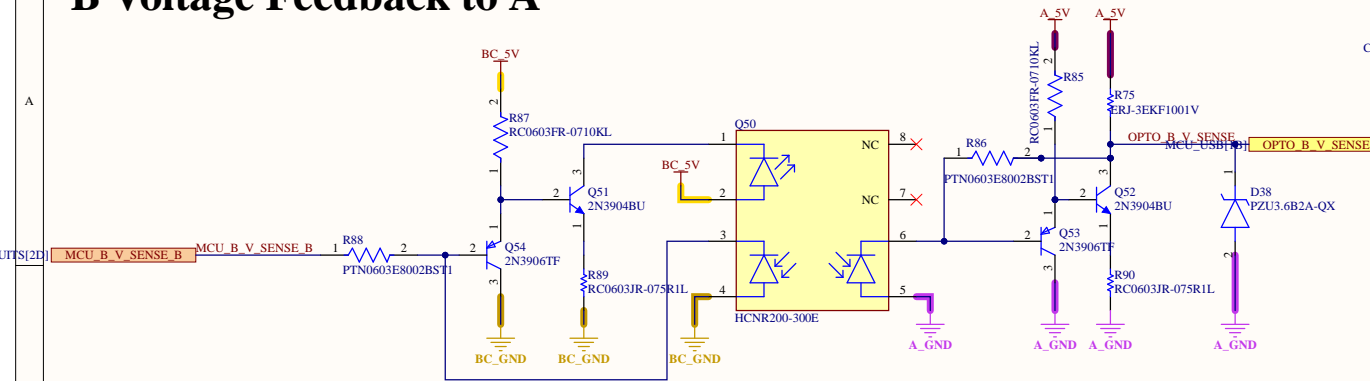
## USB Controller

Controller circuit that handles CC lines and regulates VBUS output.

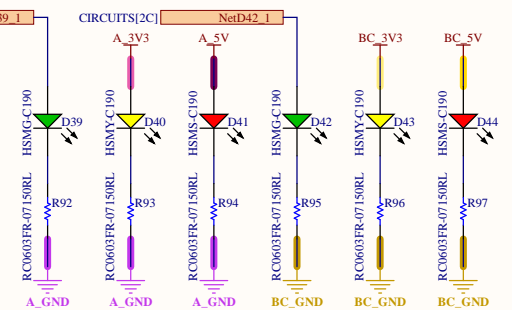


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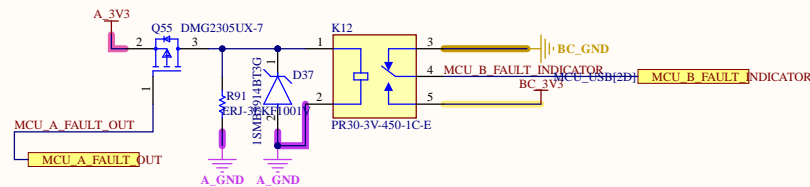
## B Voltage Feedback to A



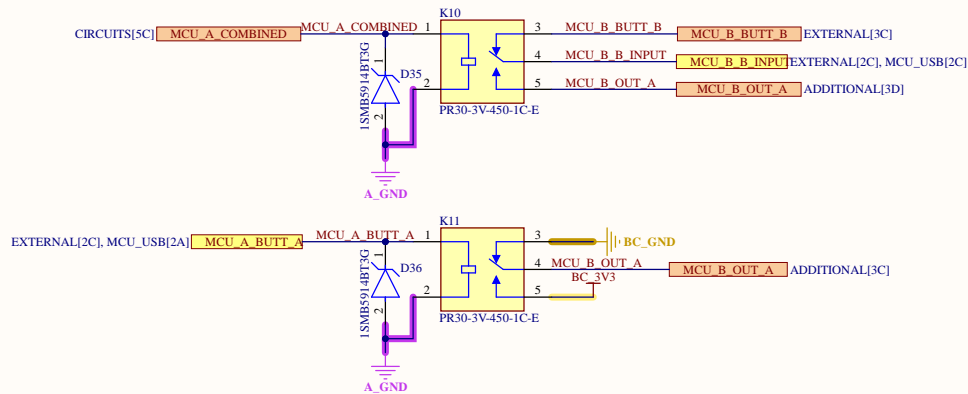
## LEDs



## A Fault Indicator to B



## Channel B ON/OFF Logic



MCU_B_BUTT_B	MCU_A_COMBINED	MCU_A_BUTT_A	PSU Output A & B	Logic Drive (for Channel B)
0	0	0	No Output	MCU_B_BUTT_B
0	0	1	Indep A Output	MCU_B_BUTT_B
0	1	0	No Output	MCU_B_PIN_X2
0	1	1	Combined	MCU_B_PIN_X2
1	0	0	Indep B Output	MCU_B_BUTT_B
1	0	1	Indep A & B Output	MCU_B_BUTT_B
1	1	0	No Output	MCU_B_PIN_X2
1	1	1	Combined	MCU_B_PIN_X2

Title		
Size	Number	Revision
B		
Date:	3/23/2025	Sheet of
File:	C:\Users\... \ADDITIONAL_SchDoc	Drawn By: