AC Input

AC_Input.sch

AC Current Sensor

AC_Current_Sensor.sch

AC Output

AC_Output.sch

POS12 Power Supply

POS12_Power_Supply.sch

POS3P3 Power Supply

POS3P3_Power_Supply.sch

Microcontroller

Microcontroller.sch

Microcontroller Programming

Microcontroller_Programming.sch

Sensor Signal Conditioning

Sensor_Signal_Conditioning.sch

USB UART Bridge

USB_UART_Bridge.sch

USB UART Isolation

USB_UART_Isolation.sch

OLED Display

OLED_Display.sch

Mechanical

Mechanical.sch

Zero Cross Detect

Zero_Cross_Detect.sch

Output Switch

Output_Switch.sch

Status LEDs

Status_LEDs.sch

Pushbuttons

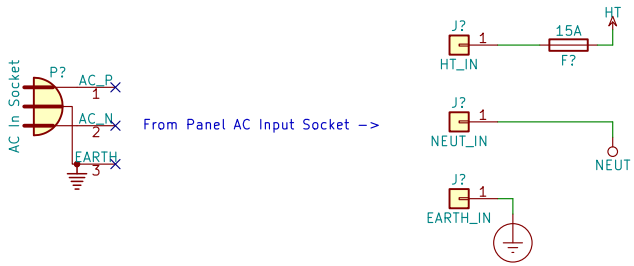
Pushbuttons.sch

Sheet: /
File: AC_Power_Meter.sch

Title:

Size: A	Date: 2018-10-01	**Rev: A**
KiCad E.D.A. kicad (5.0.0)		Id: 1/17

AC Input Connections



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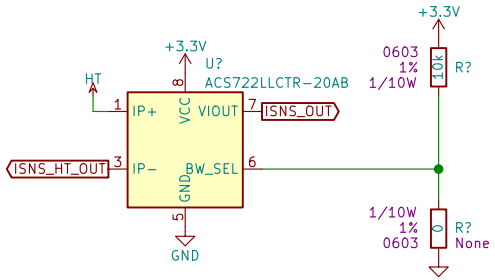
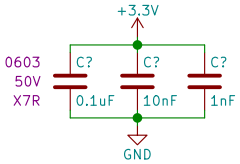
Size: A	Date: 2018-10-01	**Rev: A**
KiCad E.D.A. kicad (5.0.0)		Id: 2/17

AC Current Sensor



10.7ARMS Max to support full output swing of conditioning stages



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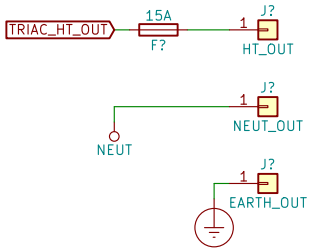
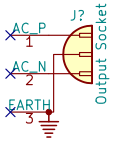
KiCad E.D.A. kicad (5.0.0)		Id: 3/17

AC Output Connections



-> To Panel AC Output Socket



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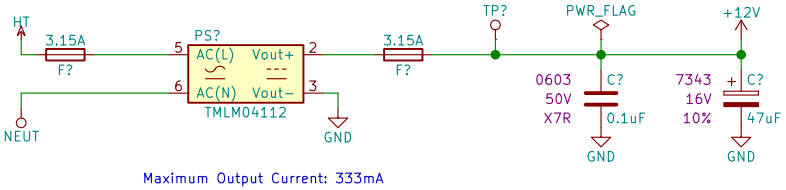
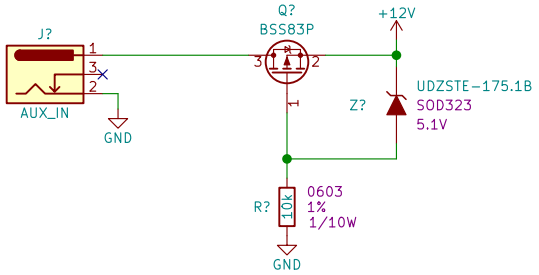
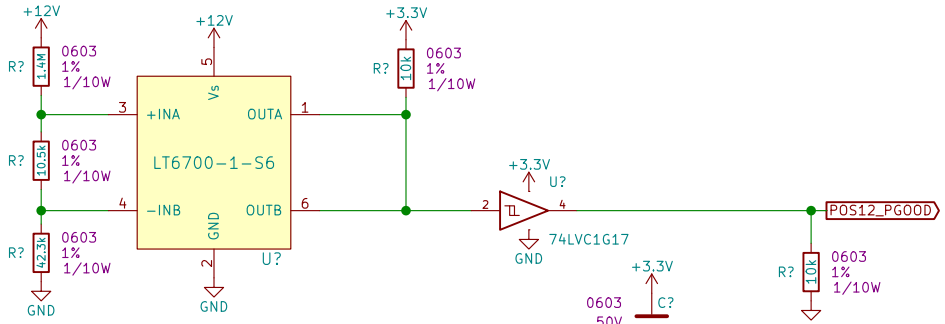
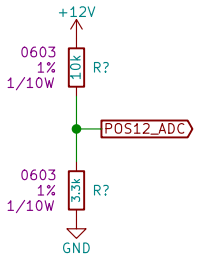
Size: A	Date: 2018-10-01	**Rev: A**
KiCad E.D.A. kicad (5.0.0)		Id: 4/17

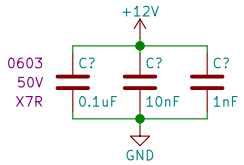
+12V 4W Isolated AC/DC Converter, +12V PGOOD Window Comparator











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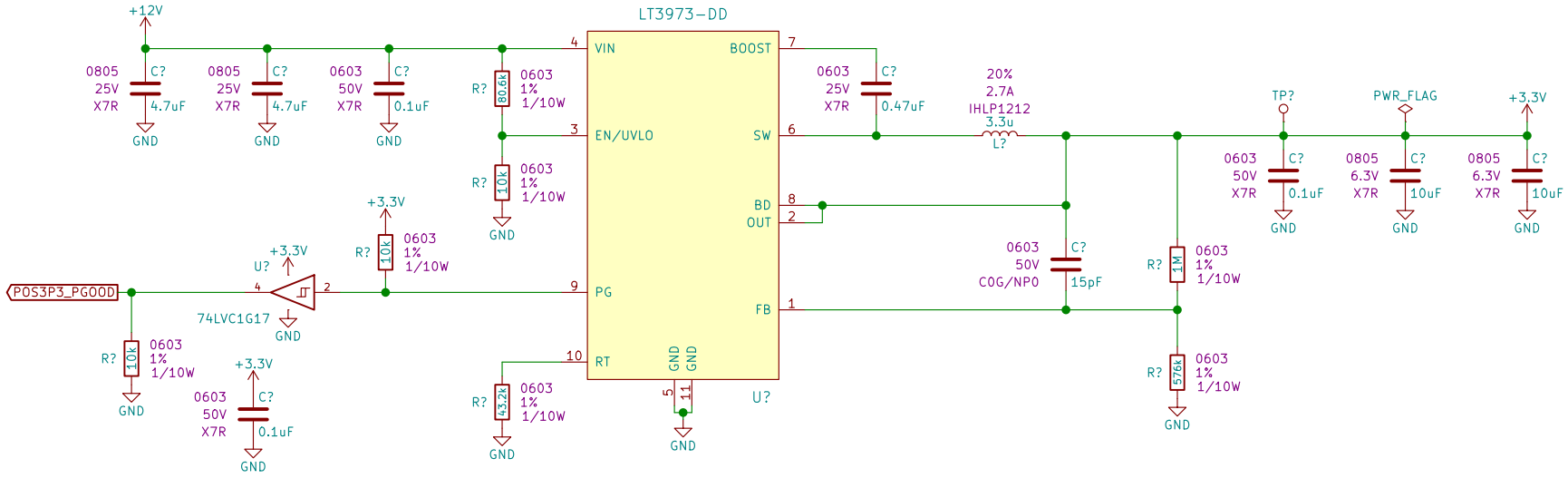
Size: A	Date: 2018-10-01	**Rev: A**
KiCad E.D.A. kicad (5.0.0)		Id: 5/17

+3.3V, 750mA, 2MHz Buck Converter



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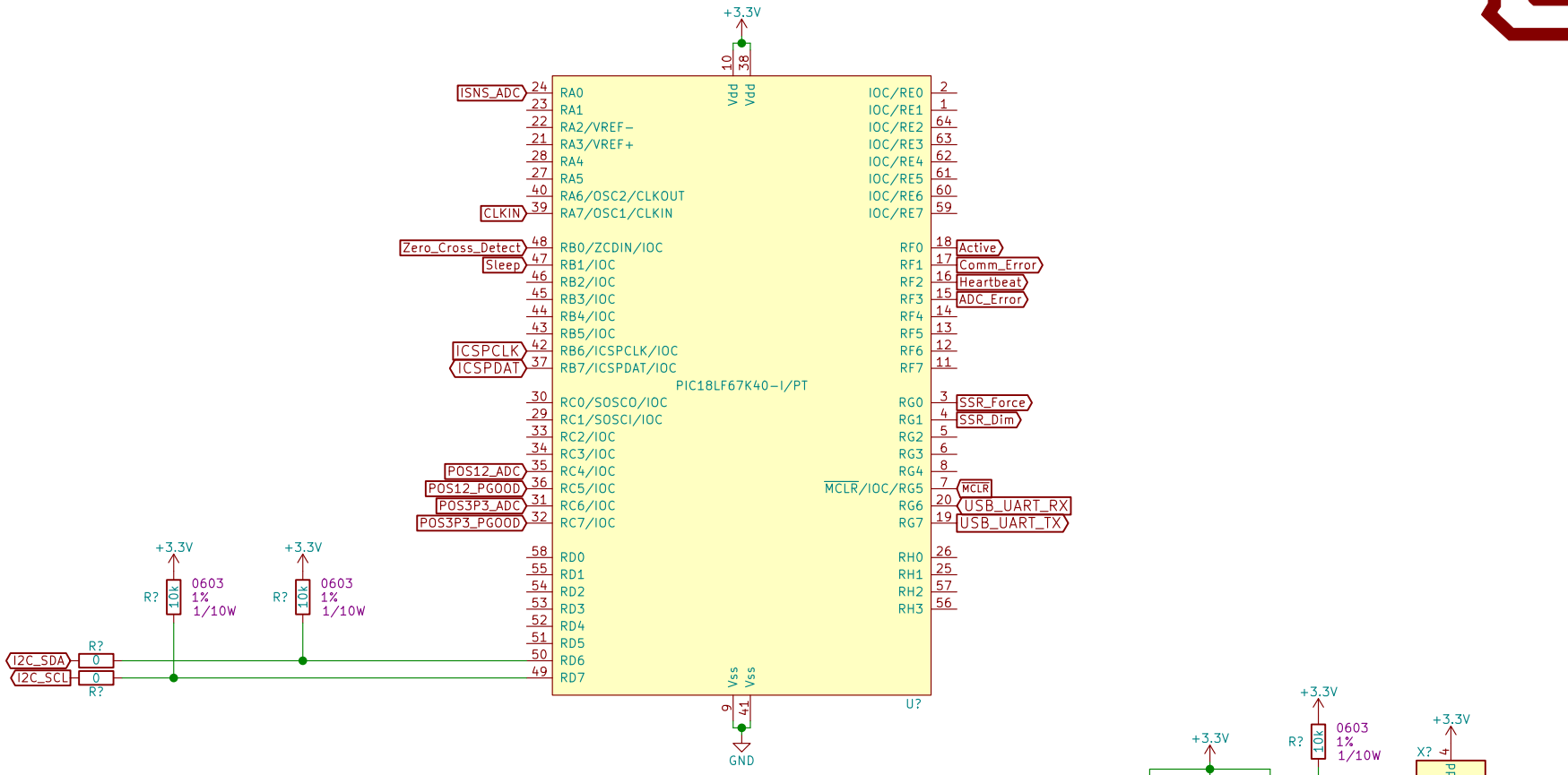
KiCad E.D.A. kicad (5.0.0)		Id: 6/17

8 bit High Performance Enhanced Flash PIC Microcontroller



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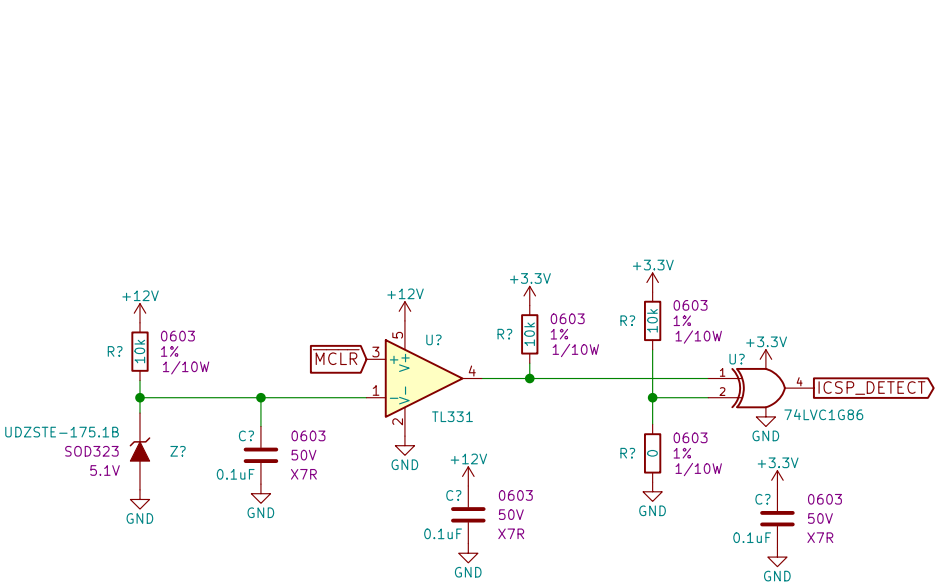
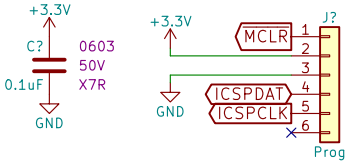
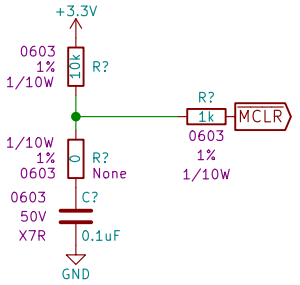
KiCad E.D.A. kicad (5.0.0)		Id: 7/17

Programming Header, $\overline{\text{MCLR}}$ Reset Filter, ICSP Detection

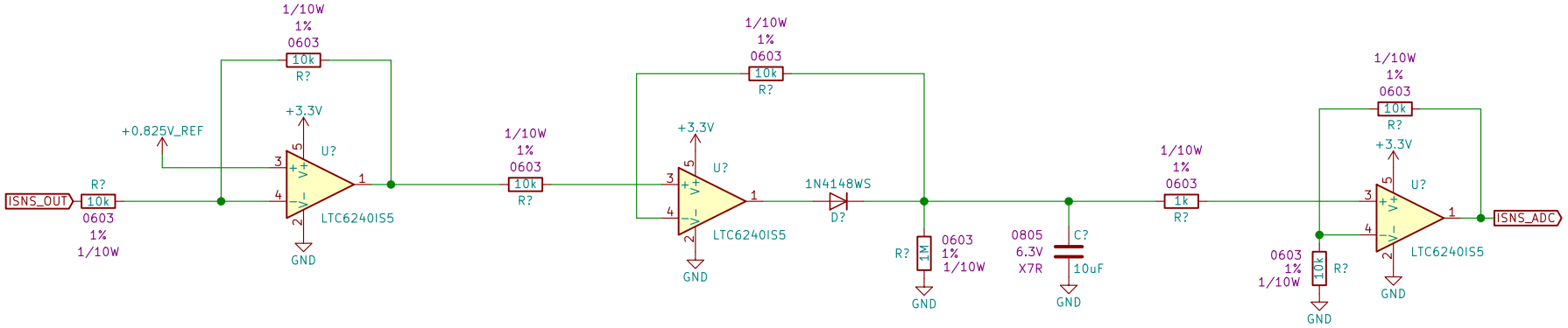


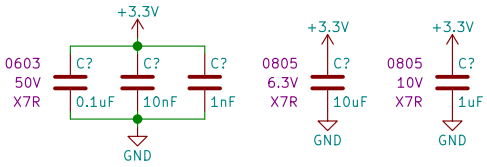


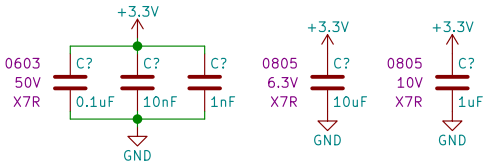


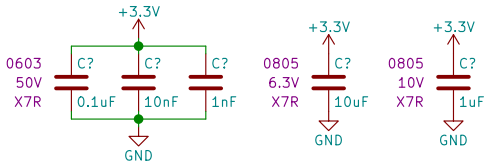
Sheet: /Microcontroller Programming/ File: Microcontroller_Programming.sch		
Title:		
Size: A	Date:	**Rev:**
KiCad E.D.A. kicad (5.0.0)		Id: 8/17

Offset Removal, Active Peak Detector, 2V/V Gain Stage

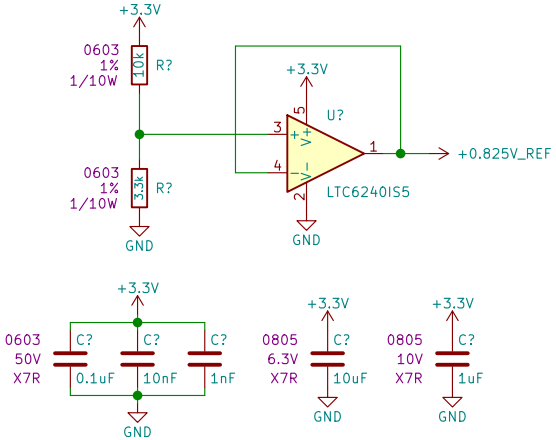








ISNS_ADC Scaling: 5.35ARMS/V



Sheet: /Sensor Signal Conditioning/		
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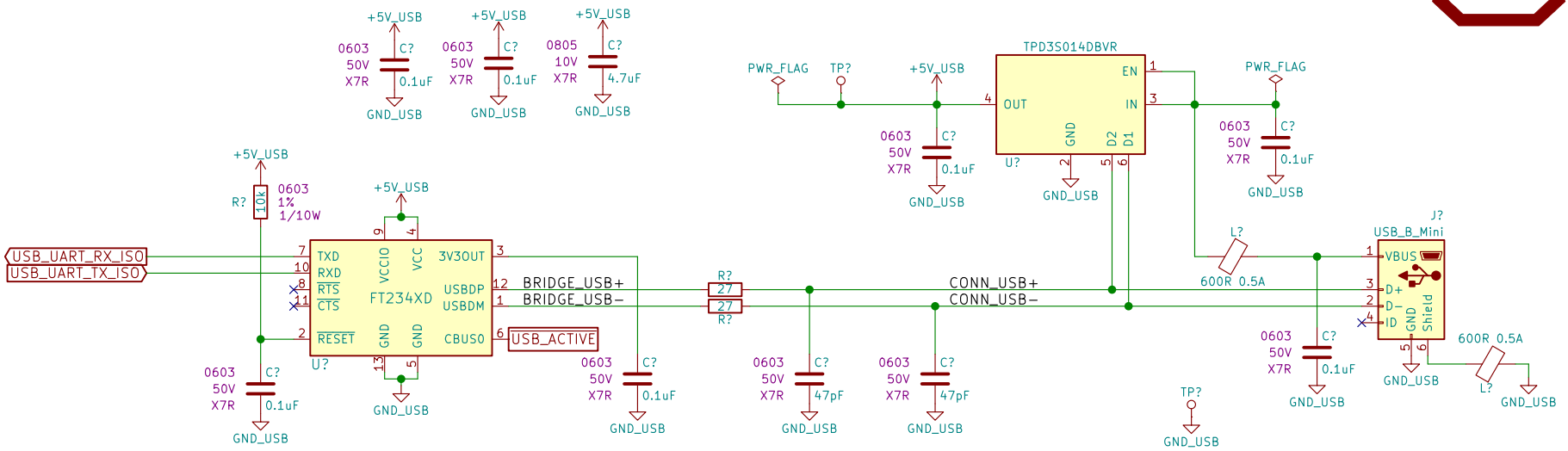
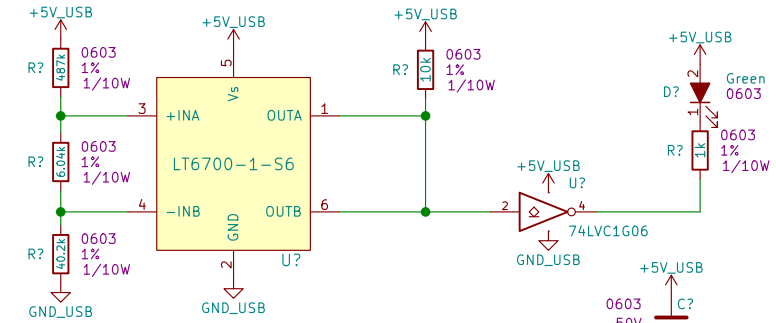
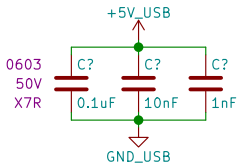
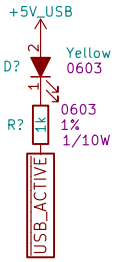
Size: A	Date: 2018-10-01	**Rev: A**
KiCad E.D.A. kicad (5.0.0)		Id: 9/17

UART to USB Bridge, +5V USB Window Comparator









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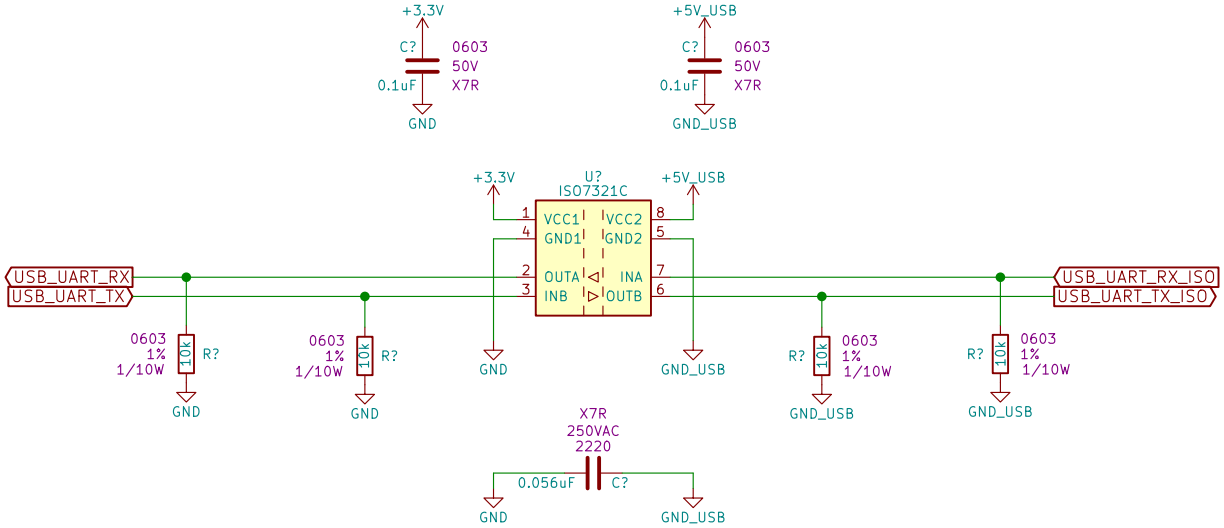
Size: A	Date:	**Rev:**
KiCad E.D.A. kicad (5.0.0)		Id: 10/17

USB UART Isolation



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File: USB_UART_Isolation.sch		
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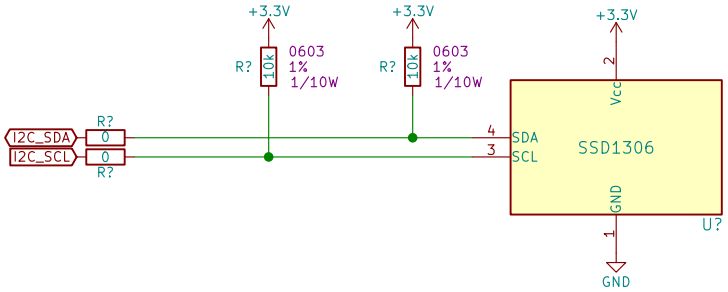
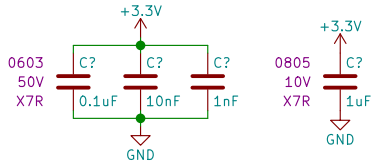
KiCad E.D.A. kicad (5.0.0)		Id: 11/17

OLED Display





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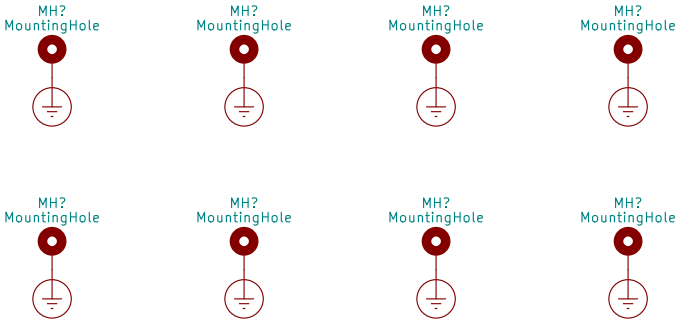
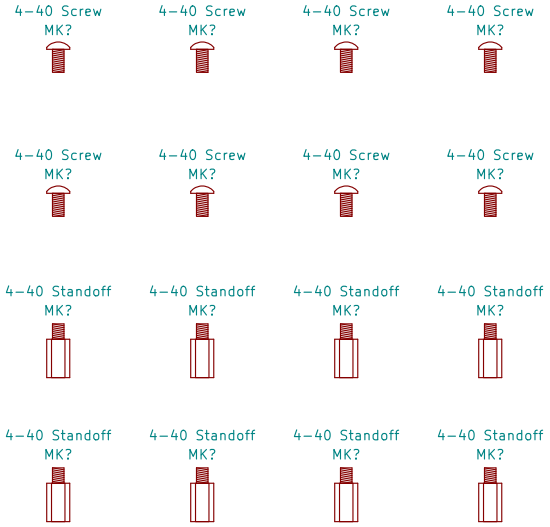
Size: A	Date: 2018-10-01	**Rev: A**
KiCad E.D.A. kicad (5.0.0)		Id: 12/17

Mounting Holes and Mechanical Components





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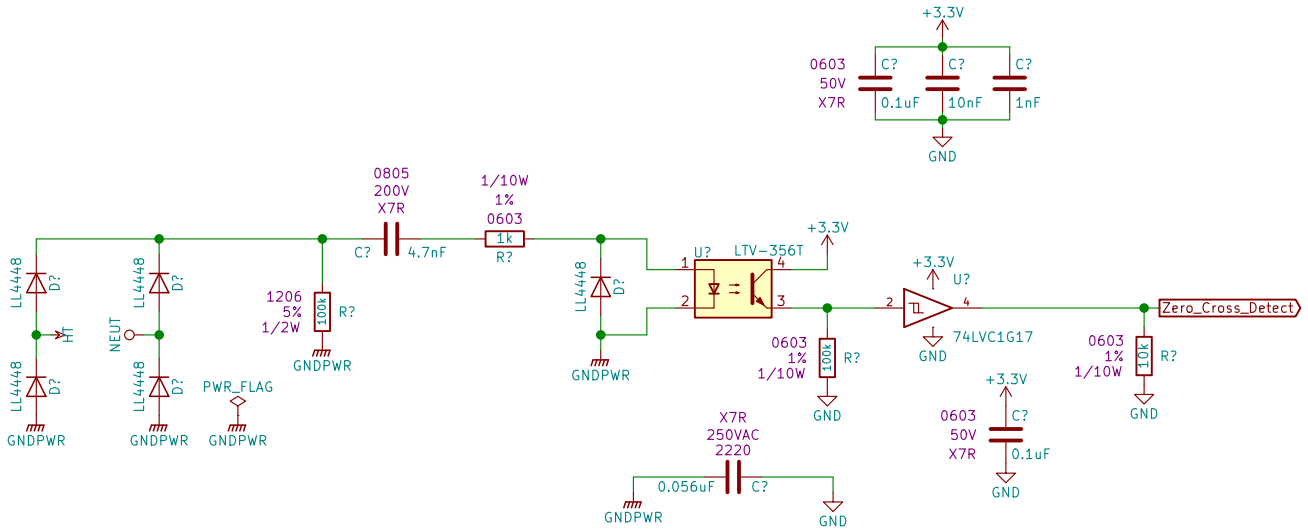
KiCad E.D.A. kicad (5.0.0)		Id: 13/17

Input AC Zero-Cross Detection



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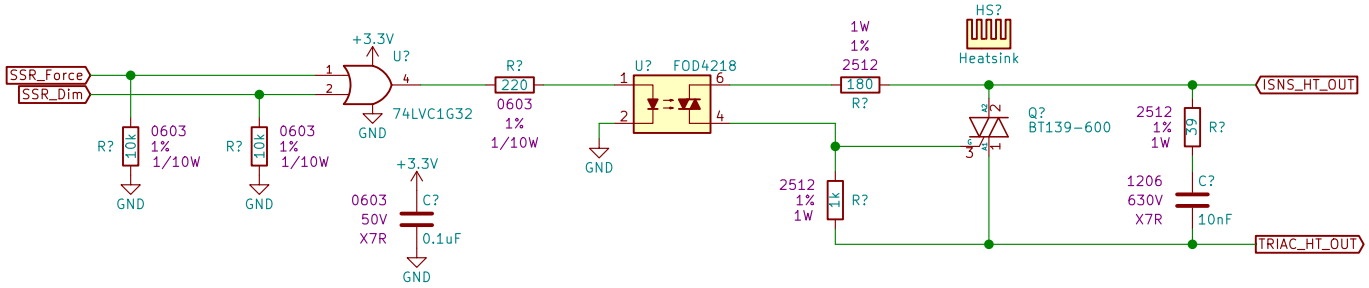
KiCad E.D.A. kicad (5.0.0)		Id: 14/17

Output AC Solid State Switch, Random Phase



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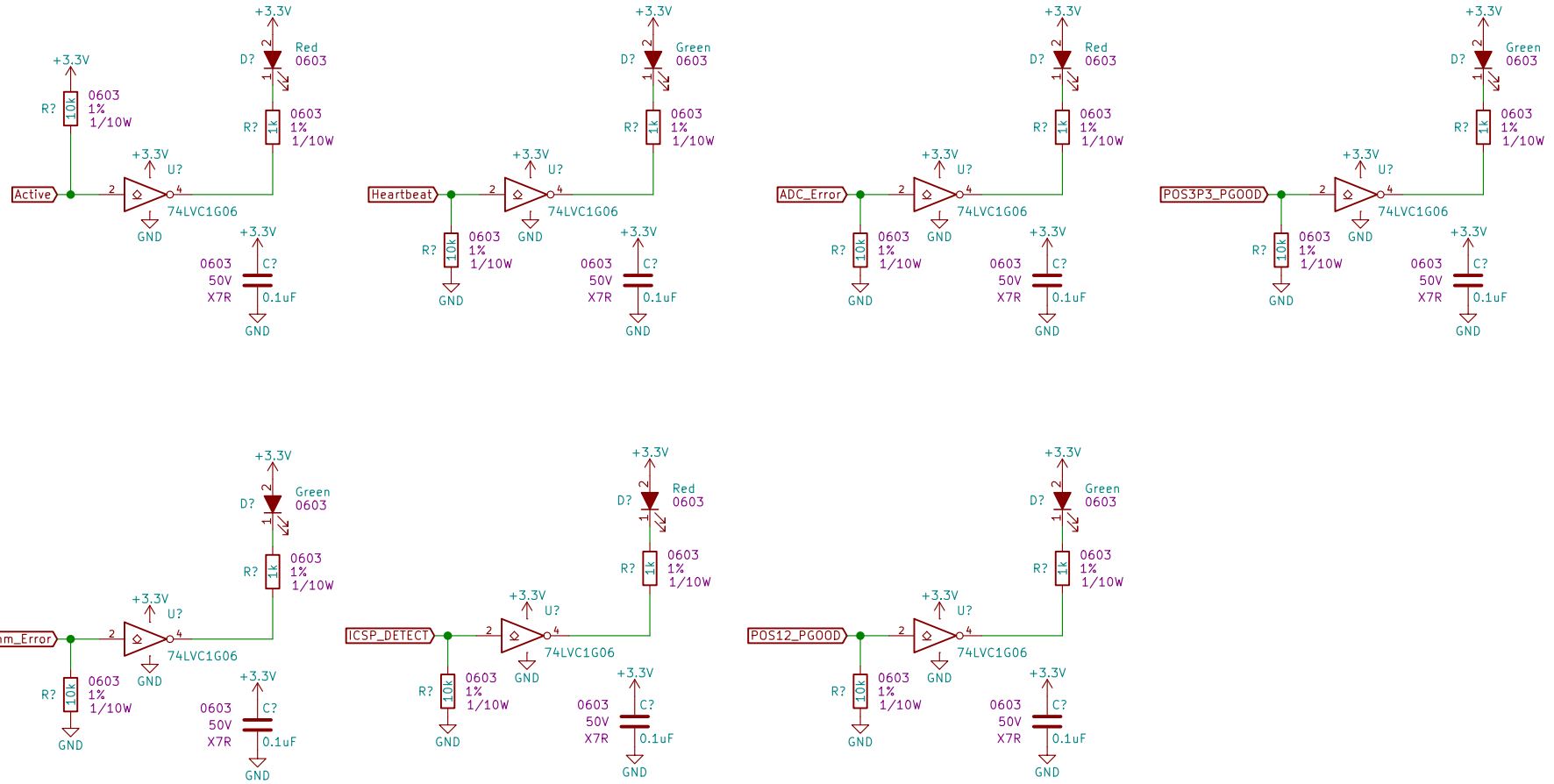
KiCad E.D.A. kicad (5.0.0)		Id: 15/17

Status LEDs



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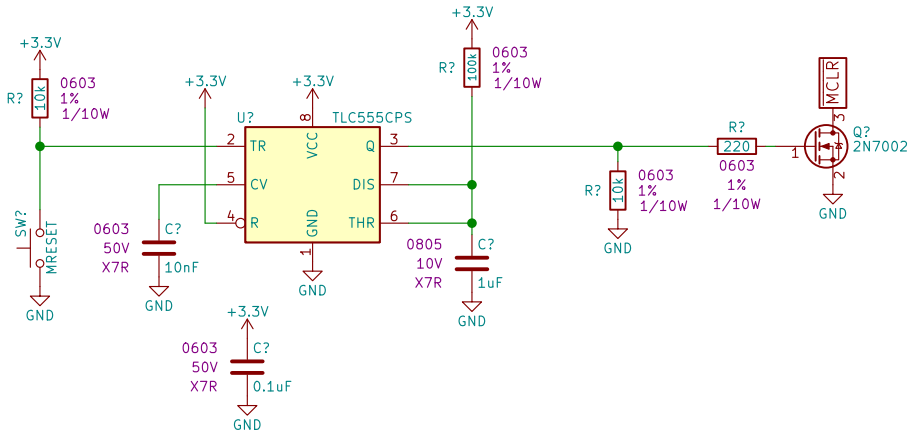
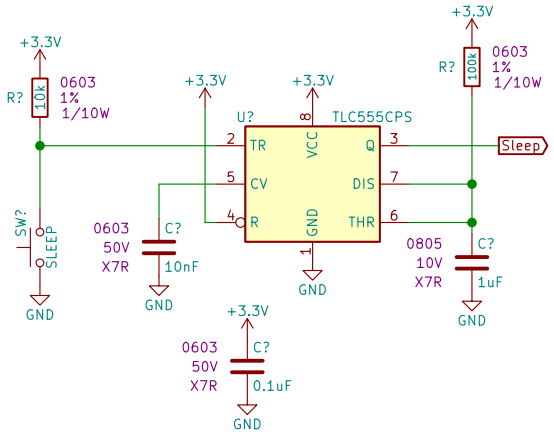
Size: A | Date: | **Rev:**

KiCad E.D.A. kicad (5.0.0) | Id: 16/17

Pushbuttons and Debouncing





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