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

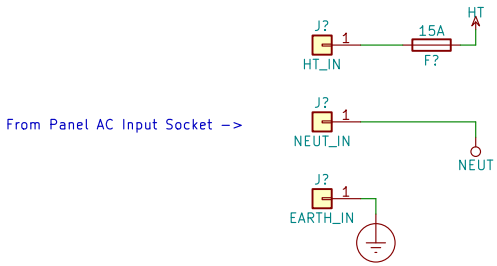
Status_LEDs.sch

Sheet: /
File: AC_Power_Meter.sch

Title:

Size: A	Date: 2018-10-01	**Rev: A**
KiCad E.D.A. kicad (5.0.0)		Id: 1/16

AC Input Connections



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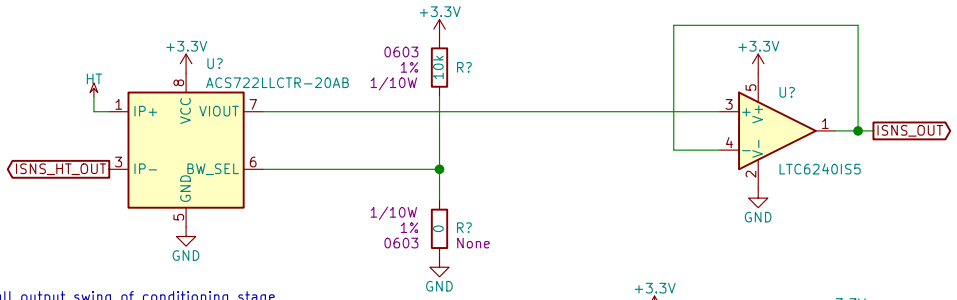
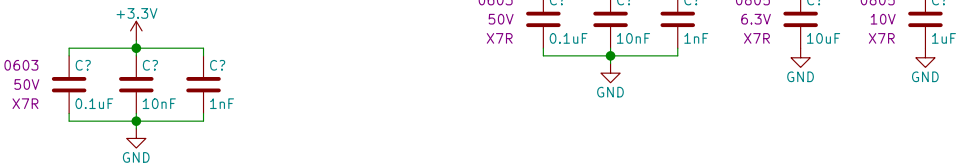
KiCad E.D.A. kicad (5.0.0)		Id: 2/16

AC Current Sensor, Signal Buffer



15A Max to support full output swing of conditioning stage



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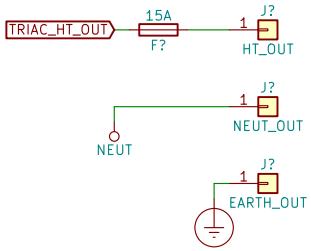
KiCad E.D.A. kicad (5.0.0)		Id: 3/16

AC Output Connections



-> To Panel AC Output Socket

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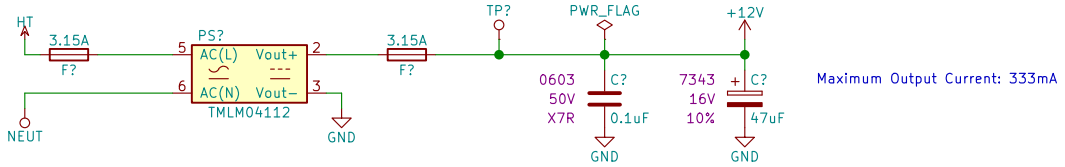
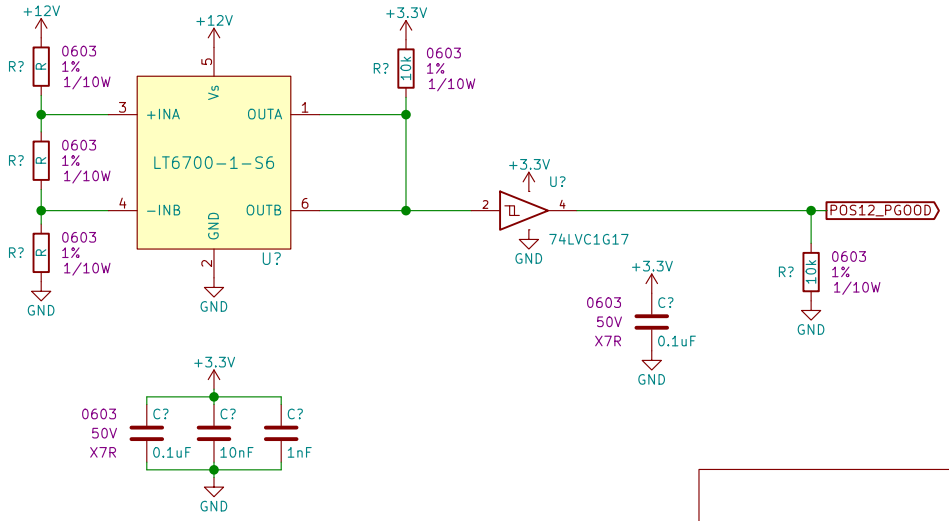
KiCad E.D.A. kicad (5.0.0)		Id: 4/16

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





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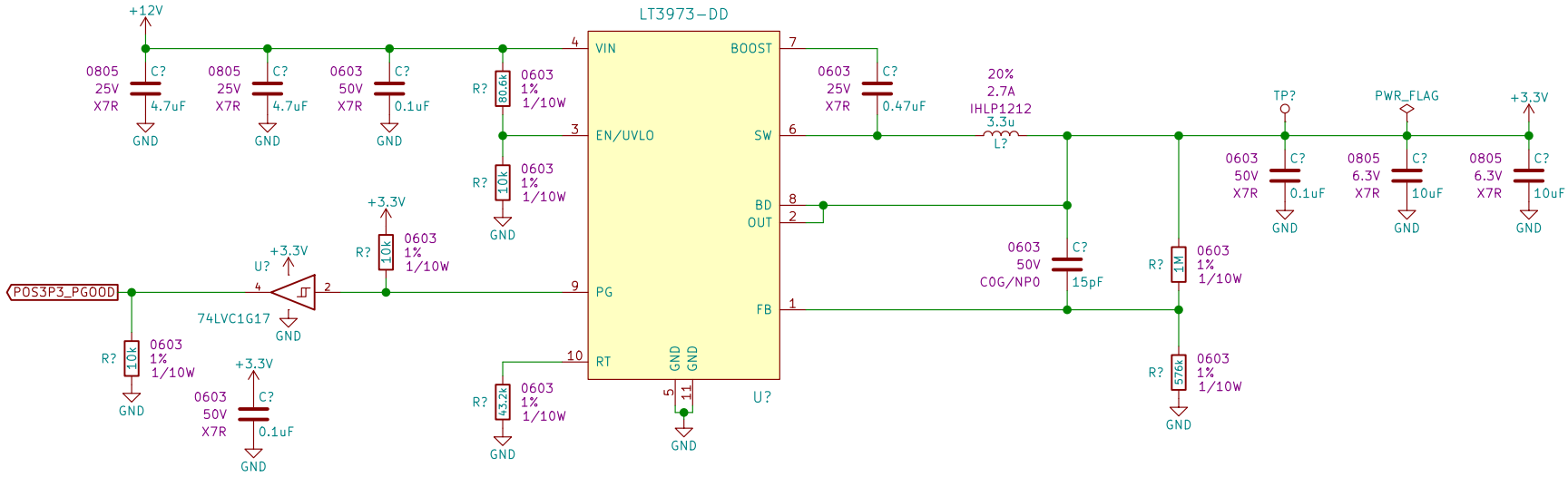
KiCad E.D.A. kicad (5.0.0)		Id: 5/16

+3.3V, 750mA, 2MHz Buck Converter



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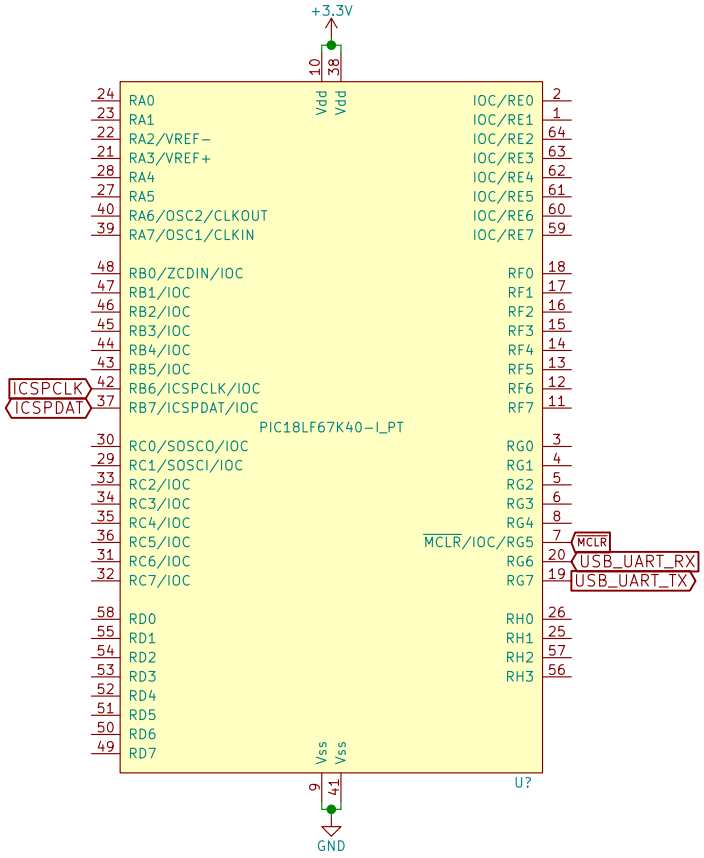
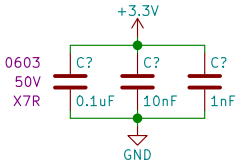
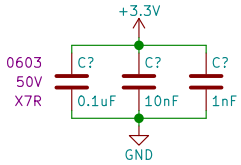
8 bit High Performance Enhanced Flash PIC Microcontroller







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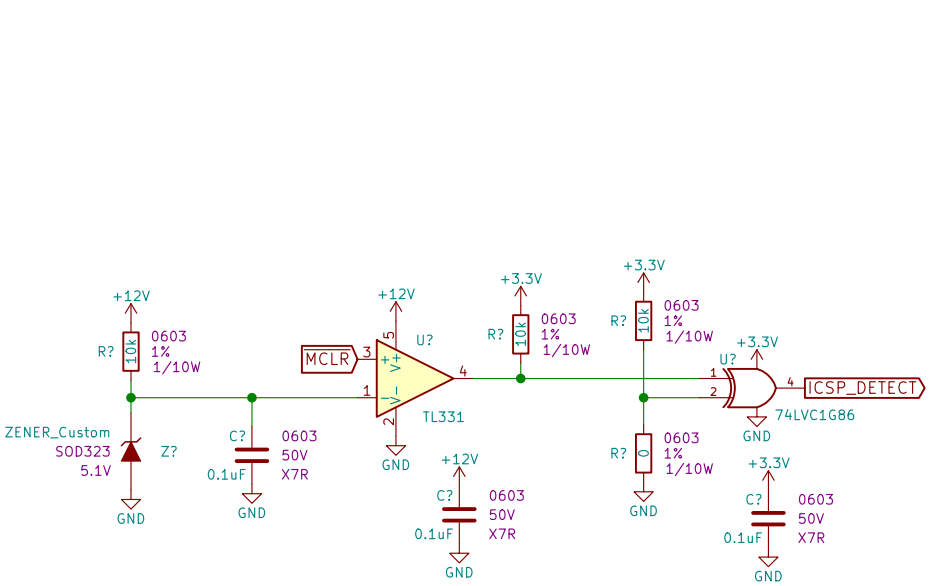
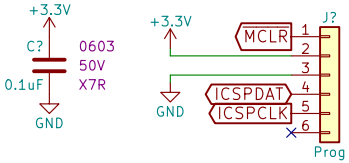
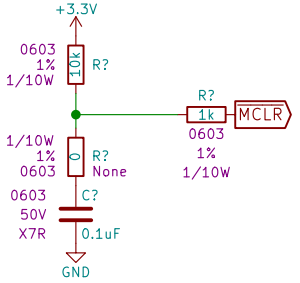
Size: A	Date: 2018-10-01	**Rev: A**
KiCad E.D.A. kicad (5.0.0)		Id: 7/16

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







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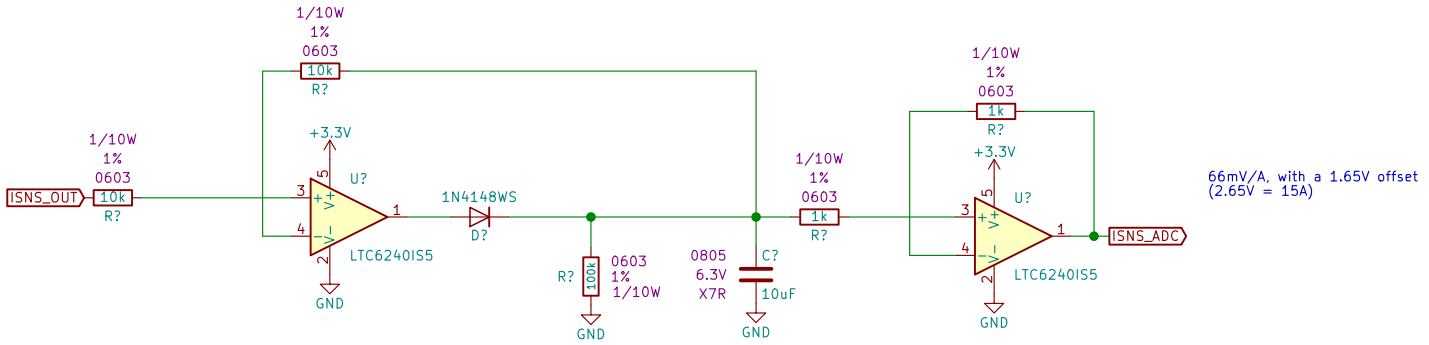
KiCad E.D.A. kicad (5.0.0)		Id: 8/16

Current Sensing Peak Detector, ADC Buffer



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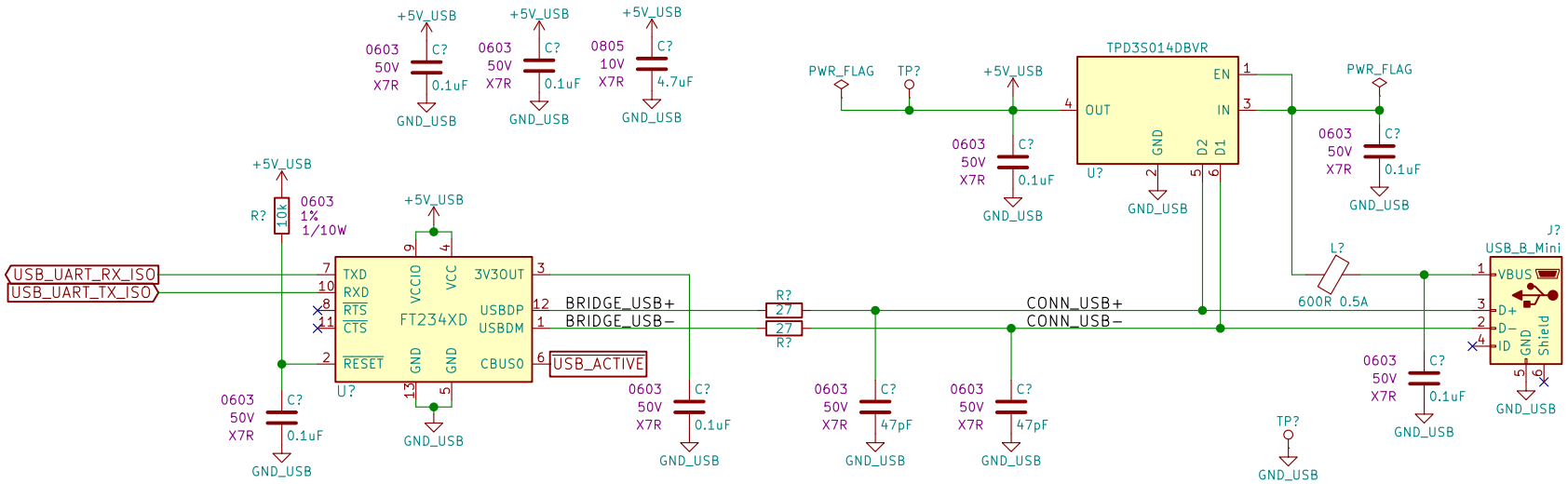
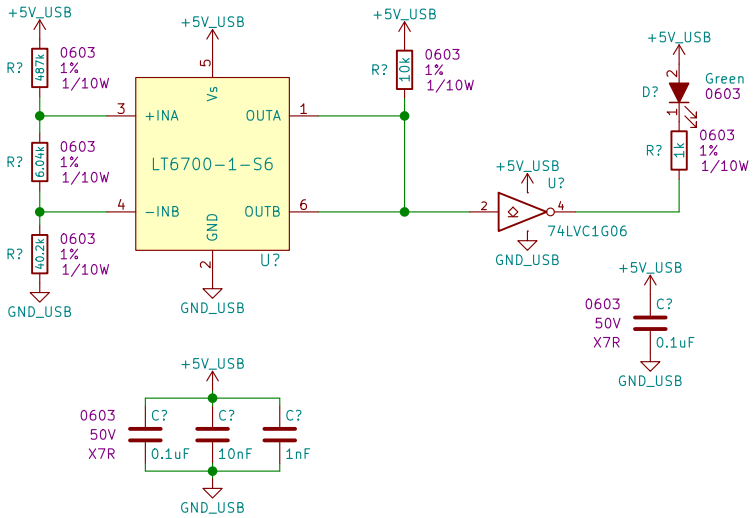
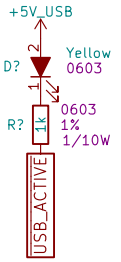
KiCad E.D.A. kicad (5.0.0)		Id: 9/16

UART to USB Bridge, +5V USB Window Comparator







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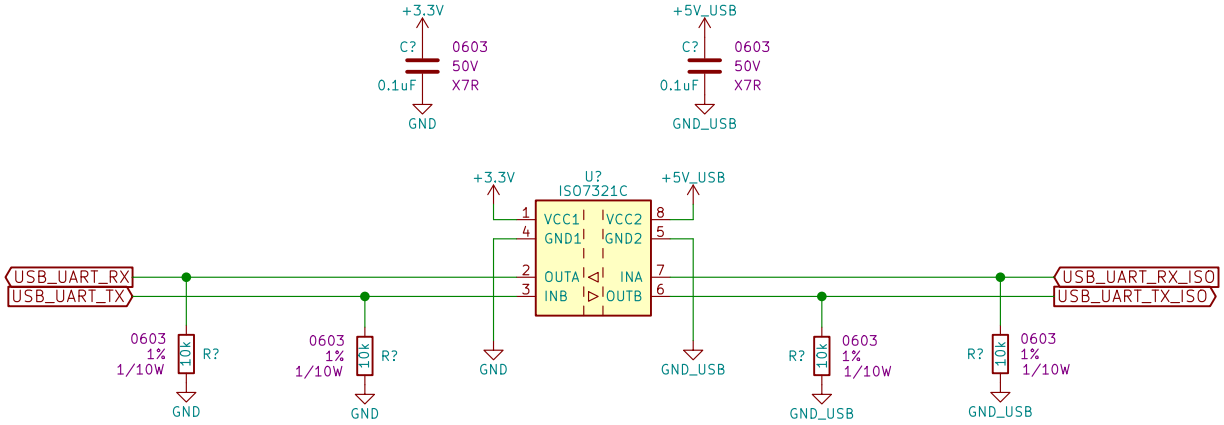
KiCad E.D.A. kicad (5.0.0)	Id: 10/16

USB UART Isolation



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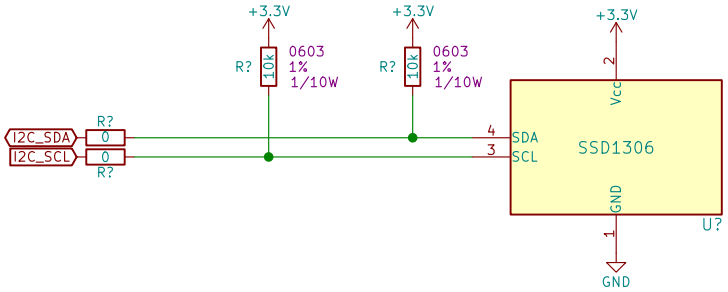
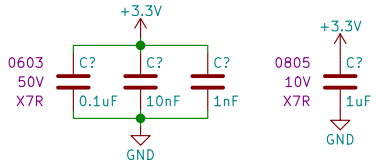
KiCad E.D.A. kicad (5.0.0)		Id: 11/16

OLED Display





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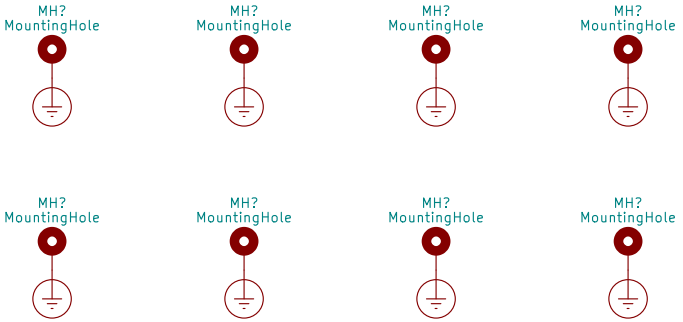
KiCad E.D.A. kicad (5.0.0)		Id: 12/16

Mounting Holes and Mechanical Components



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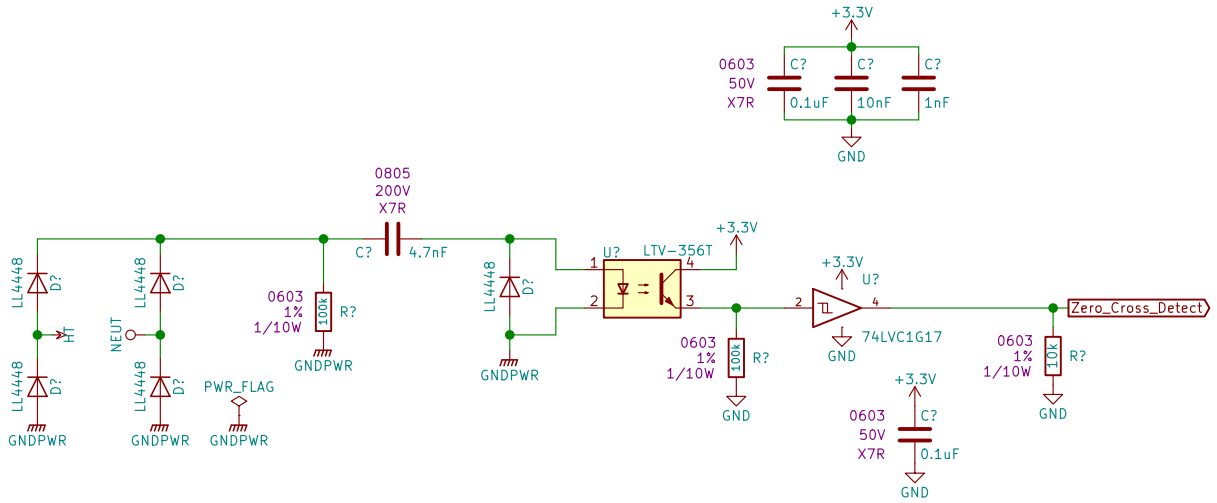
KiCad E.D.A. kicad (5.0.0)		Id: 13/16

Input AC Zero-Cross Detection



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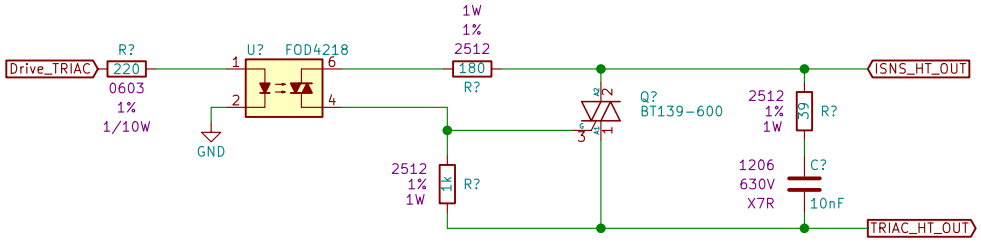
KiCad E.D.A. kicad (5.0.0)		Id: 14/16

Output AC Solid State Switch, Random Phase



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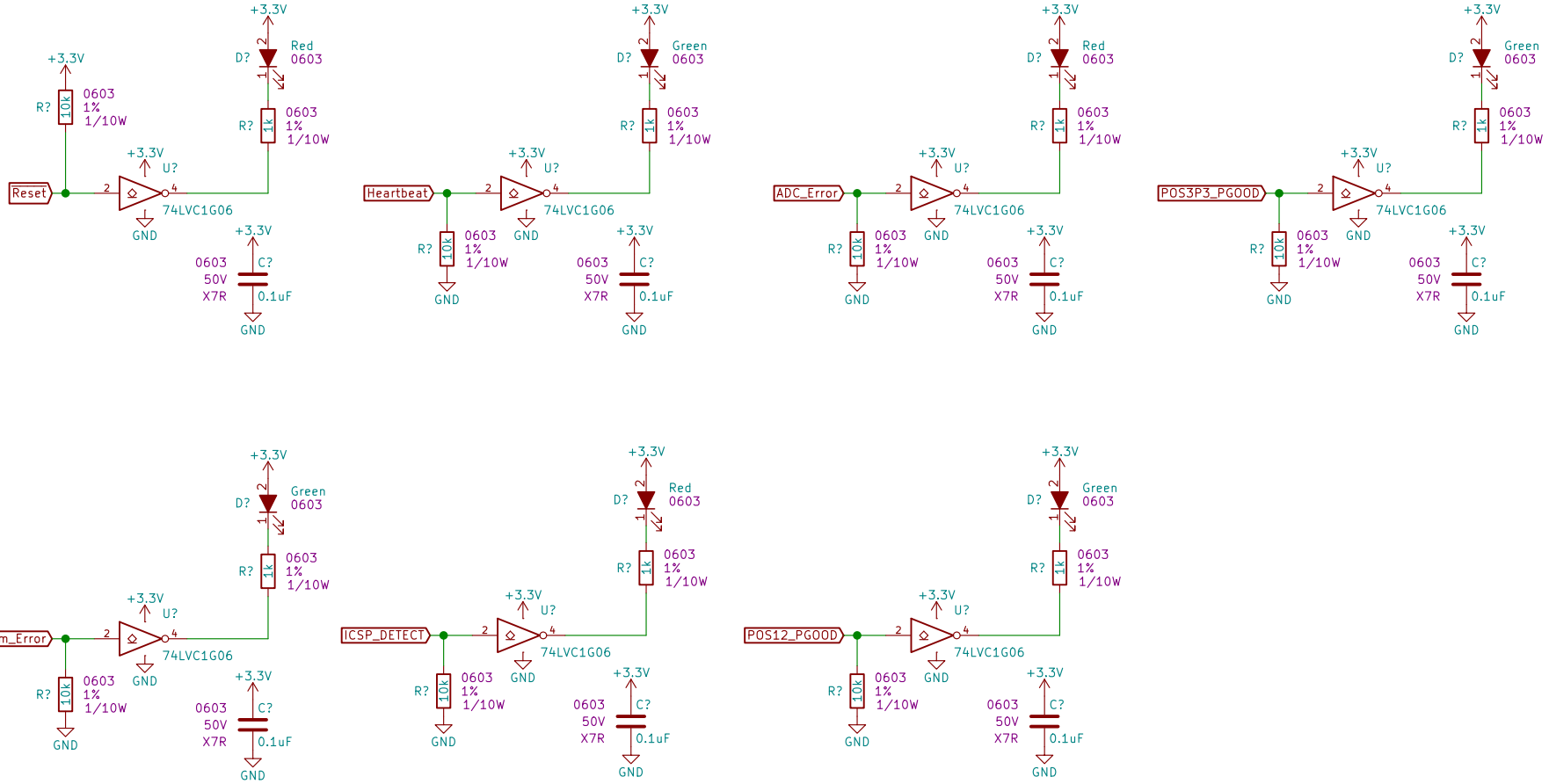
KiCad E.D.A. kicad (5.0.0)		Id: 15/16

Status LEDs



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