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LED Display Power Board

Marquette University Senior Design 2018/2019, Group E44 Drew Maatman, Kvein Etta, Logan Wedel, Caroline Gilger, Tuoxuan Ren



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Sheet: / File: LTC7851_Demo.sch

Title: Electronic Display Power Board

Date: 2018-11-28 Size: A Rev: A KiCad E.D.A. kicad (5.1.0)-1 ld: 1/14

Note: If component footprints, tolerances, and power ratings are hidden, components are: 0402 case size, 1% tolerance, 1/16W power rating

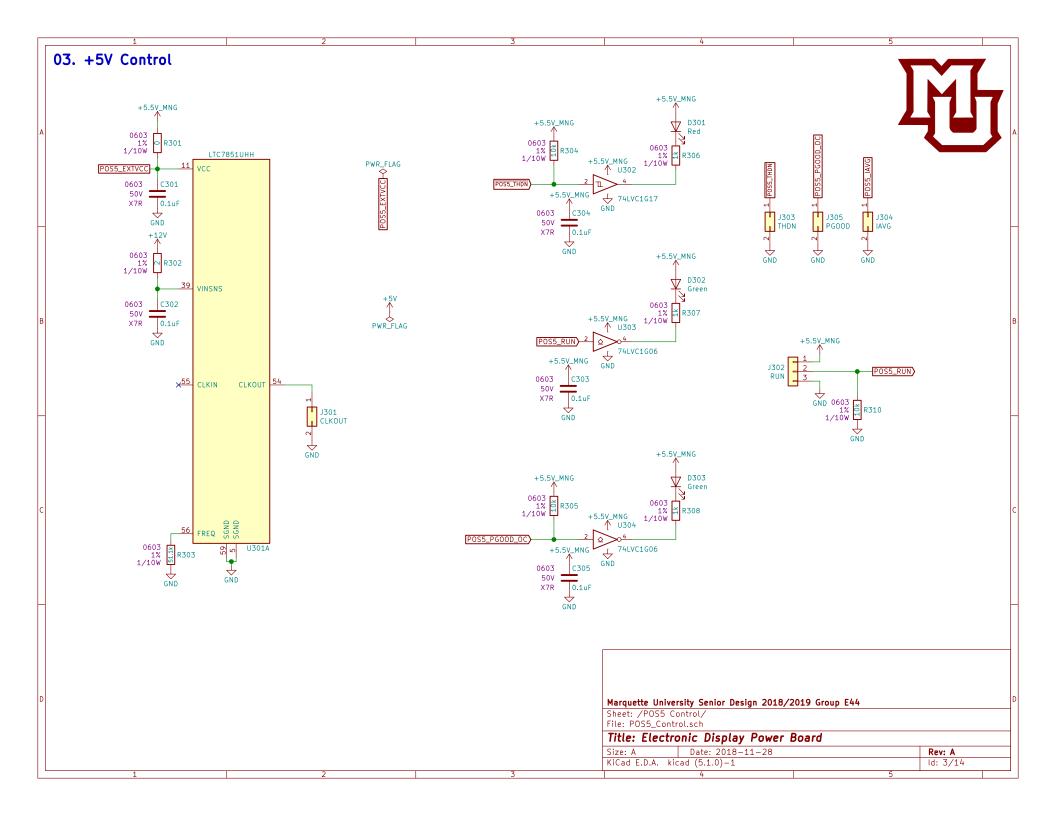
02. Power Input ECO heatsinks added due to insufficient PCB copper area for cooling of Q201 ECO Heatsink Heatsink Q201 Q202 PWR_FLAG +12Vin TP202 +12V PWR_FLAG IPC100N04S51R7ATMA1 IPC100N04S51R7ATMA1 J201 1 +12V IN 7343 + C204 7343 + C206 7343 + C208 16V 16V 16V D201 100uF GND D201 24V GND 100uF R206 100uF 10% 10% 10% 10 10 J206 OND IN GND GND PWR_FLAG 0603 0603 GND GND 1% 1% 1/10W 1/10W U201 LTC4365DDB TP201 GND ECO 470nF cap added to slow down +12V rise time R208 1 0603 1 1/10W +5.5V_MNG +5.5V_MNG SHDN 0603 C205 0805 0603 1% 1/10W 50V 50V R207 10nF X7R R201 X7R D202 Green GND GŇD FAULT POS12_PGOOD) UVLO threshold set to 10V OVLO threshold set to 14V OV GND +5.5V_MNG GND C207 0603 50V GND X7R +12Vin 0603 C201 C202 C203 50V X7R Note: Components with 'ECO' Reference Designators are modifications to the original design GND Fan added for forced air cooling. Marquette University Senior Design 2018/2019 Group E44 Wired to +12V input voltage through Sheet: /Power Input/ external connector File: Power_Input.sch

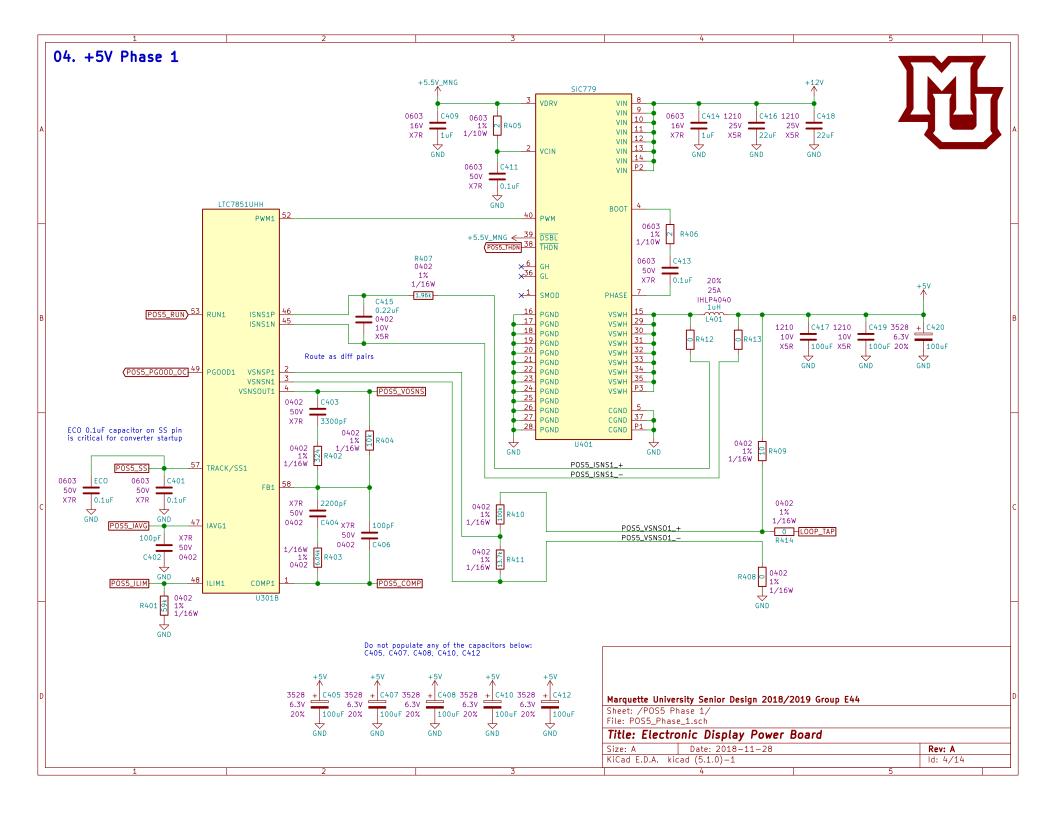
Title: Electronic Display Power Board Date: 2018-11-28

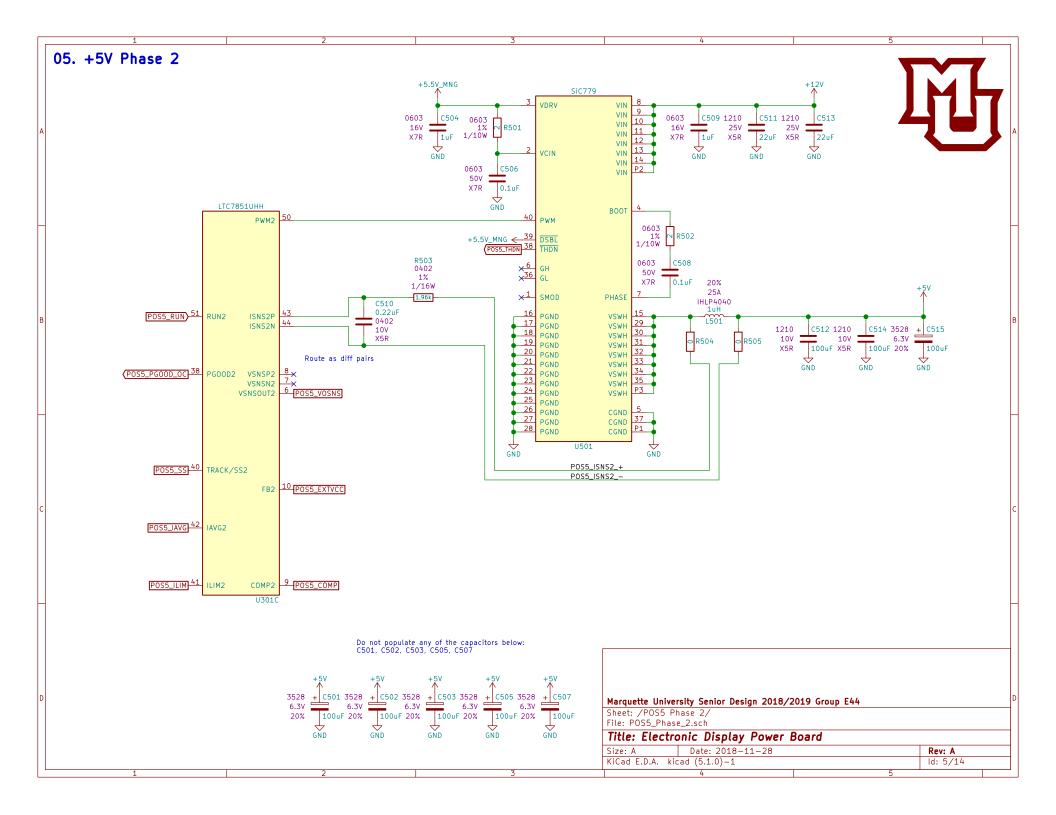
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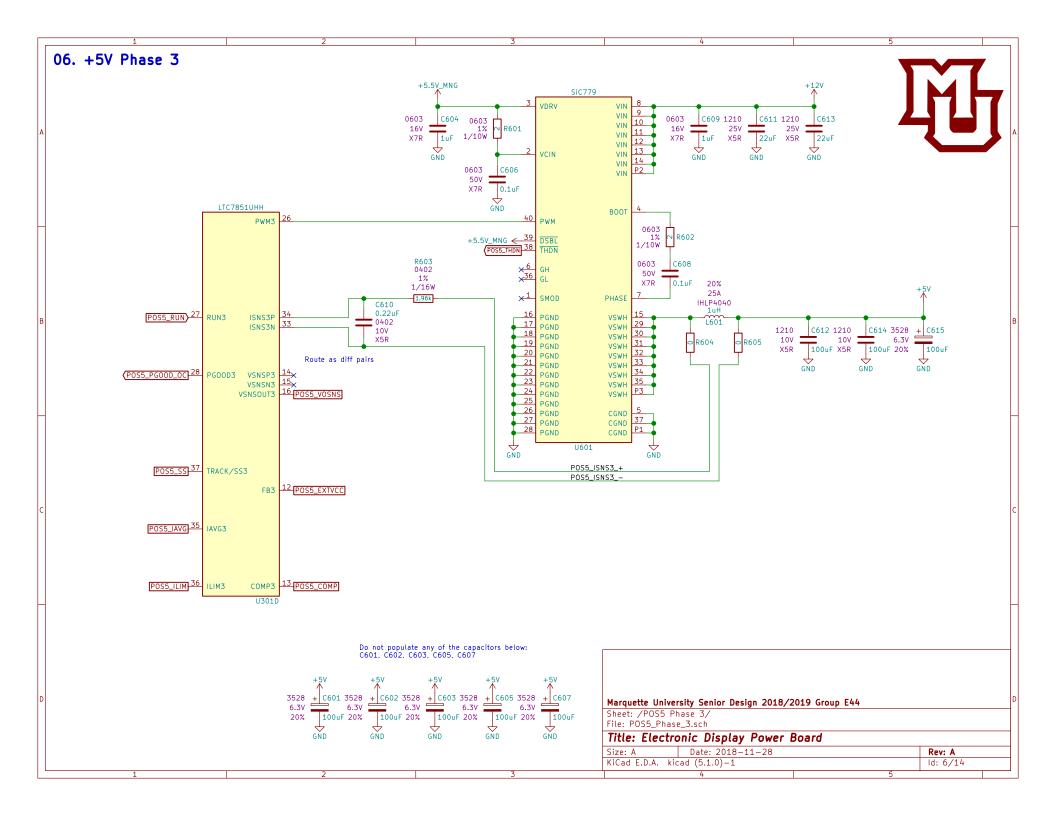
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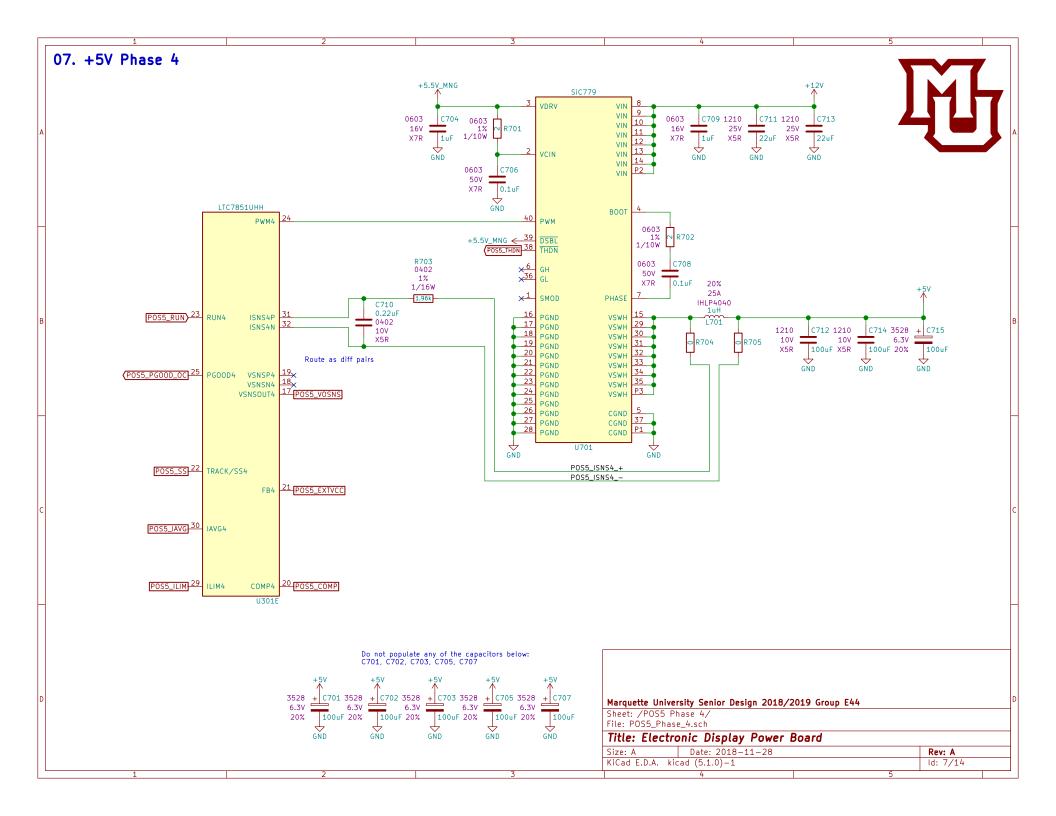
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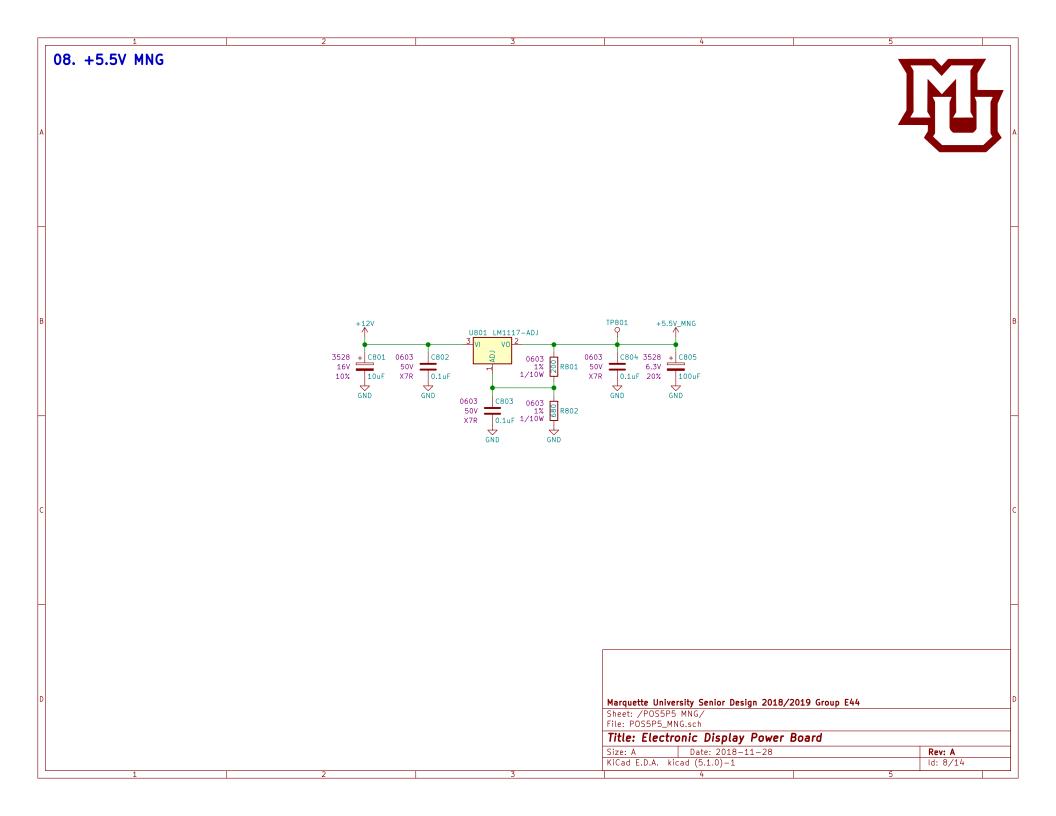


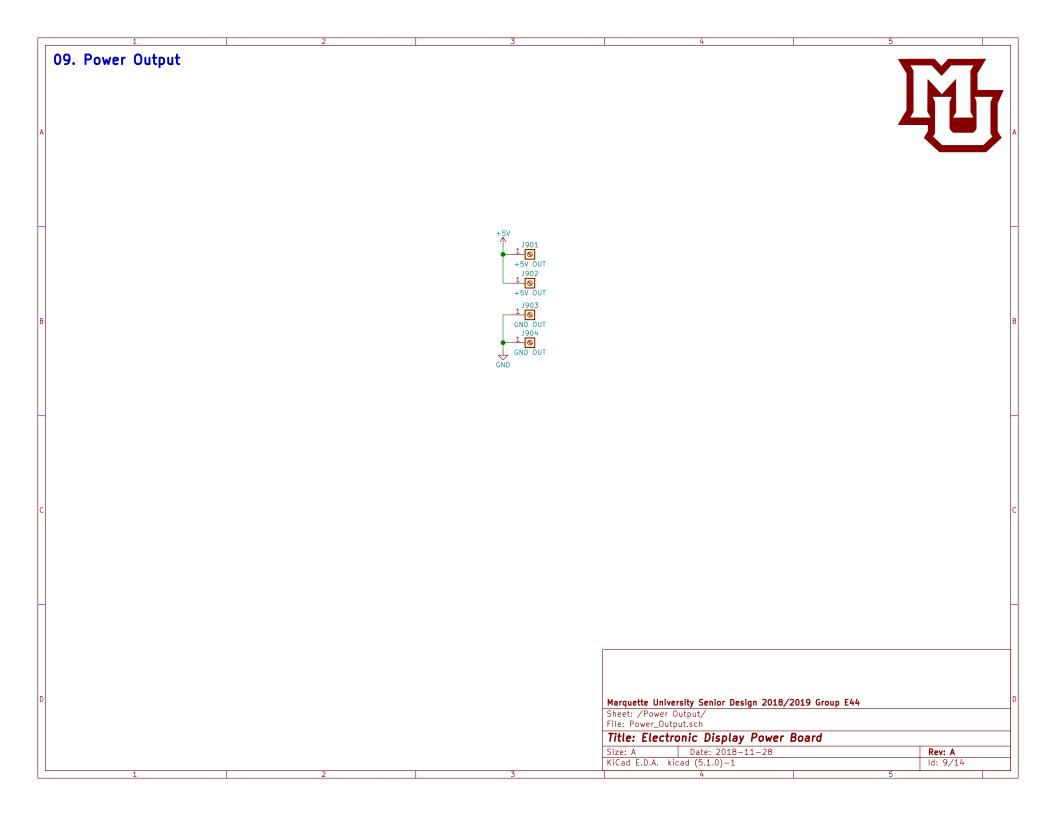


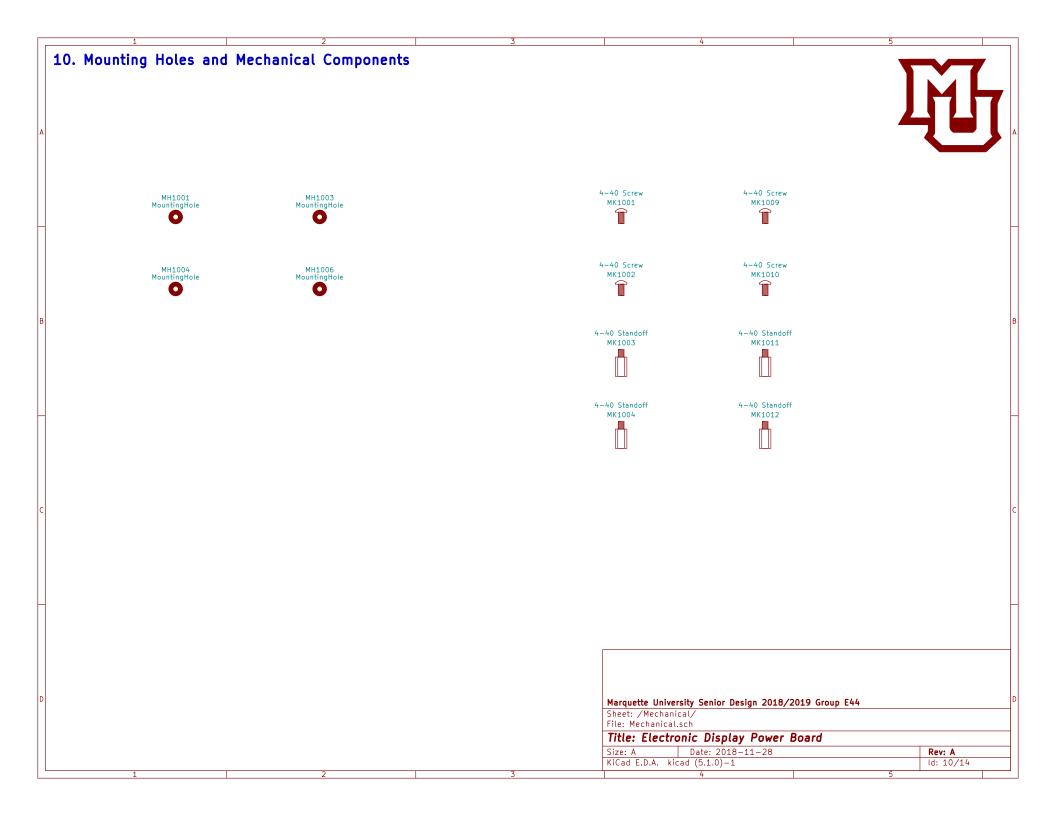






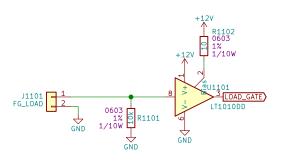




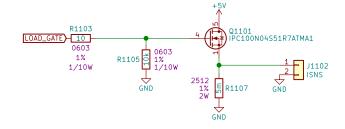


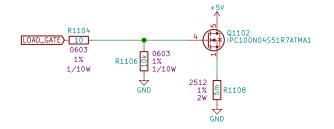
11. Active Load Driver and Active Load Bank 1











Do not populate any components on this sheet

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Sheet: /Active Load 1/ File: Active_Load_1.sch

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