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LED Display Power Supply, Quad-Phase 5V, 45A Buck Converter

Marquette University Senior Design 2018/2019, Group E44
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Sheet: /

File: LTC7851_Demo.sch

Title: Electronic Display Power Board

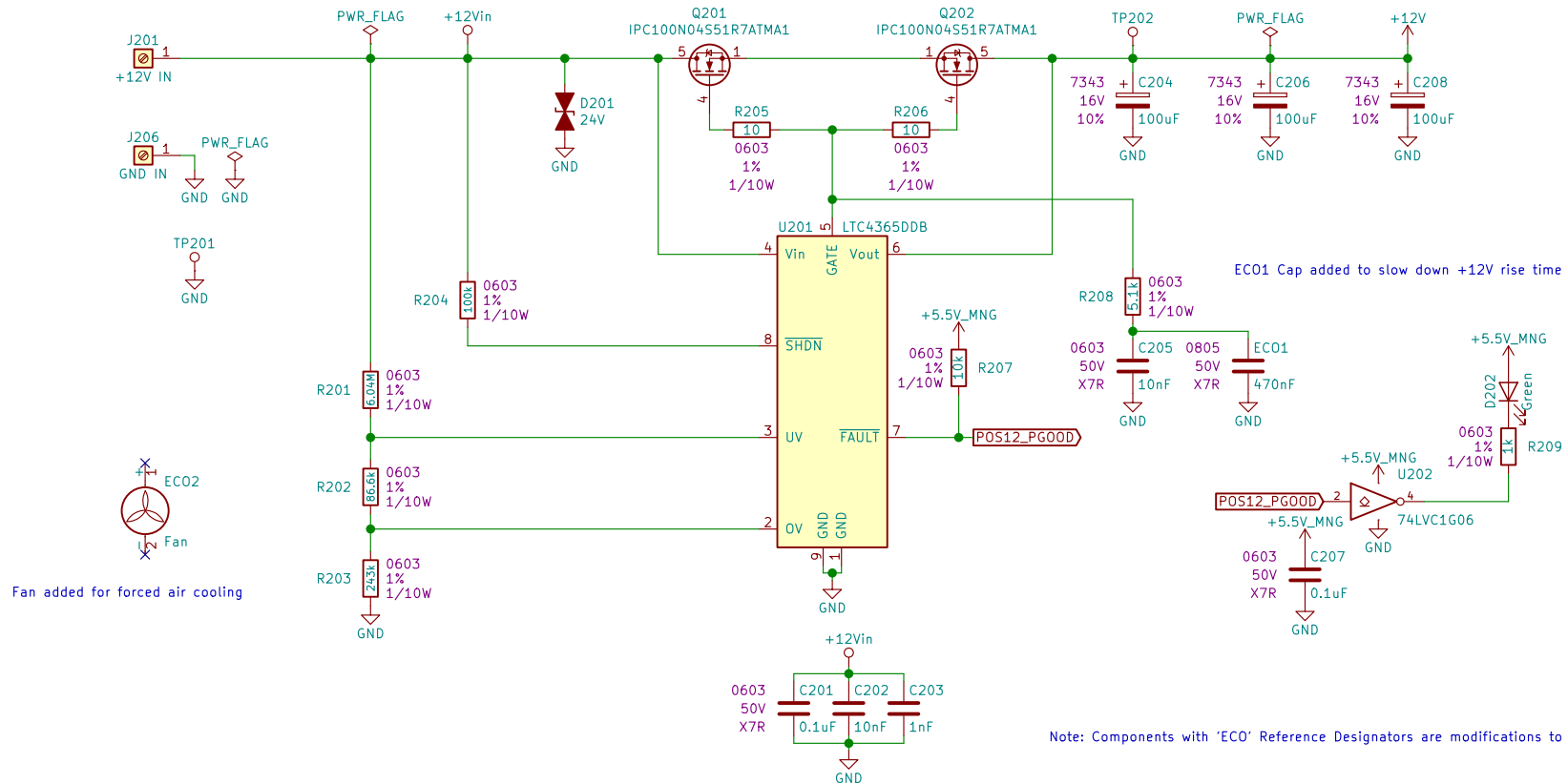
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02. Power Input



Note: Components with 'ECO' Reference Designators are modifications to the original design

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Sheet: /Power Input/

File: Power_Input.sch

Title: Electronic Display Power Board

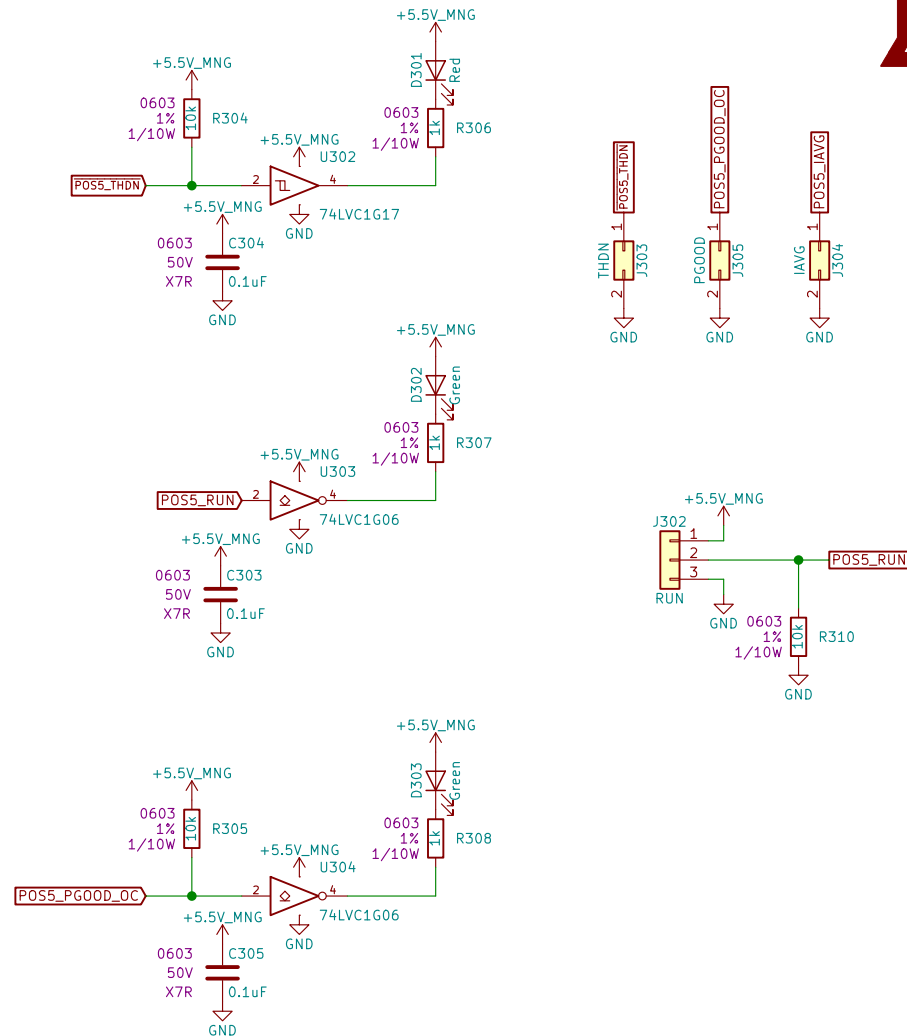
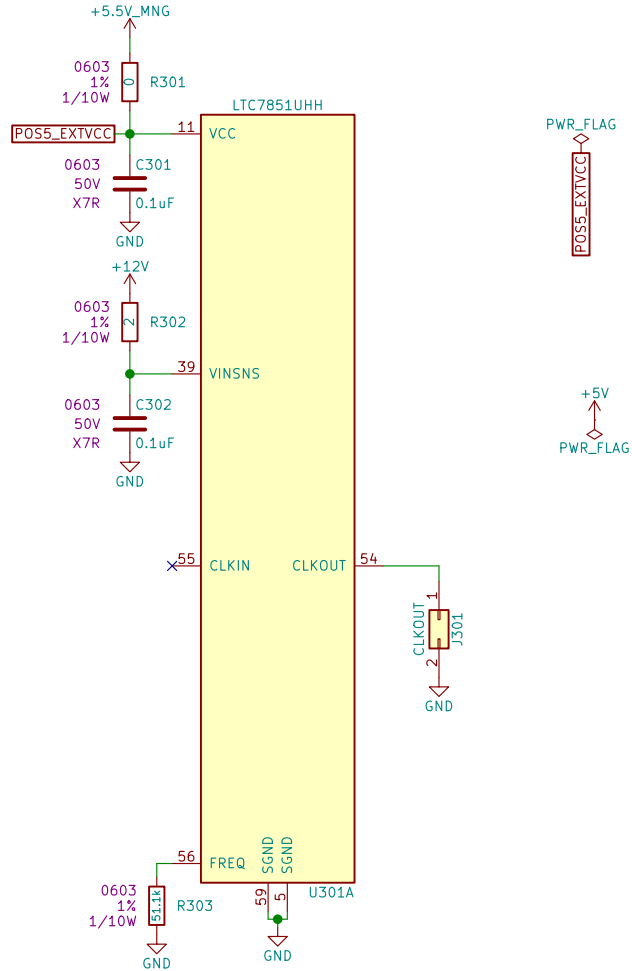
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Rev: A

Id: 2/14

03. +5V Control



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Sheet: /POS5 Control/
File: POS5_Control.sch

Title: Electronic Display Power Board

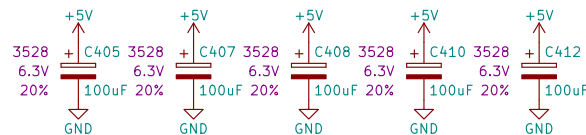
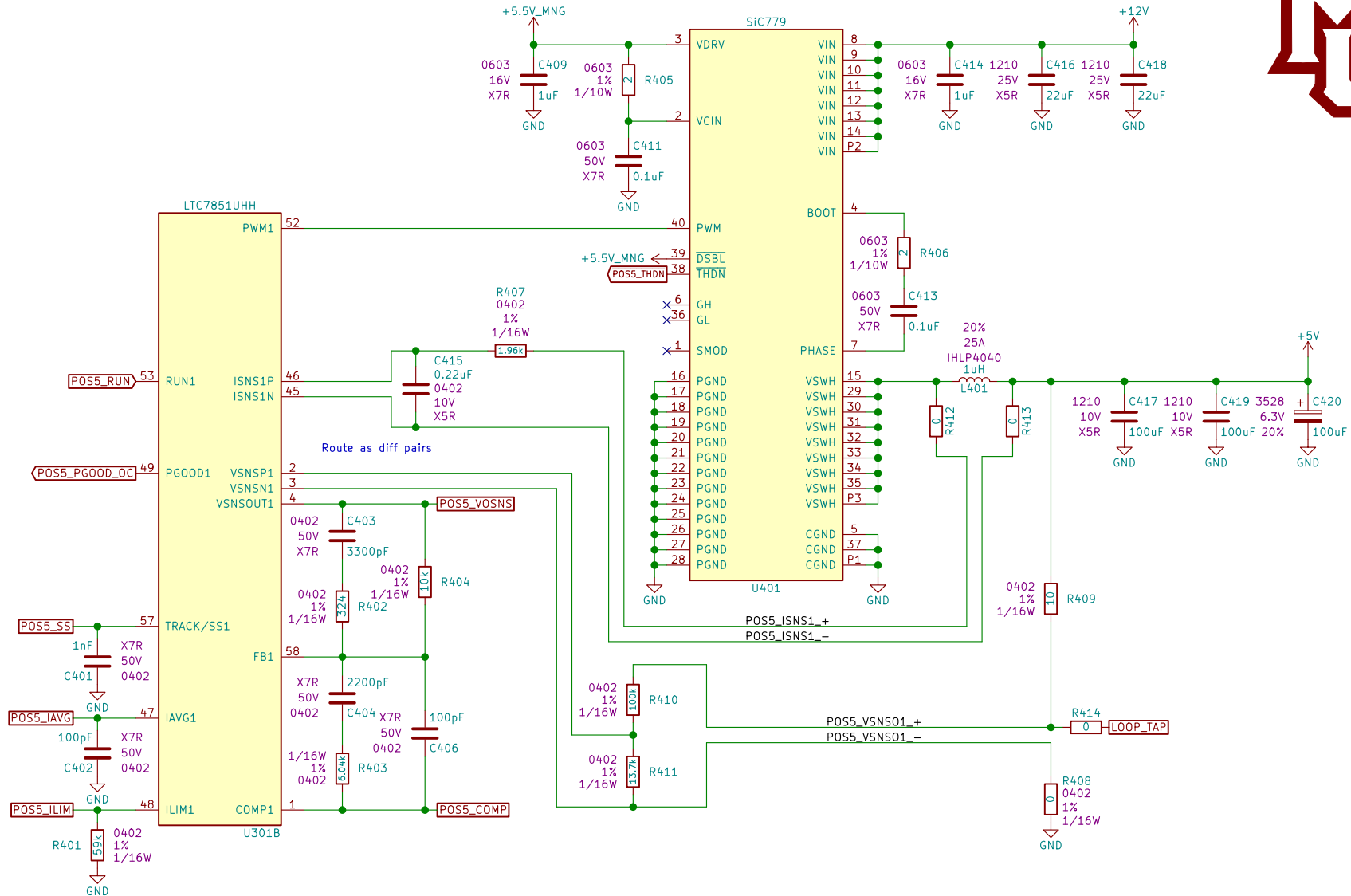
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Id: 3/14

04. +5V Phase 1



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Sheet: /POS5 Phase 1/
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Title: Electronic Display Power Board

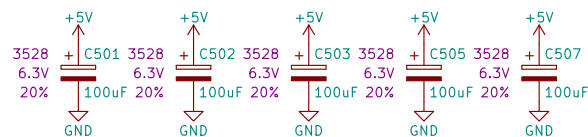
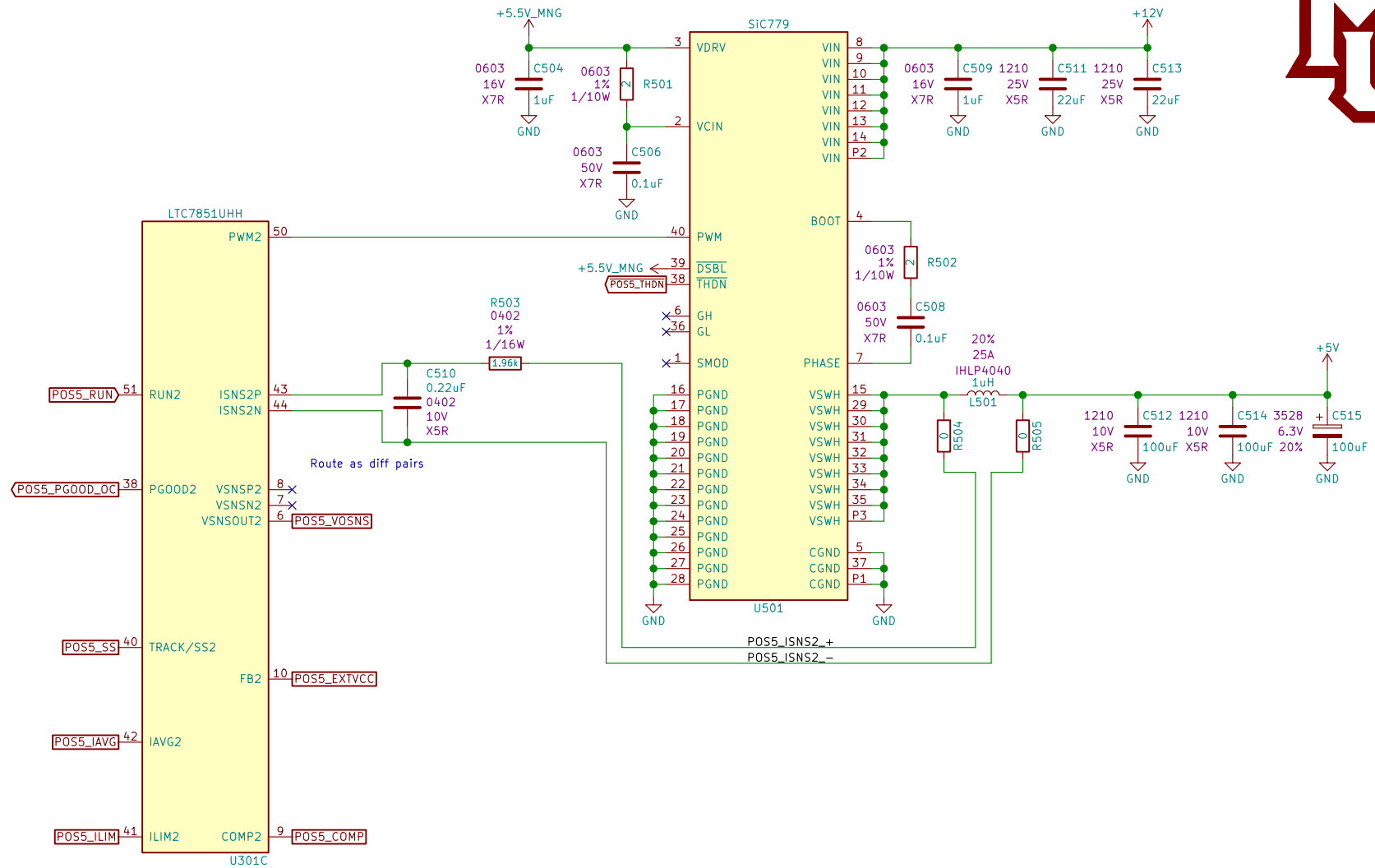
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05. +5V Phase 2



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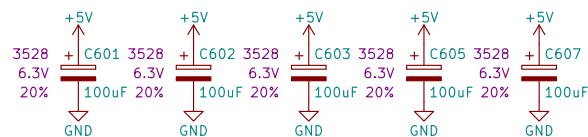
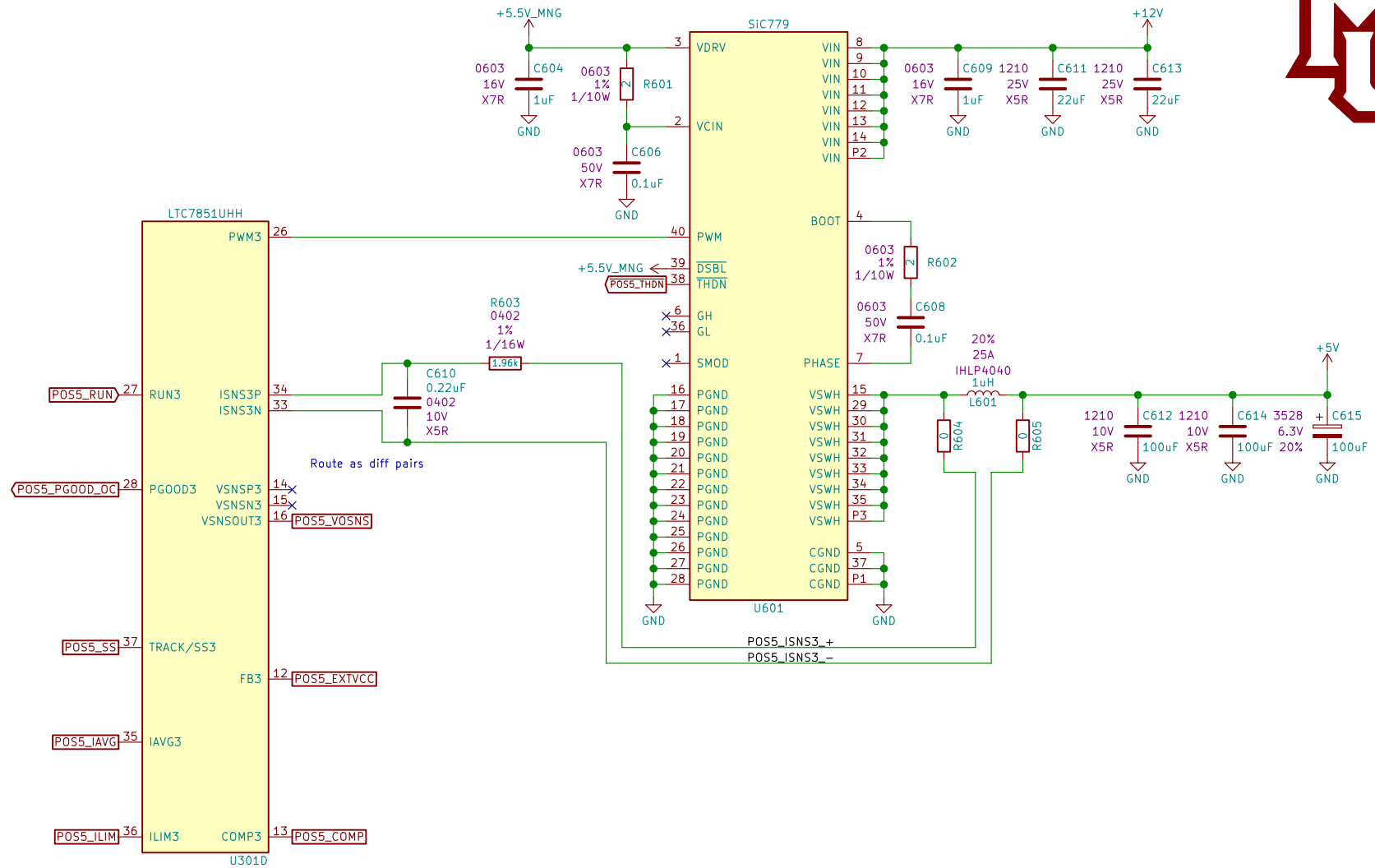
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Rev: A
Id: 5/14

06. +5V Phase 3



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Title: Electronic Display Power Board

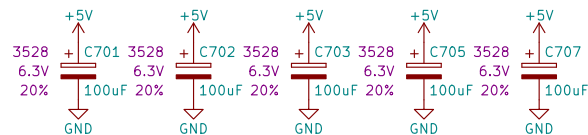
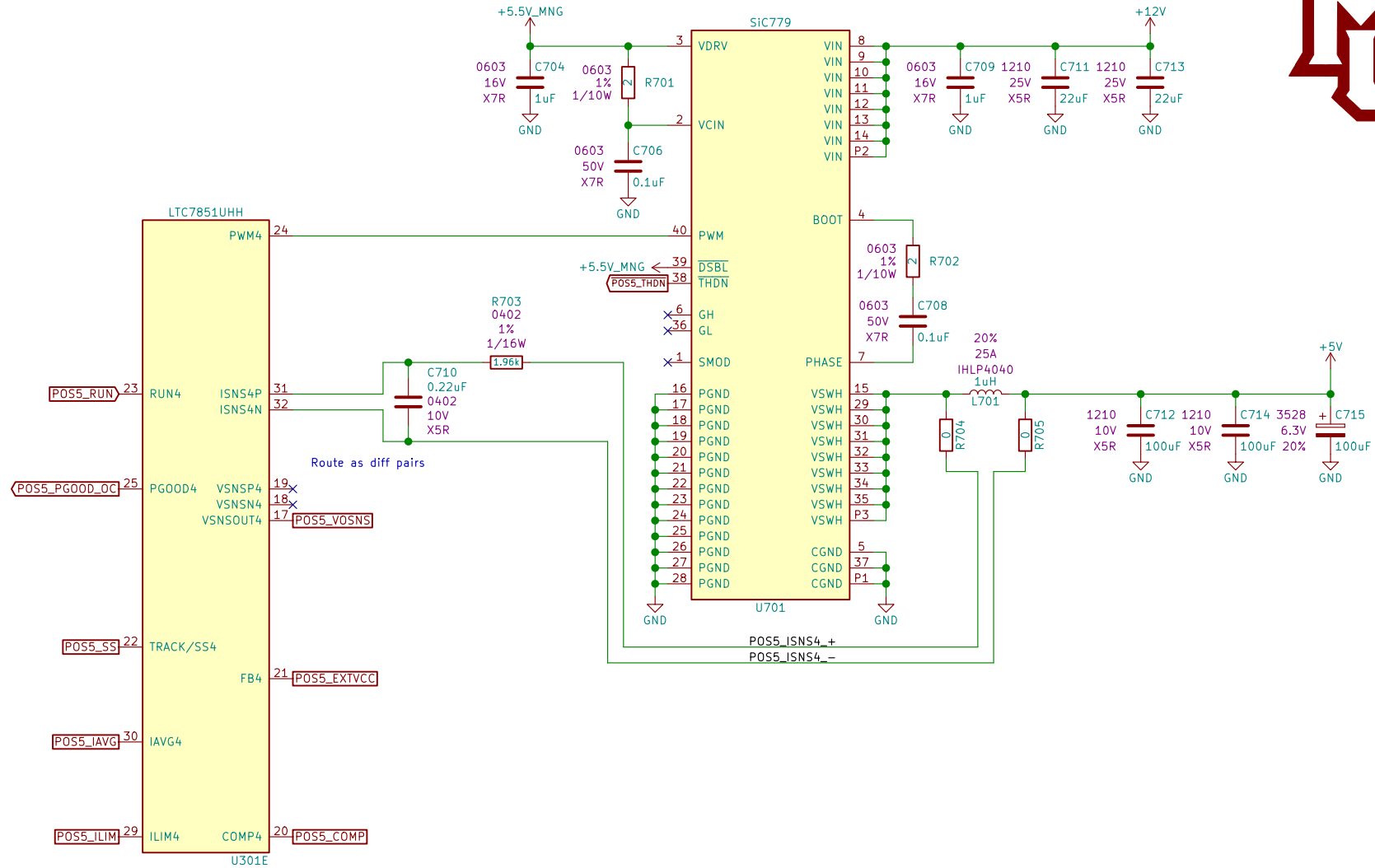
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Rev: A

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07. +5V Phase 4



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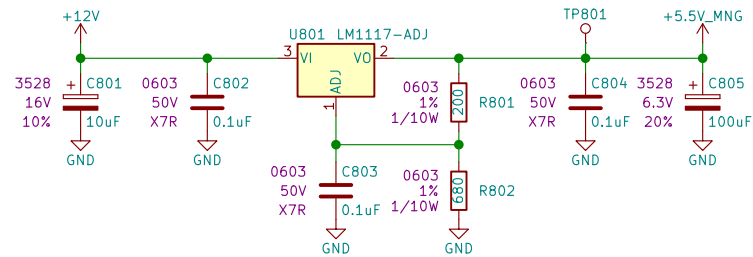
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Title: Electronic Display Power Board

Size: A Date: 2018-11-28
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Id: 7/14

08. +5.5V MNG



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Sheet: /POS5P5 MNG/

File: POS5P5_MNG.sch

Title: Electronic Display Power Board

Size: A Date: 2018-11-28

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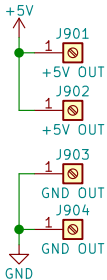
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09. Power Output



Place bulk output caps close to terminals



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Sheet: /Power Output/
File: Power_Output.sch

Title: Electronic Display Power Board

Size: A Date: 2018-11-28
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10. Mounting Holes and Mechanical Components



MH1001
MountingHole



MH1003
MountingHole



MH1004
MountingHole



MH1006
MountingHole



4-40 Screw
MK1001



4-40 Screw
MK1009



4-40 Screw
MK1002



4-40 Screw
MK1010



4-40 Standoff
MK1003



4-40 Standoff
MK1011



4-40 Standoff
MK1004



4-40 Standoff
MK1012



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Sheet: /Mechanical/
File: Mechanical.sch

Title: **Electronic Display Power Board**

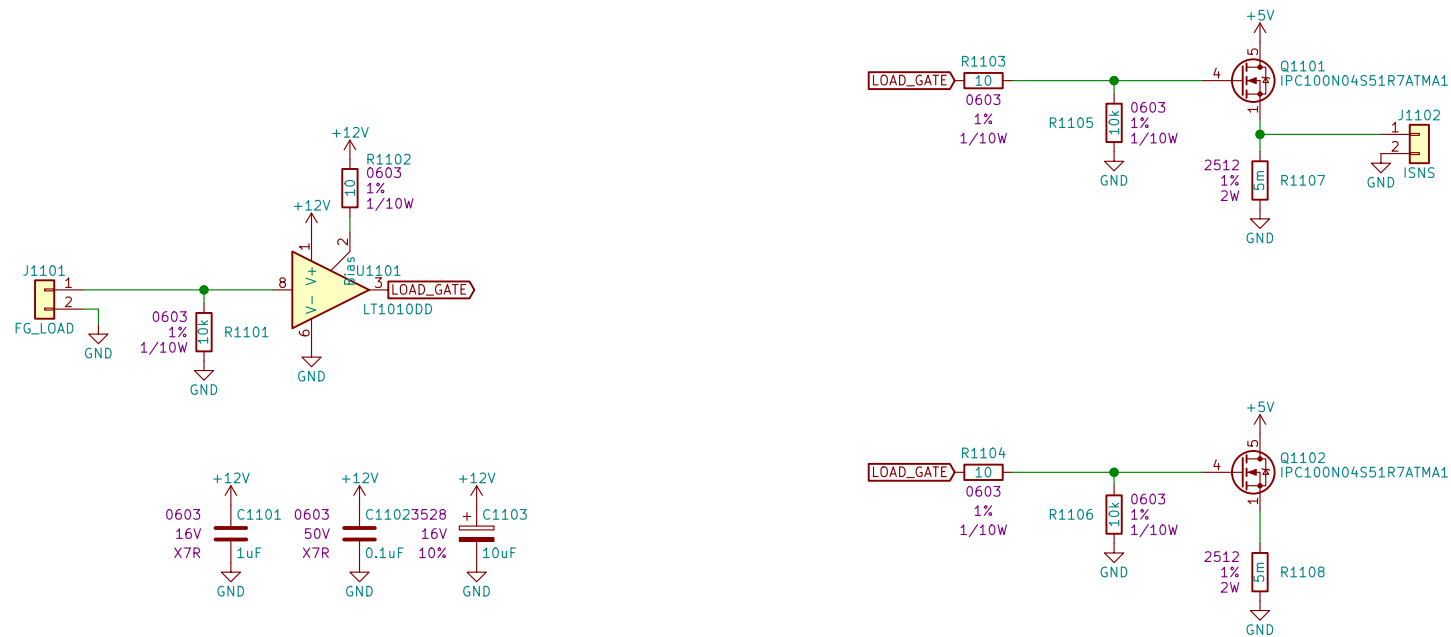
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Rev: A

Id: 10/14

11. Active Load Driver and Active Load Bank 1



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Sheet: /Active Load 1/

File: Active_Load_1.sch

Title: Electronic Display Power Board

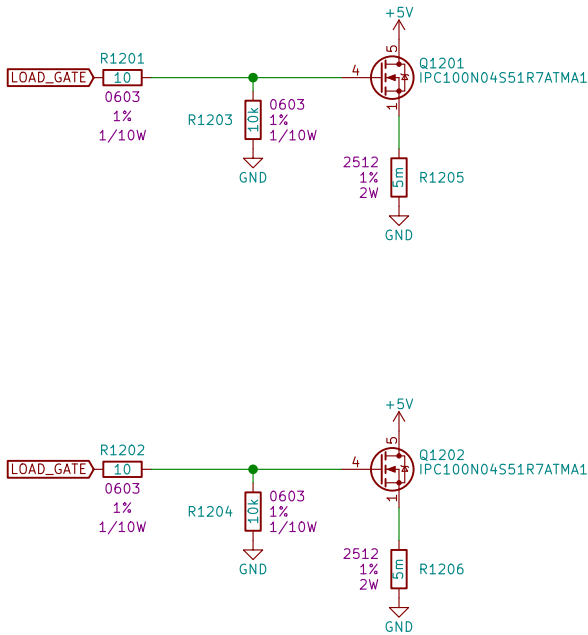
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Rev: A

Id: 11/14

12. Active Load Bank 2



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Sheet: /Active Load 2/

File: Active_Load_2.sch

Title: Electronic Display Power Board

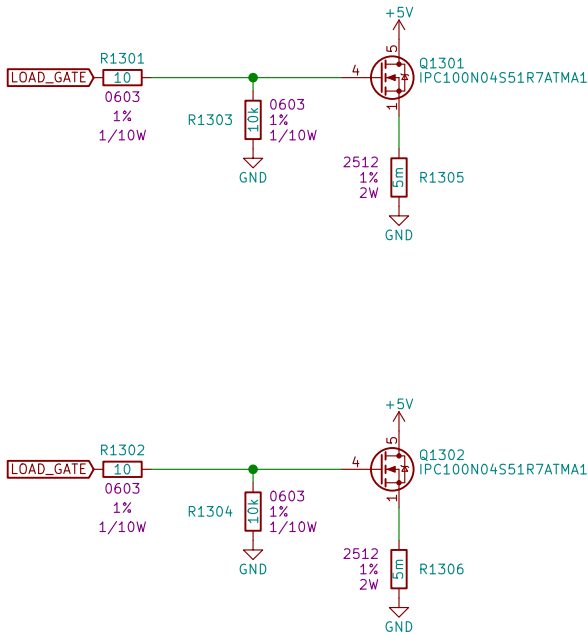
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Rev: A

Id: 12/14

13. Active Load Bank 3



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Sheet: /Active Load 3/

File: Active_Load_3.sch

Title: Electronic Display Power Board

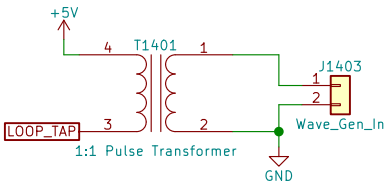
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Rev: A

Id: 13/14

14. Open Loop Transfer Function Test Components



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Sheet: /Loop Response/
File: Loop_Response.sch

Title: Electronic Display Power Board

Size: A Date: 2018-11-28
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Rev: A
Id: 14/14