

Daniel Walter
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Sheet: /
File: HPDriver.sch

Title: High Power Stepper Driver

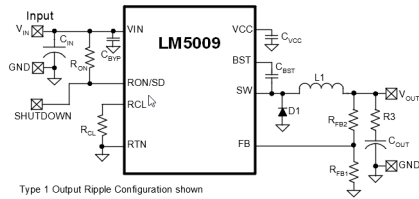
Size: A4 Date: 2019-12-19

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Rev: 1.0

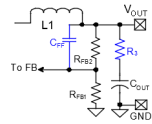
Id: 1/5

Typical Application, Basic Step-Down Regulator



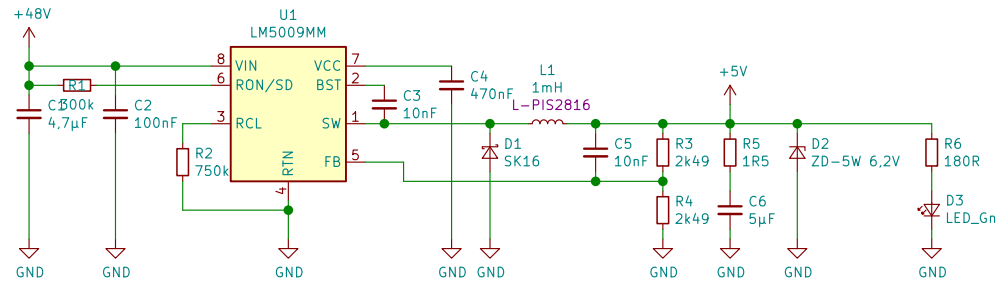
Type 1 Output Ripple Configuration shown

Type 2 Reduced Ripple Configuration



| | | | |
|------------------------------------|---|--------|---|
| Step 9: Summary | | | |
| R_{in} | = | 2.49 | kohms These two resistors set the output voltage. |
| R_{out} | = | 2.49 | kohms |
| R_1 | = | 300 | kohms Sets the switching frequency. |
| L_1 | = | 1000 | uH Determines the ripple current. |
| R_{CL} | = | 750 | kohms Sets the off-time in current limit. |
| Output Ripple Configuration | | | |
| | | Type 2 | Affects the amount of ripple at V_{out} . |
| R_3 | = | 1.5 | Ohms Sets the ripple amplitude at V_{out} . |
| C_{FB} | = | 10000 | pF Ripple bypass for Type 2 |
| C_{OUT} | = | 5 | uF |
| C_{IN} | = | 3.3 | uF |
| C_{BST} | = | 0.1 | uF See Note 1. |
| C_{OUT} | = | 0.47 | uF |
| C_{BST} | = | 0.01 | uF |
| V_{OUT} | = | 5.00 | Volts |
| Nominal Switching Frequency | = | 133 | kHz |

Notes: 1) Values shown for C_{BST} , C_{OUT} , and C_{IN} are default values, and do not require calculation.



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Sheet: /Supply/
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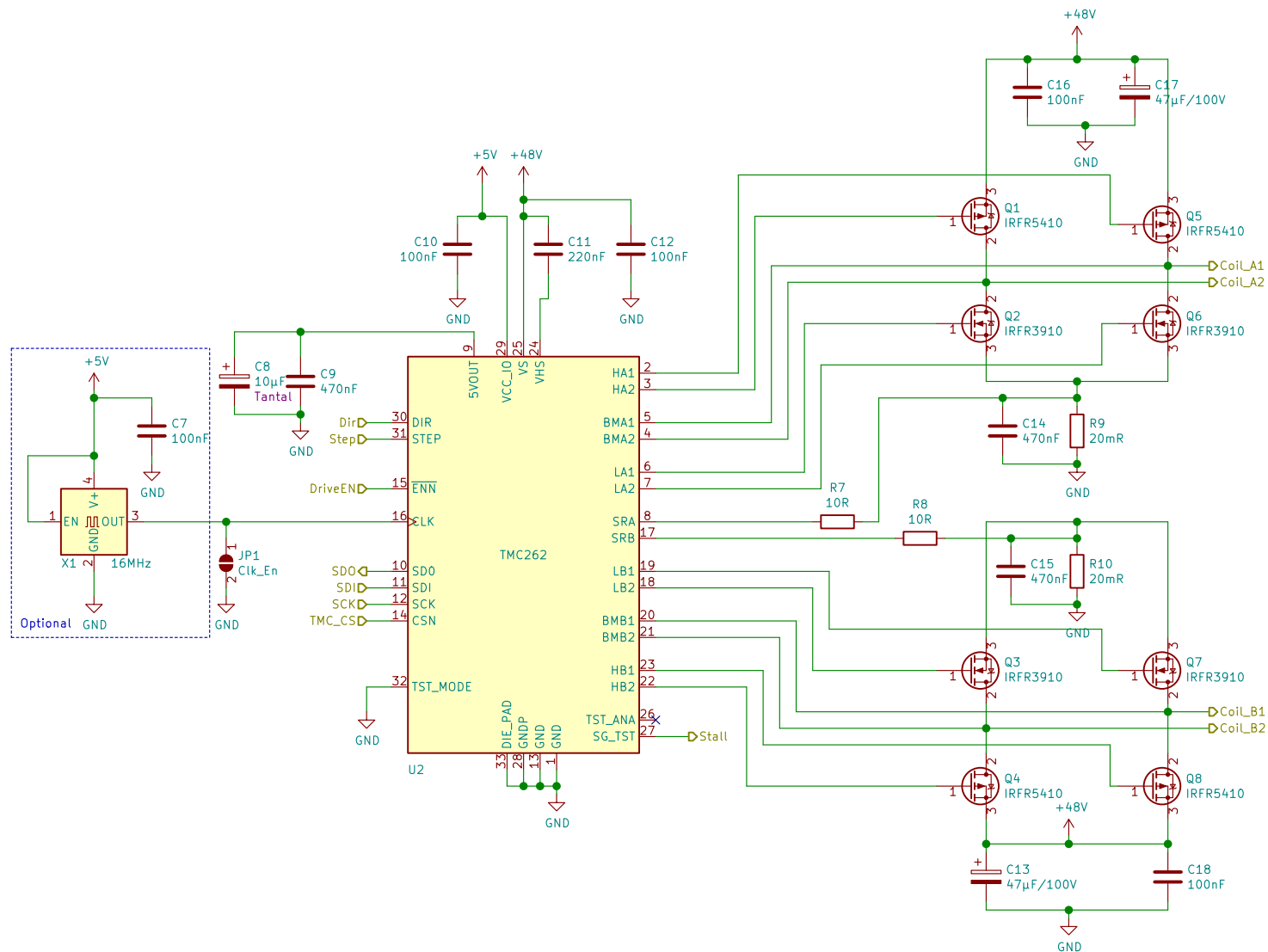
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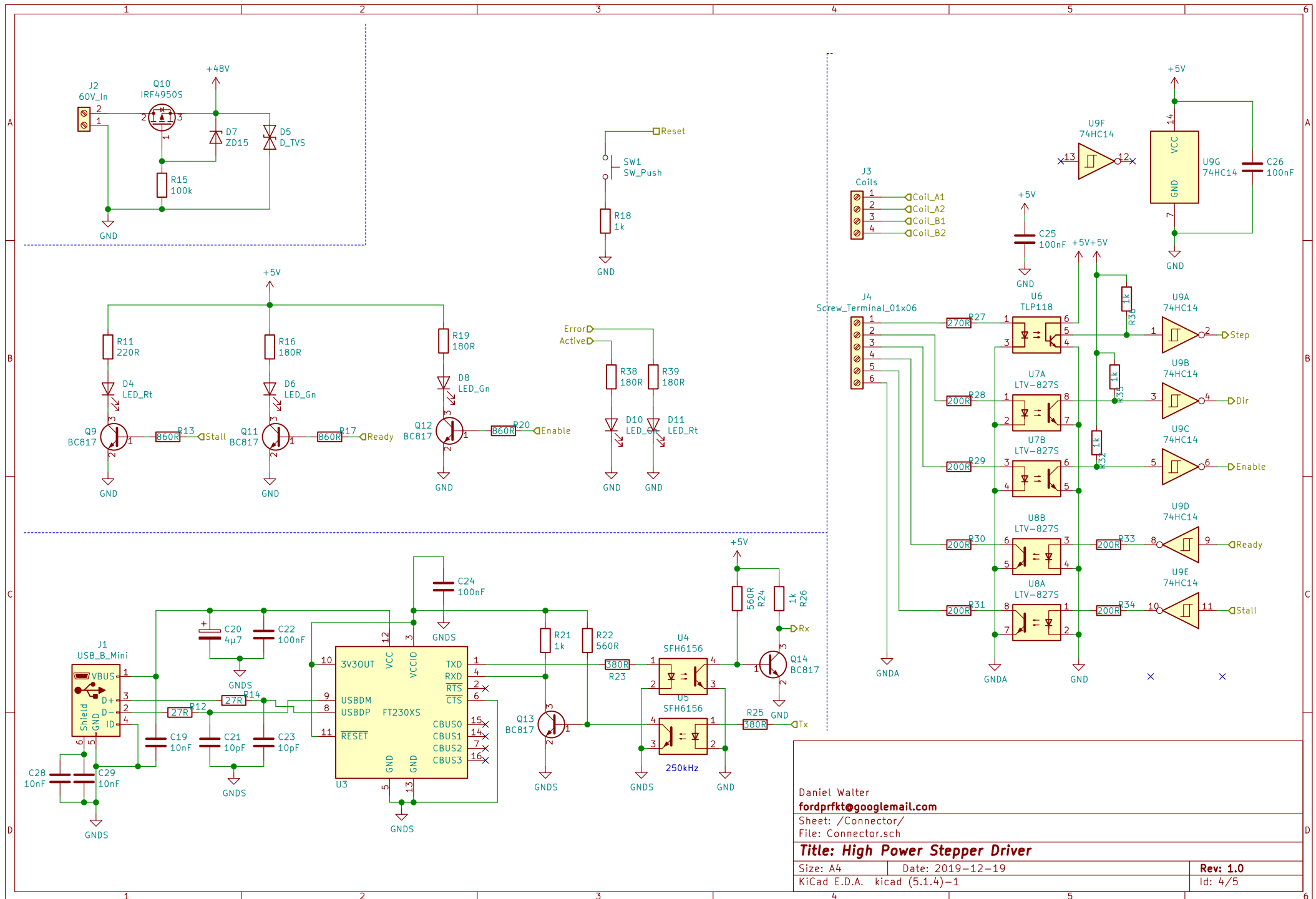
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Sheet: /Driver/
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Sheet: /Connector/
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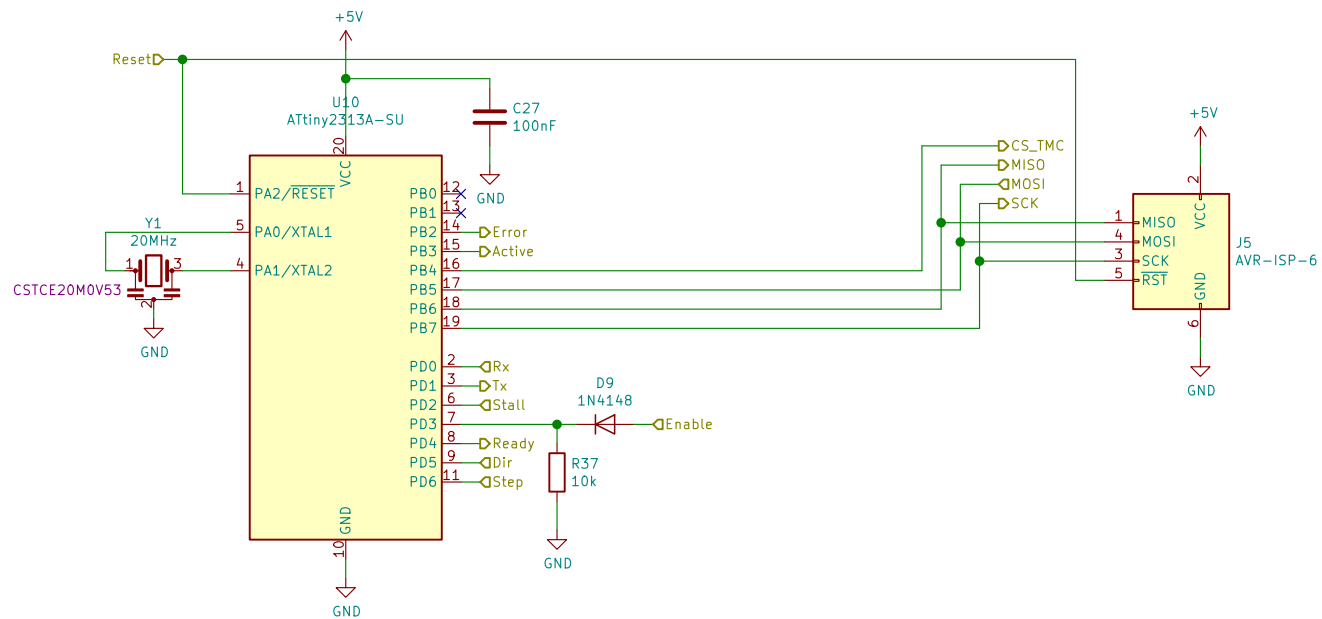
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Sheet: /Controller/
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