

Daniel Walter
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Sheet: /
File: HPDriver.sch

Title: High Power Stepper Driver

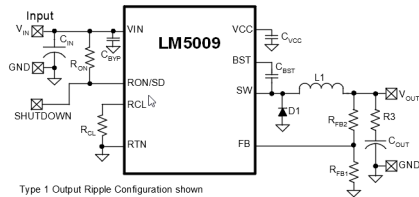
Size: A4
KiCad E.D.A. kicad (5.1.10)-1

Date: 2019-12-19

Rev: 1.0

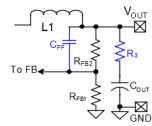
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Typical Application, Basic Step-Down Regulator



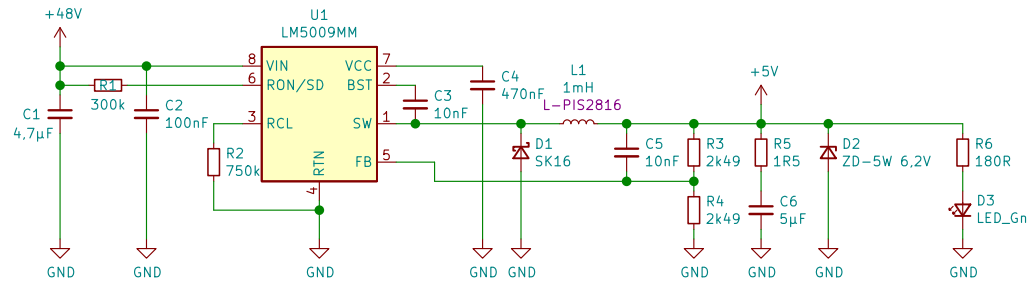
Type 1 Output Ripple Configuration shown

Type 2 Reduced Ripple Configuration



Step 9: Summary			
R_{th}	=	2.49	kohms These two resistors set the output voltage.
R_{th}	=	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_{SD}	=	0.47	uF
C_{RTN}	=	0.01	uF
V_{OUT}	=	5.00	Volts
Nominal Switching Frequency	=	133	kHz

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



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Sheet: /Supply/
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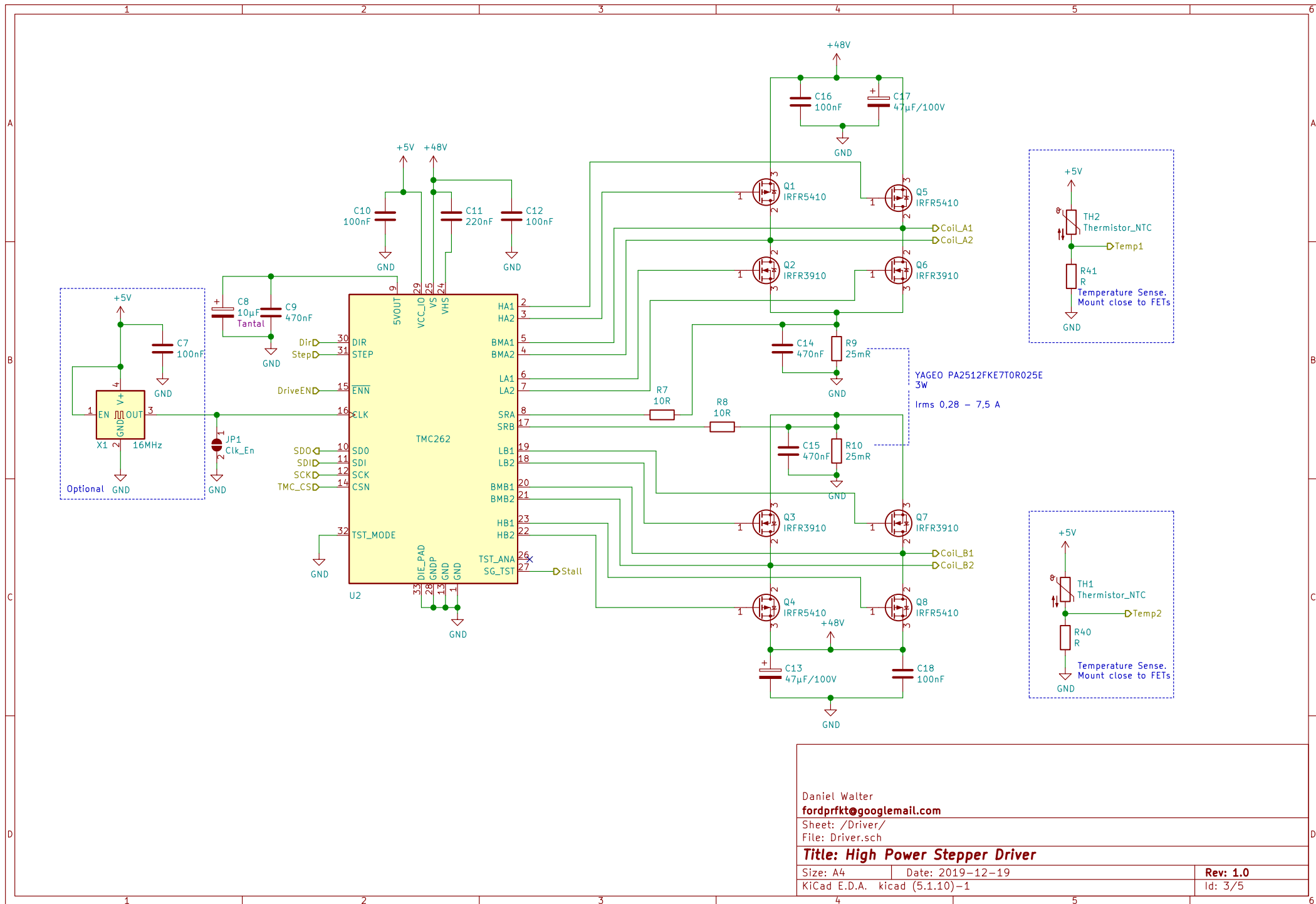
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Sheet: /Driver/
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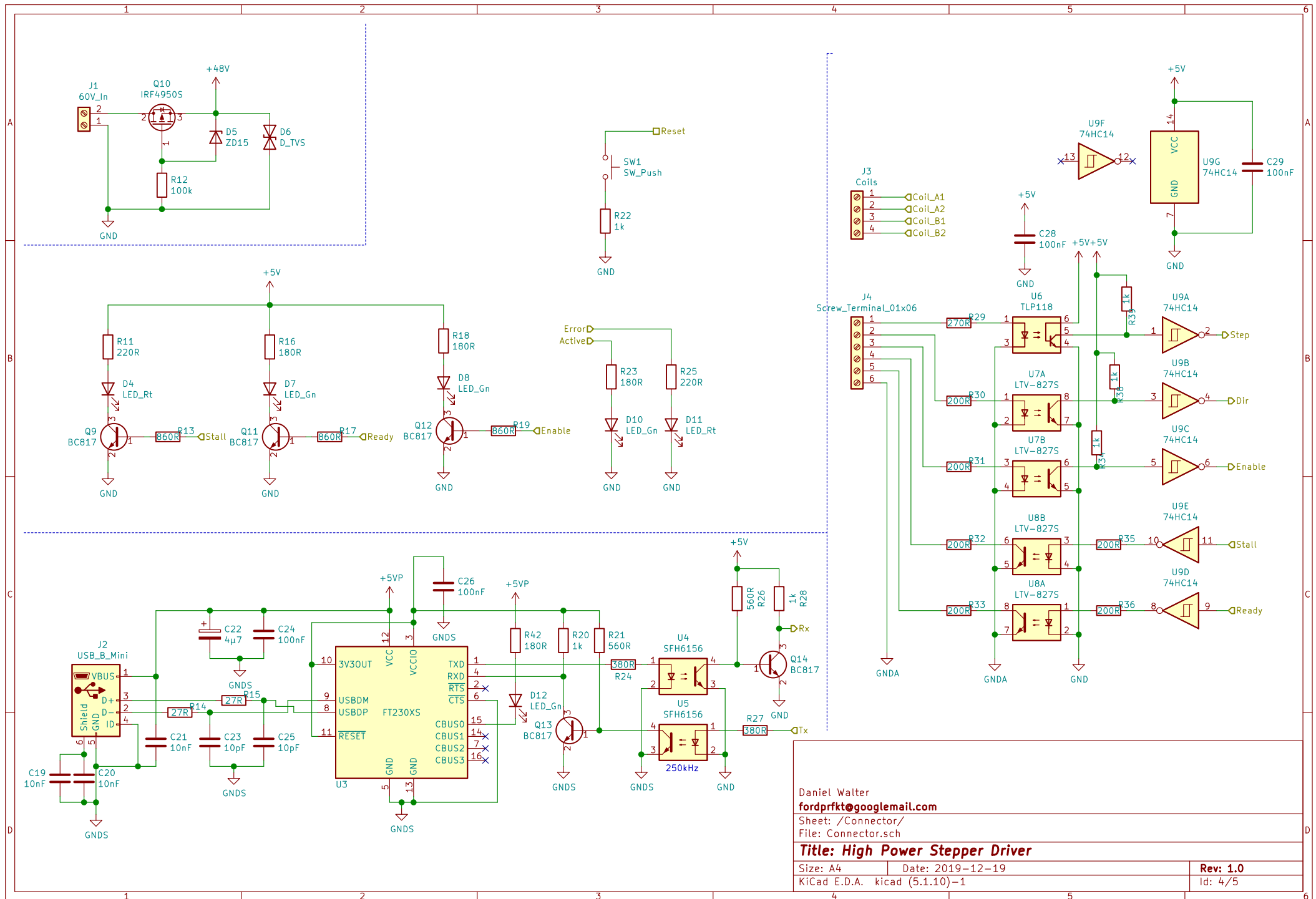
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Sheet: /Connector/
File: Connector.sch

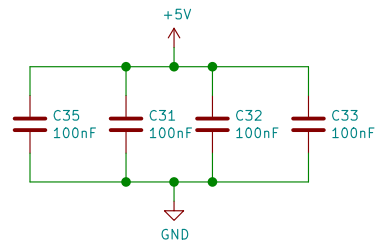
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