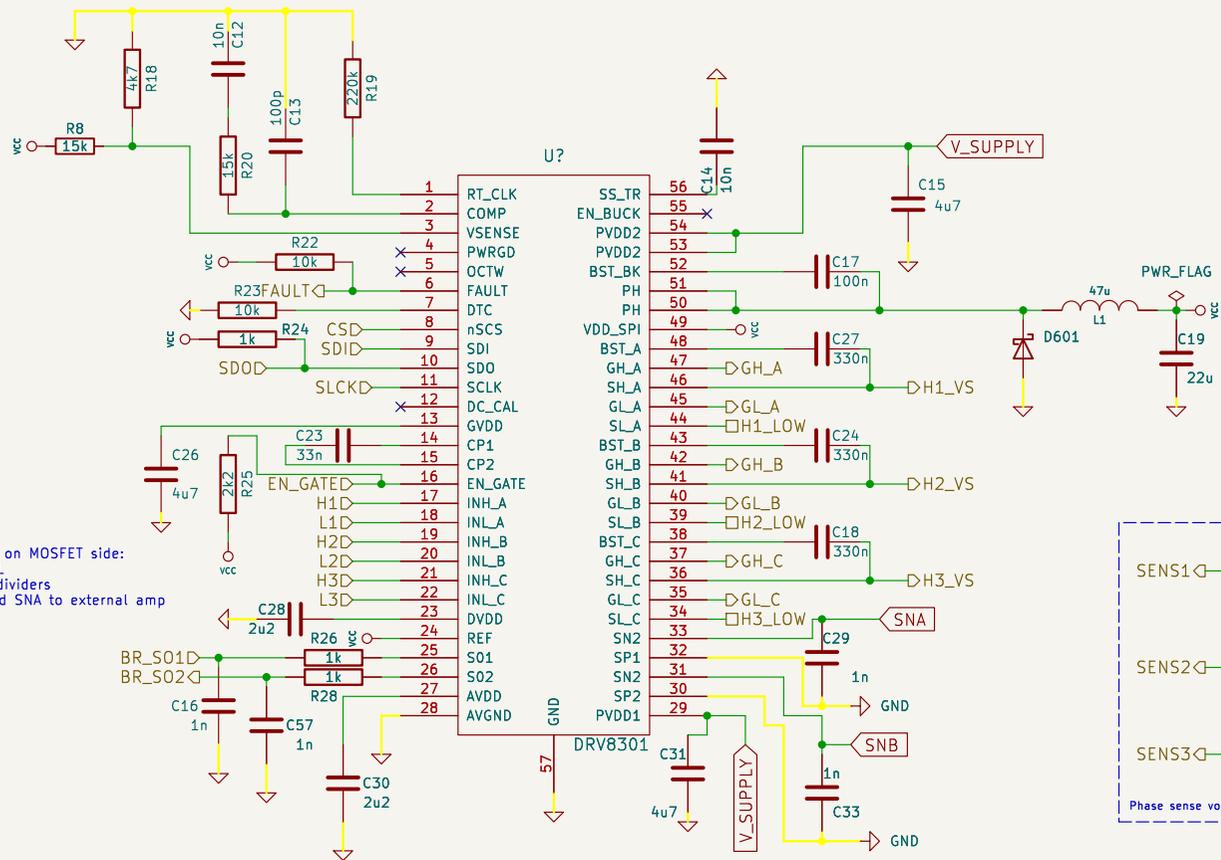
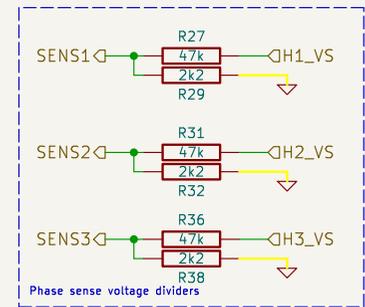


<b>Bluesat OWR</b>	
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File: stepper-driver.kicad_sch	
<b>Title: Stepper Motor Driver</b>	
Size: A4	Date: 2026-02-26
KiCad E.D.A. 9.0.0	Rev: 3.0
	Id: 1/6

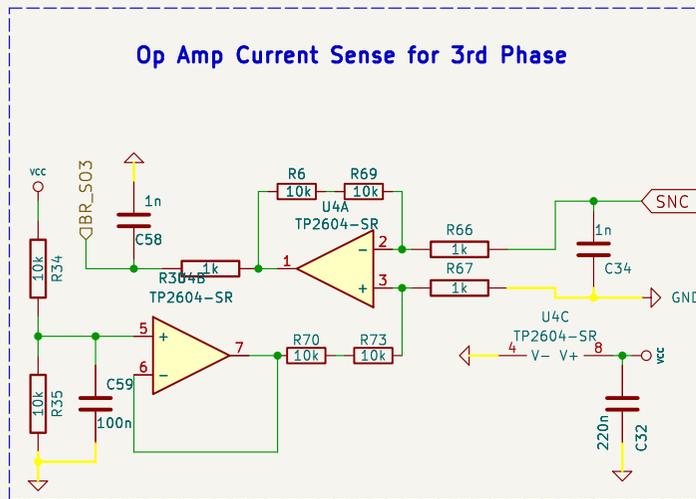


Phase 1 and 3 switched on MOSFET side:  
 - Driver BST, GH, SH, GL, SL  
 - Phase sense voltage dividers  
 - SNC to driver amp and SNA to external amp

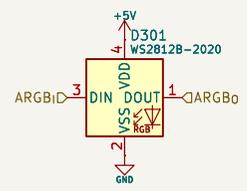
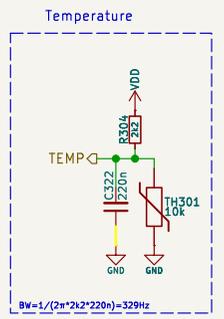
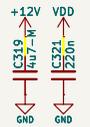
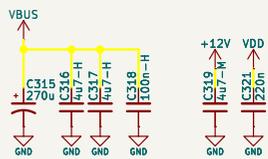
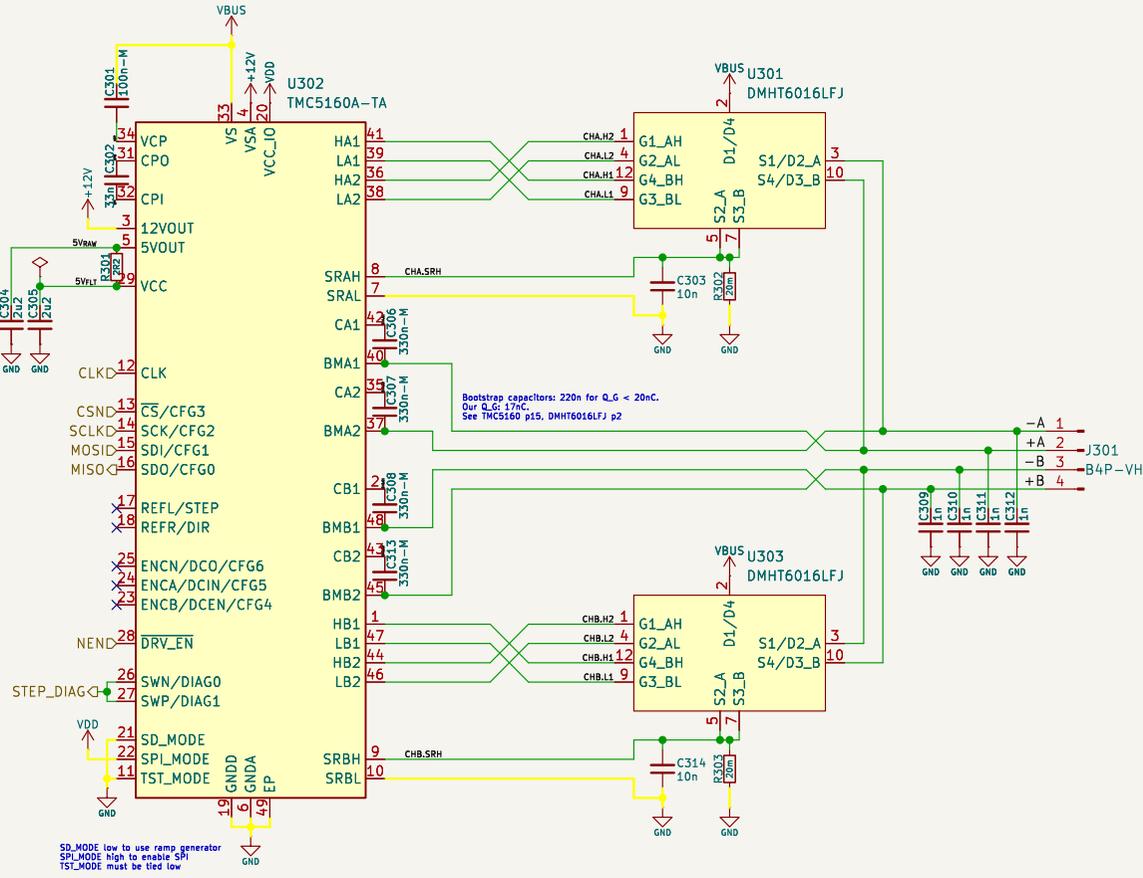


Change resistances used in code for voltage dividers

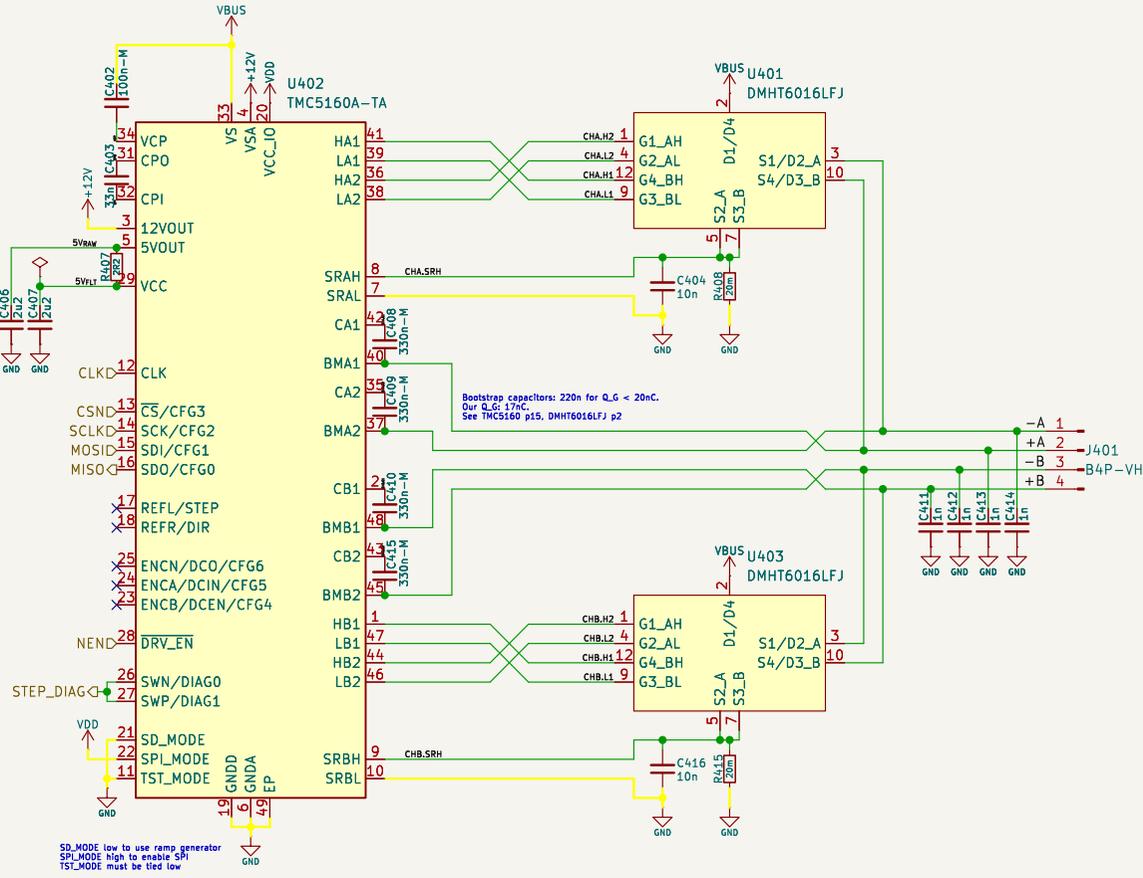
C15 and C31 must be 50V rated.  
 C18, C24 and C27 must be 25V rated.



Top level	
Root	
Shaman Systems	
Sheet: /Power/	
File: power.kicad_sch	
<b>Title: Cheap FOCer 2</b>	
Size: A4	Date: 2020-04-08
KiCad E.D.A. 9.0.0	Rev: 0.9
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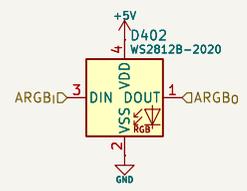
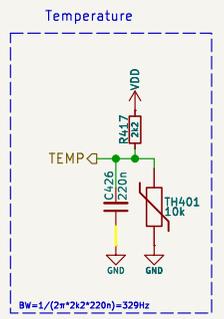
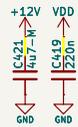
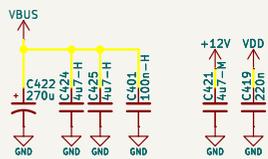


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Size: A4	Date: 2026-02-26
KiCad E.D.A. 9.0.0	Rev: 3.0
	Id: 3/6

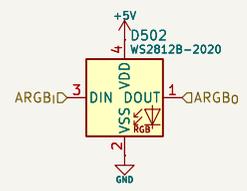
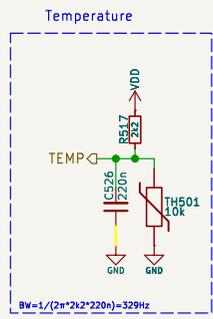
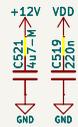
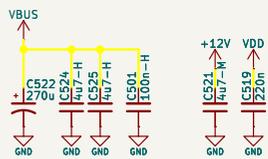
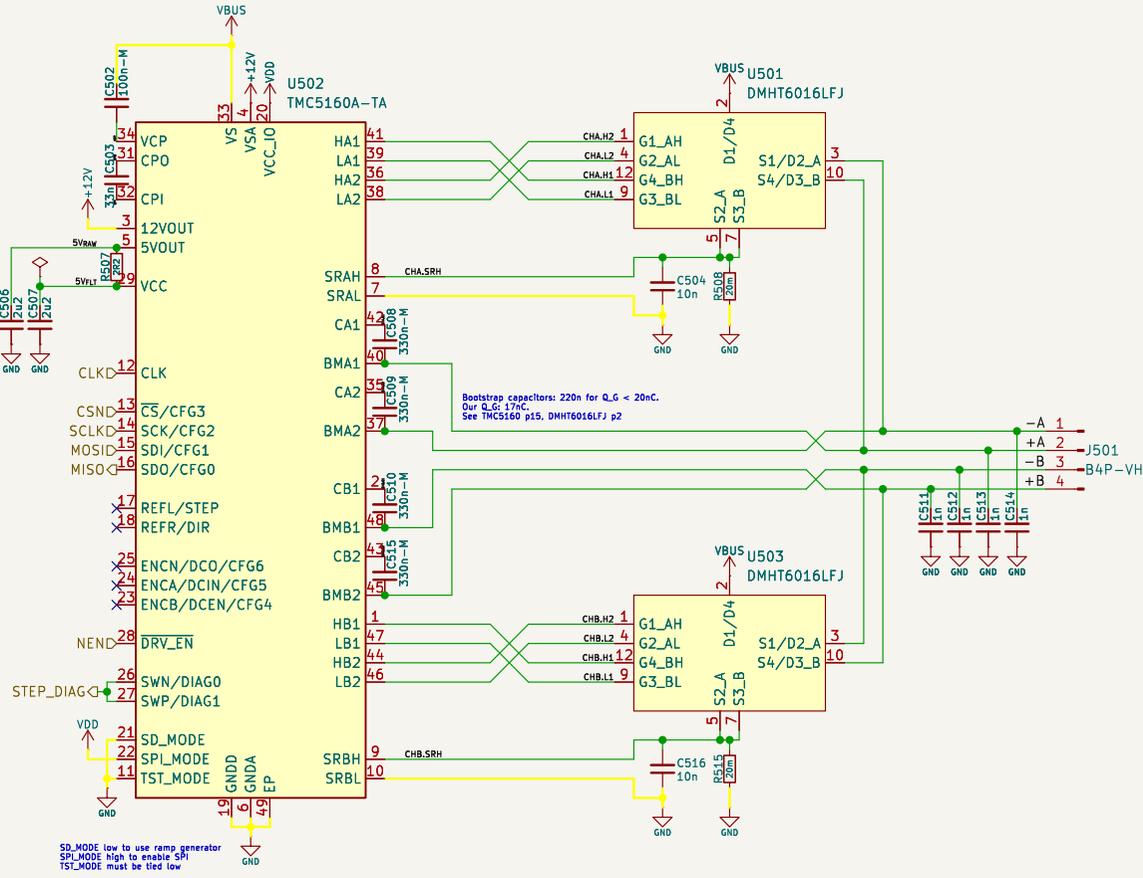


SD\_MODE low to use ramp generator  
 SPL\_MODE high to enable SPI  
 TST\_MODE must be tied low

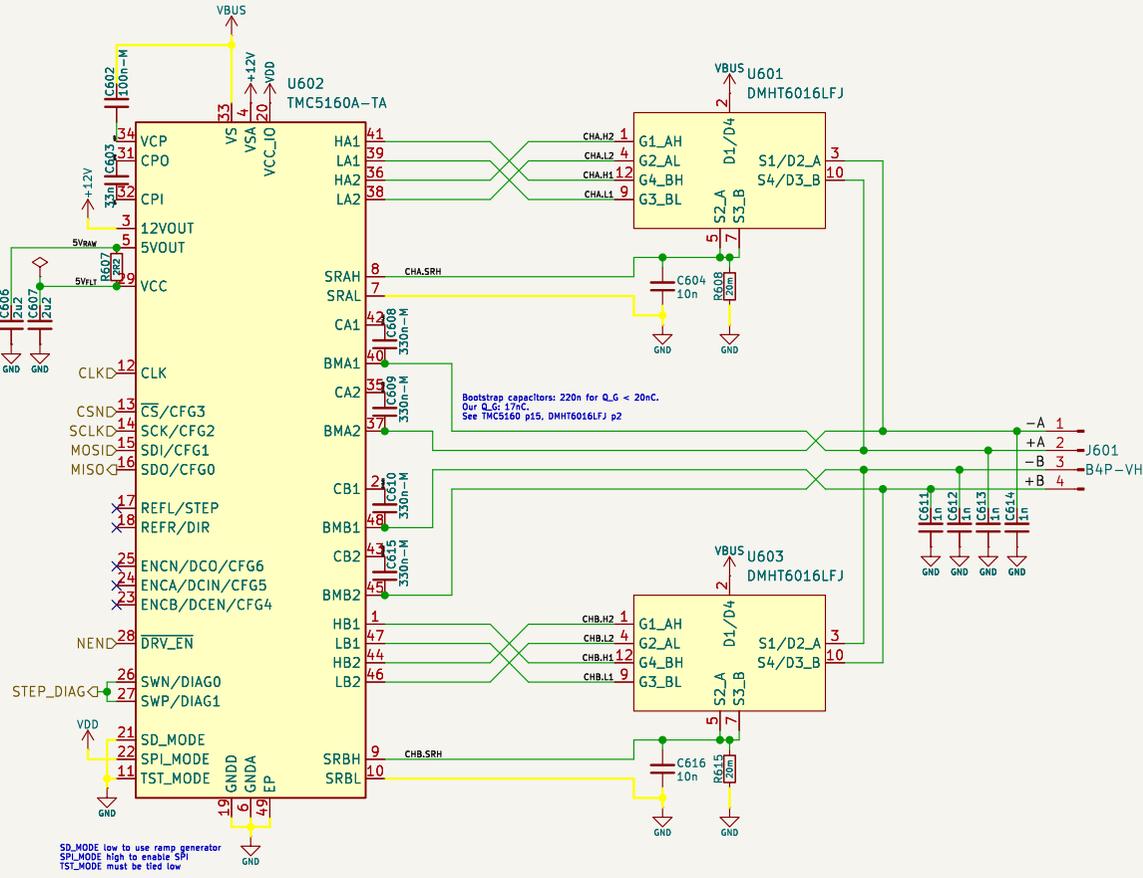
Bootstrap capacitors: 220n for Q<sub>L</sub> < 20nC.  
 Run @ 6: 17nC.  
 See TMC5160 p15, DMHT6016LFJ p2



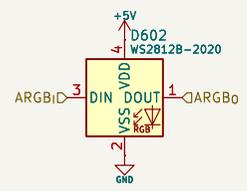
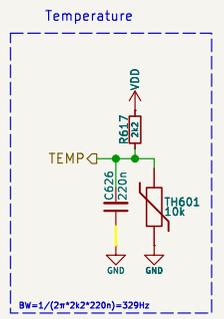
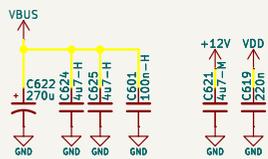
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<b>Title: Stepper Motor Driver</b>	
Size: A4	Date: 2026-02-26
KiCad E.D.A. 9.0.0	Rev: 3.0
	Id: 4/6



<b>Bluesat OWR</b>	
Sheet: /Channel2/	
File: channel.kicad_sch	
<b>Title: Stepper Motor Driver</b>	
Size: A4	Date: 2026-02-26
KiCad E.D.A. 9.0.0	Rev: 3.0
	Id: 5/6



SD\_MODE low to use ramp generator  
 SPL\_MODE high to enable SPI  
 TST\_MODE must be tied low



<b>Bluesat OWR</b>	
Sheet: /Channel3/	
File: channel.kicad_sch	
<b>Title: Stepper Motor Driver</b>	
Size: A4	Date: 2026-02-26
KiCad E.D.A. 9.0.0	Rev: 3.0
	Id: 6/6