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File: howland_ipump.sch

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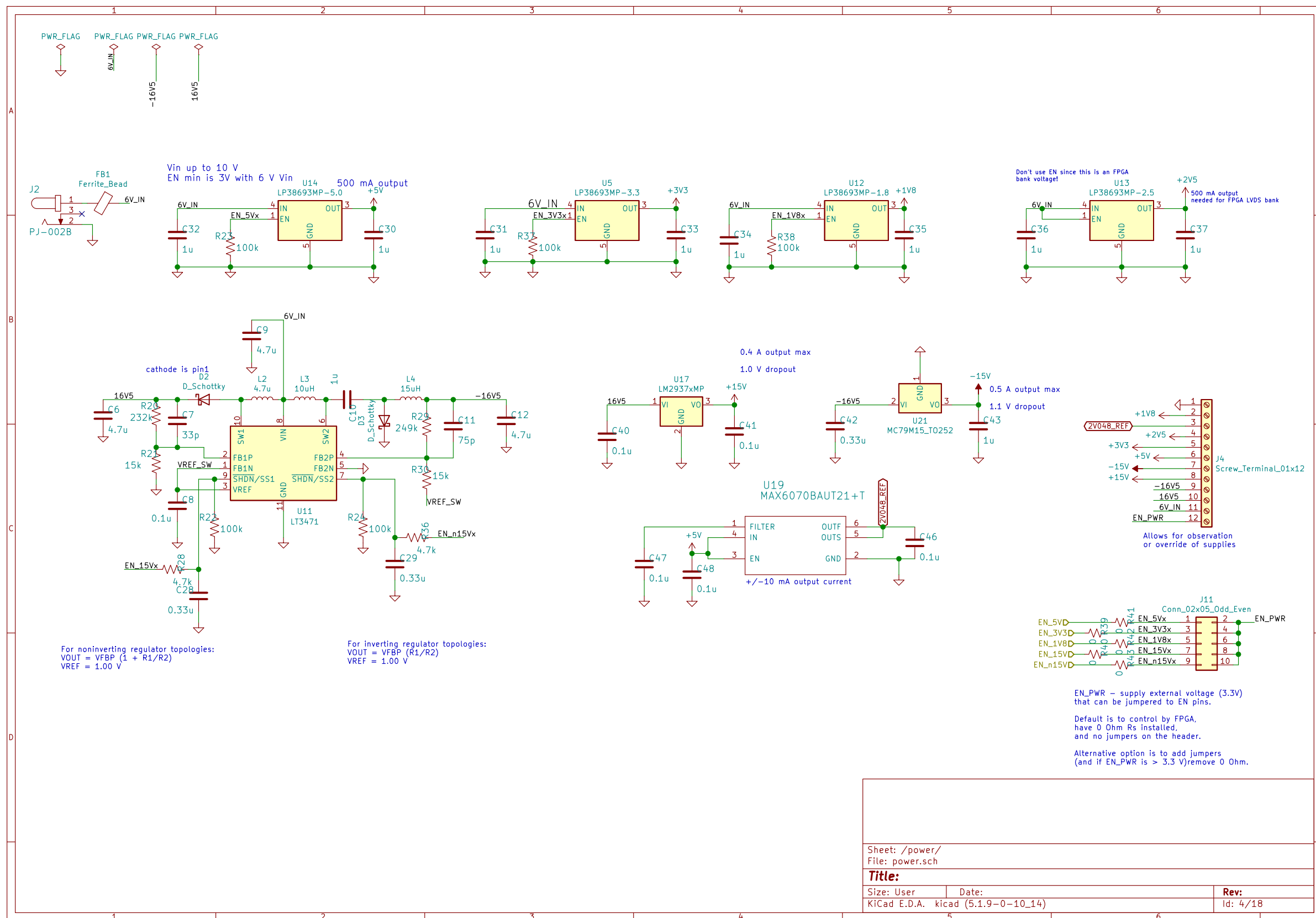
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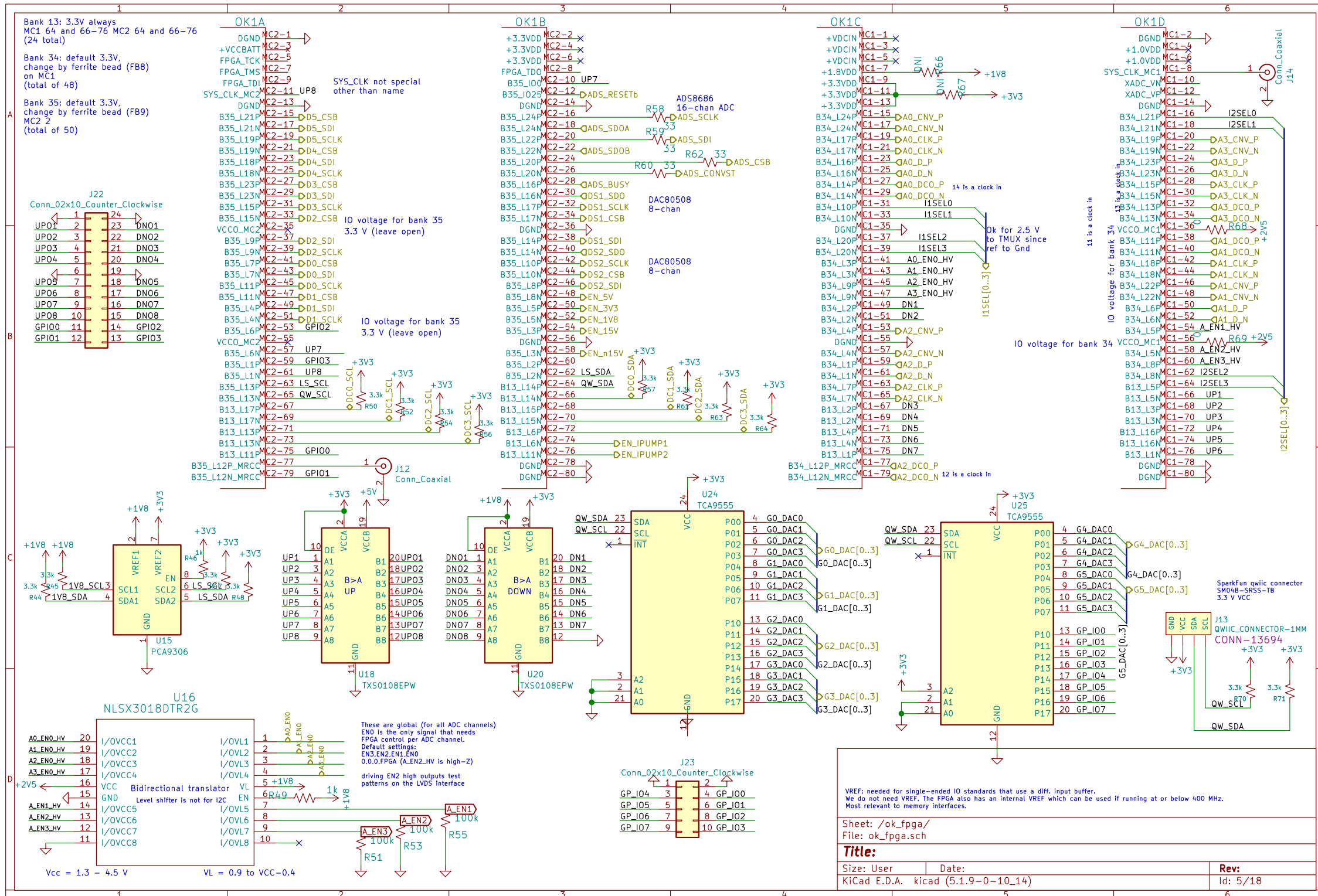
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Rev:

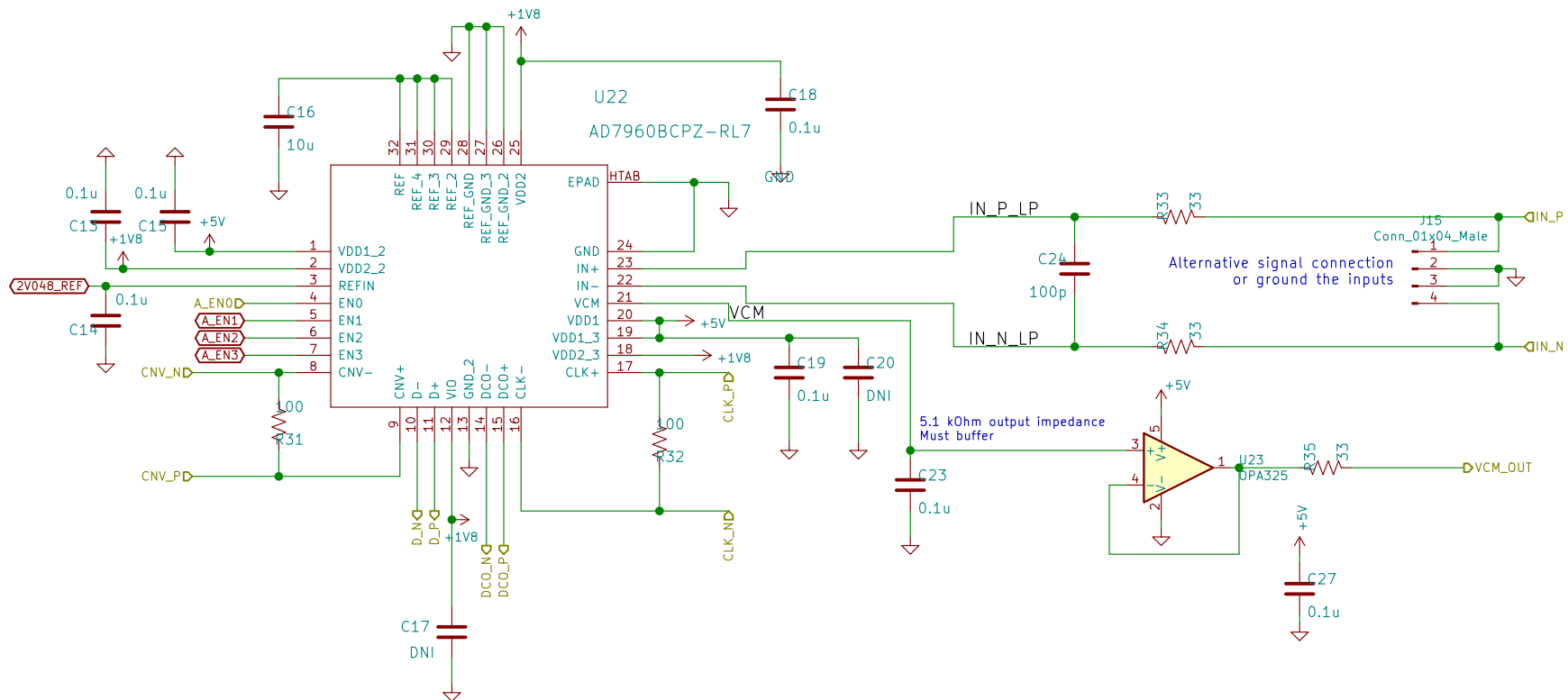
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What is VCCBATT?



Use internal buffer (x2) with 2.048V ref.
 "External reference of 2.048 V applied to the REFIN pin
 (high impedance input). The on-chip buffer gains this by 2
 and drives the REF pin with 4.096 V"
 EN3=X, EN2=0, EN1=0, EN0=1 (28 MHz BW)
 EN3=X, EN2=1, EN1=0, EN0=1 (9 MHz BW, use this BW only when the throughput is 2 MSPS or lower)
 VDD2 and VIO can come from the same supply.
 But route and decouple separately.

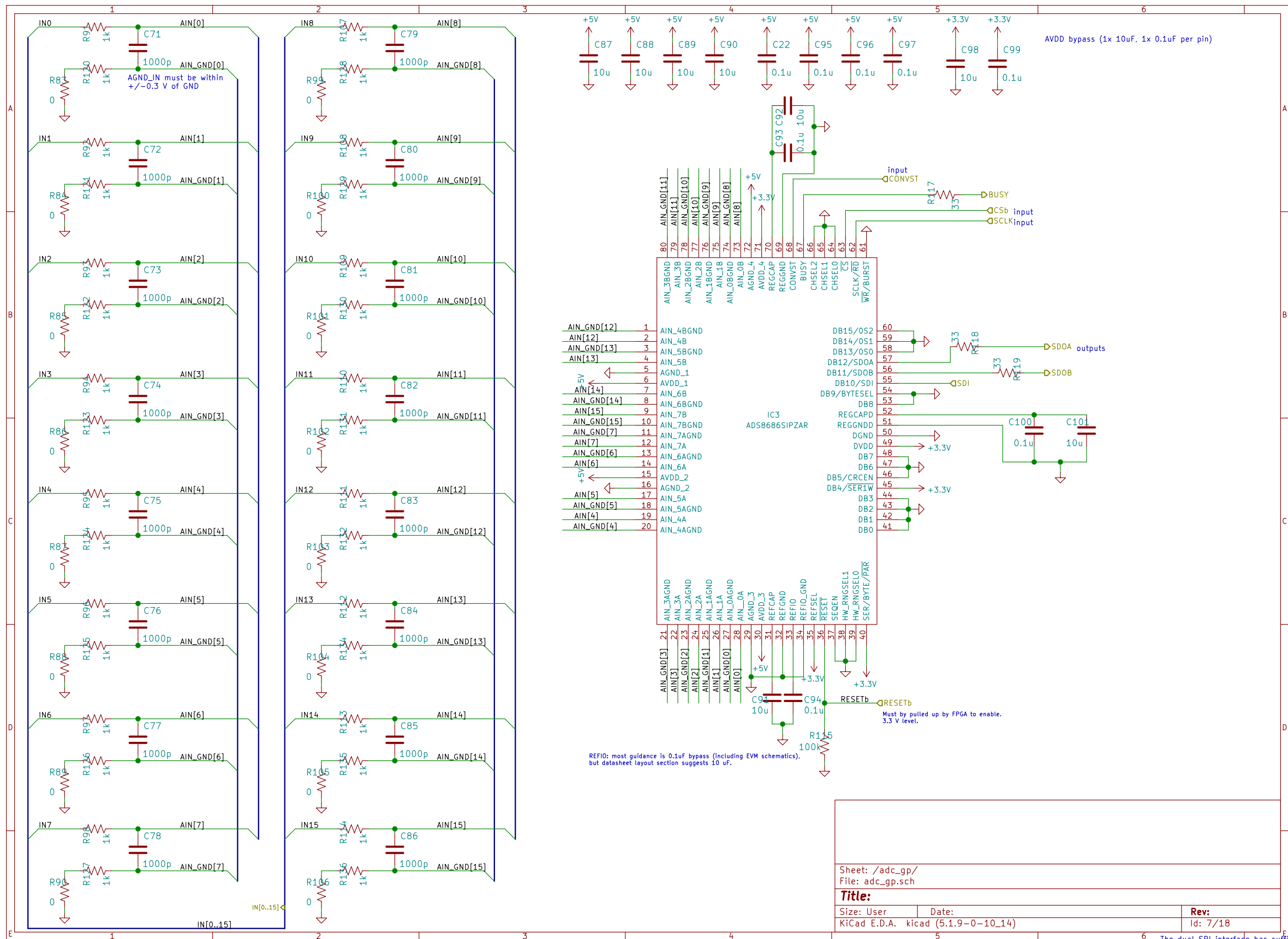


Sheet: /adc1/
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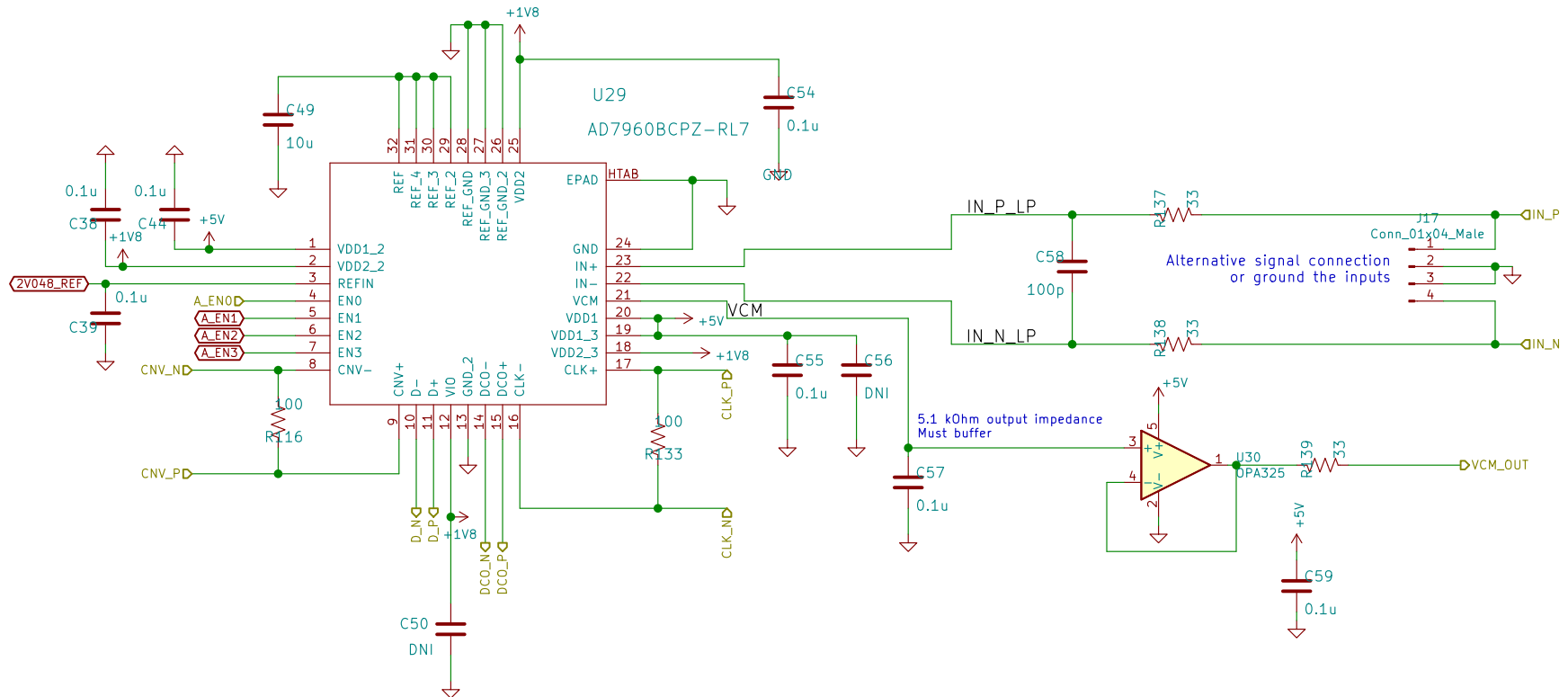
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The dual SPI interface has sufficient BW to clock the data out at the 1 MSPS (just need 16 MHz clock rate)

Use internal buffer (x2) with 2.048V ref.
 "External reference of 2.048 V applied to the REFIN pin
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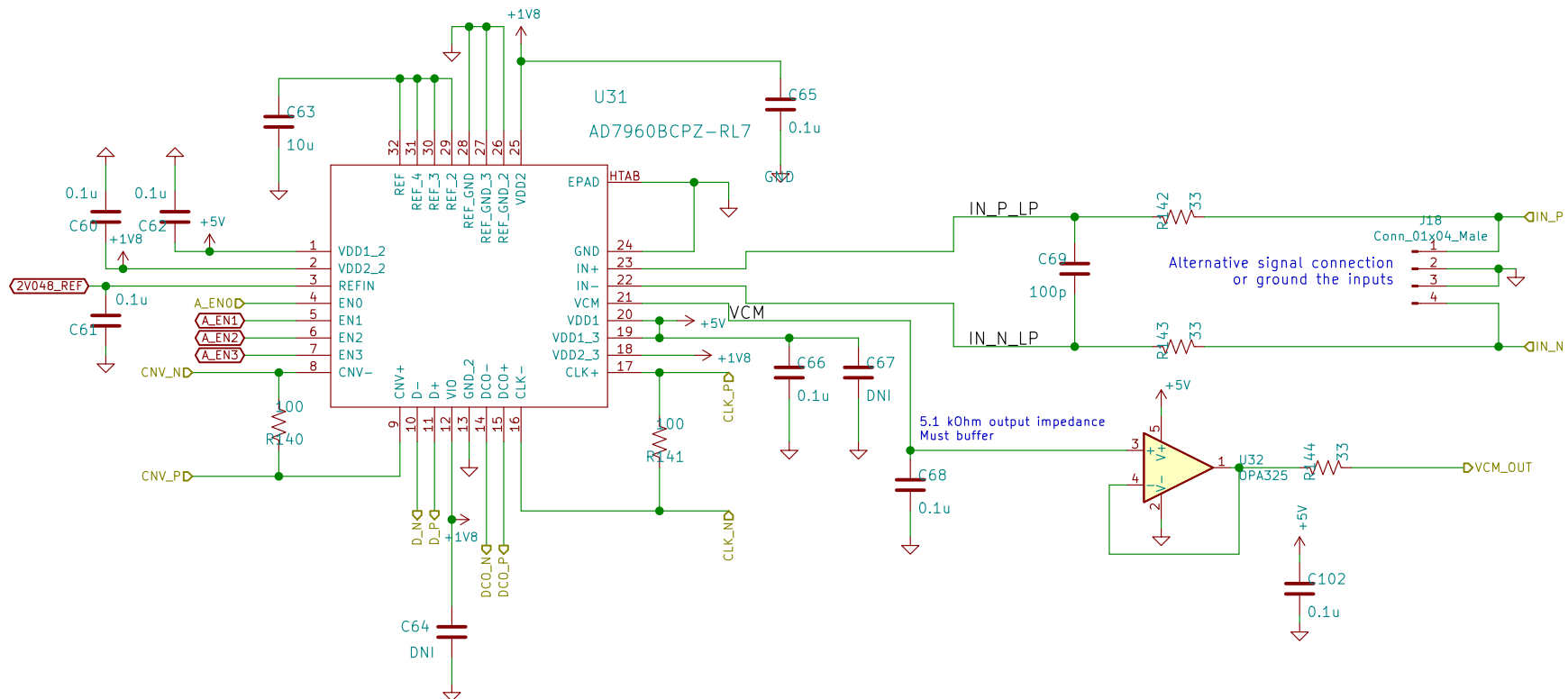
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Use internal buffer (x2) with 2.048V ref.
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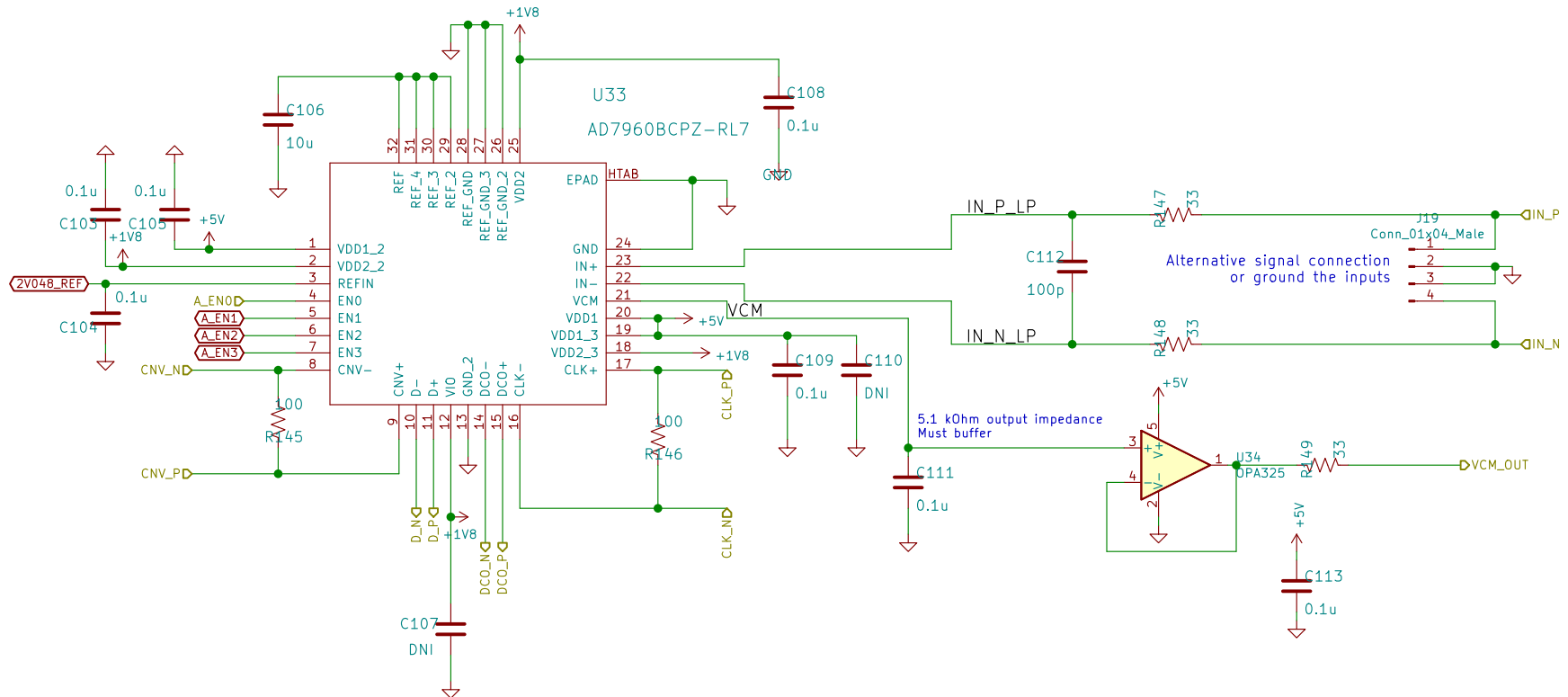
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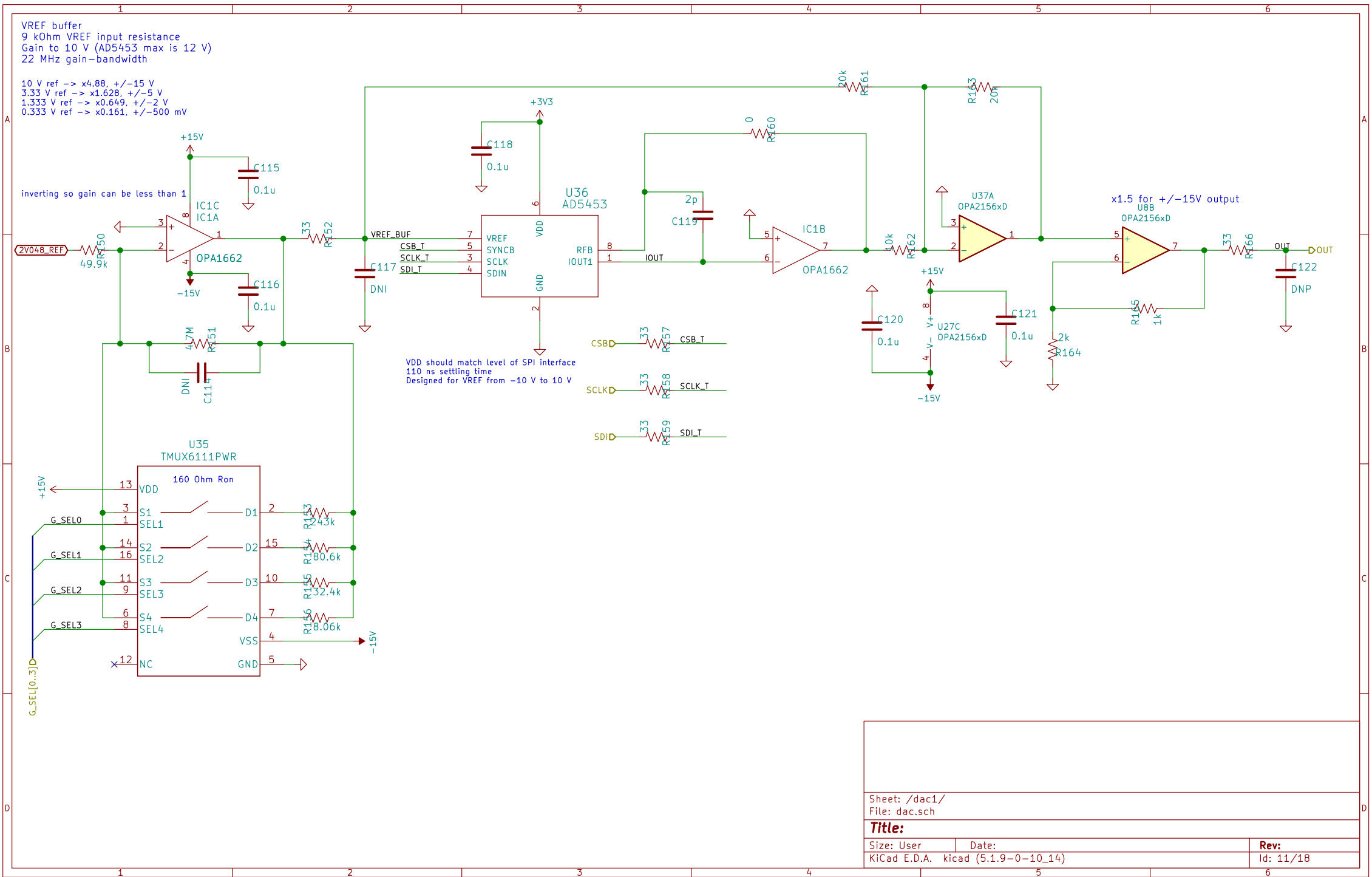
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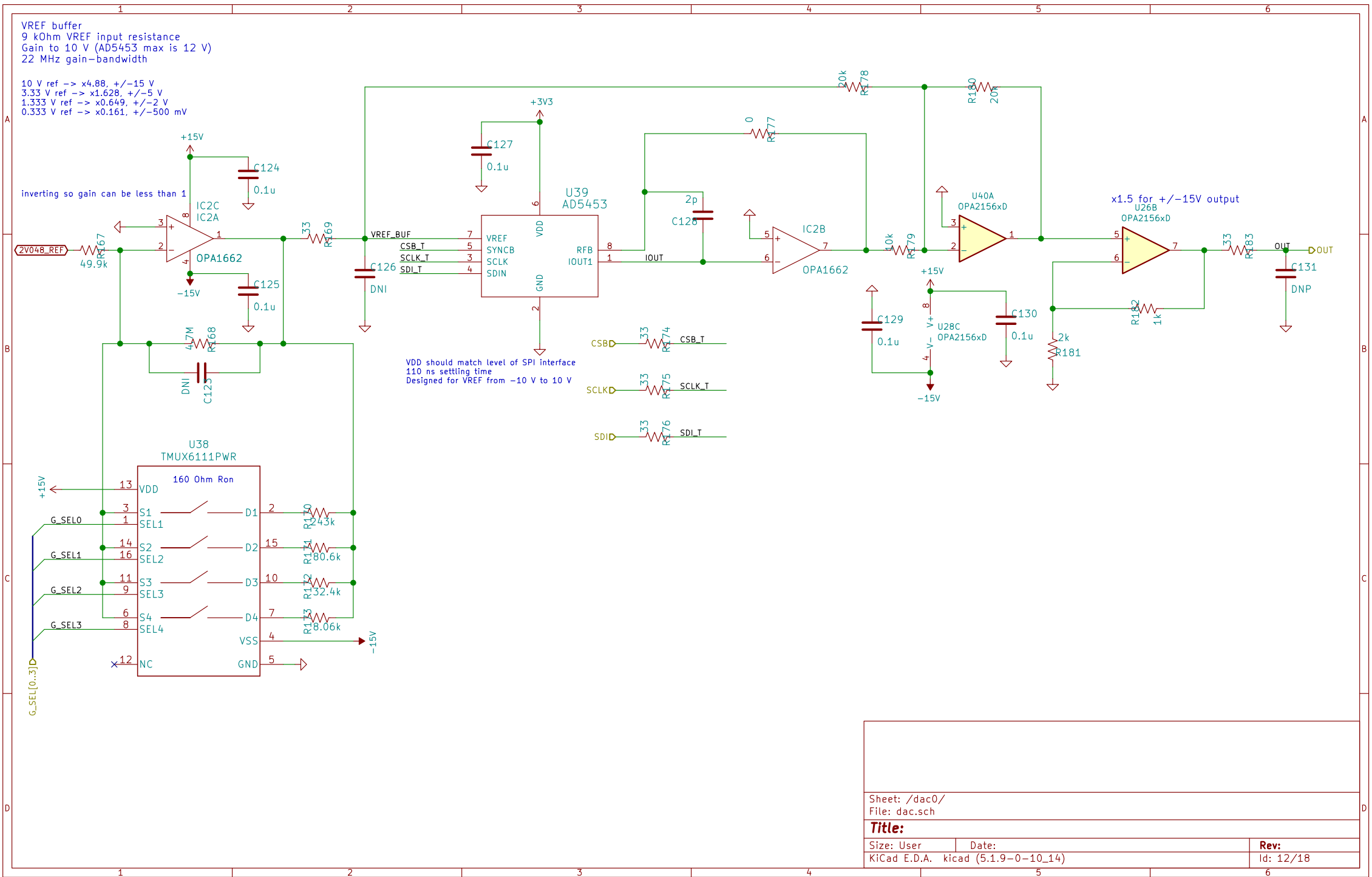
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Use internal buffer (x2) with 2.048V ref.
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 VDD2 and VIO can come from the same supply.
 But route and decouple separately.



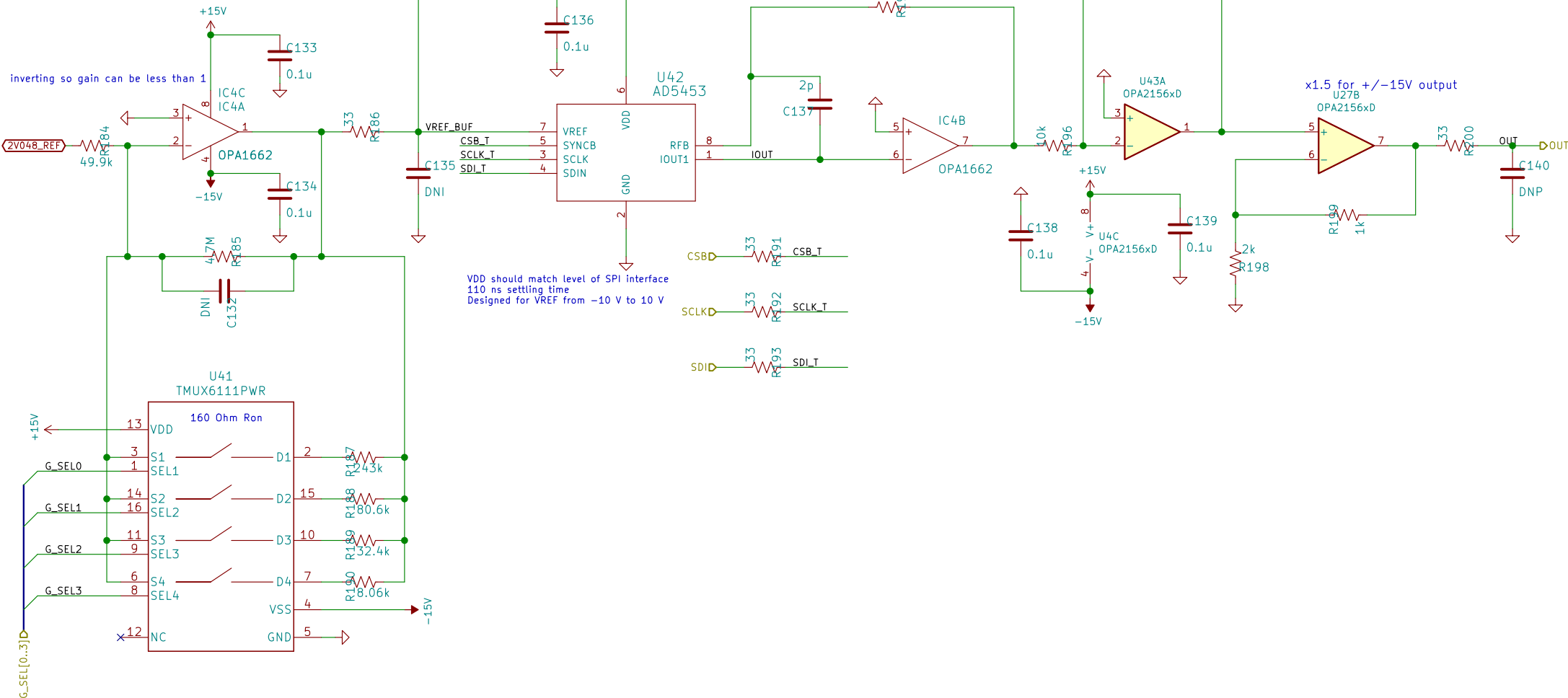
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VREF buffer
9 kOhm VREF input resistance
Gain to 10 V (AD5453 max is 12 V)
22 MHz gain-bandwidth

10 V ref -> x4.88, +/-15 V
3.33 V ref -> x1.628, +/-5 V
1.333 V ref -> x0.649, +/-2 V
0.333 V ref -> x0.161, +/-500 mV

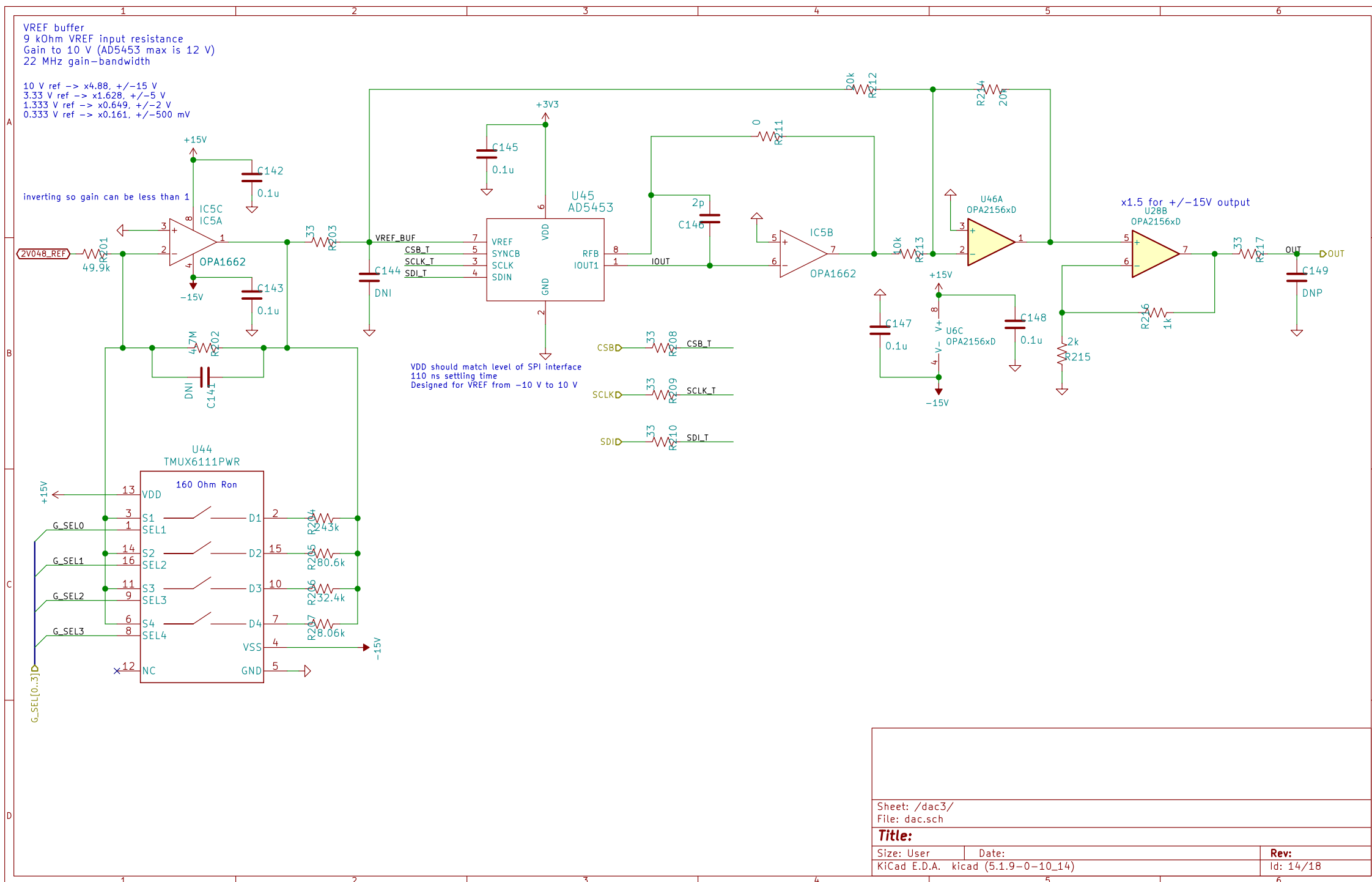


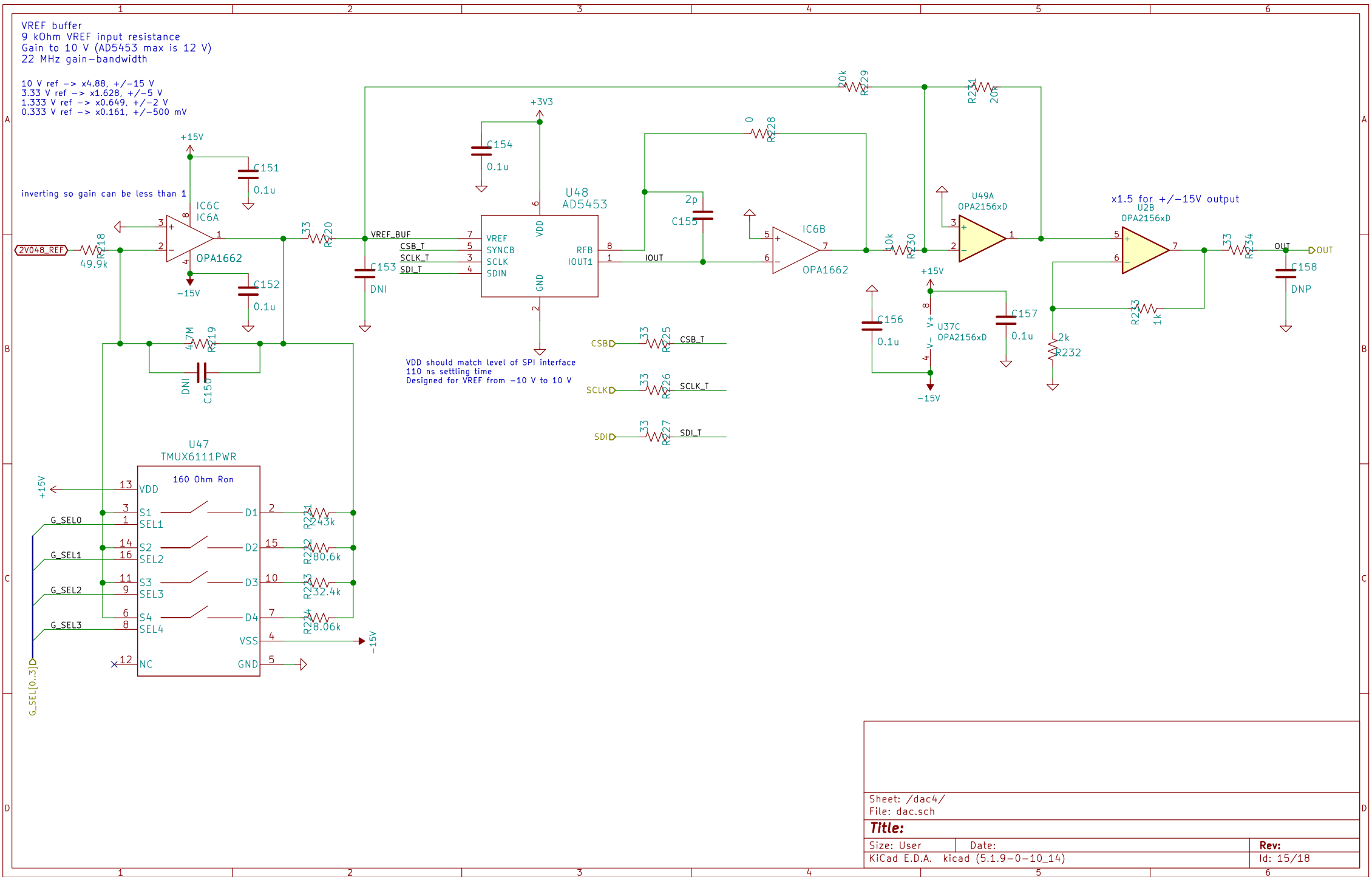
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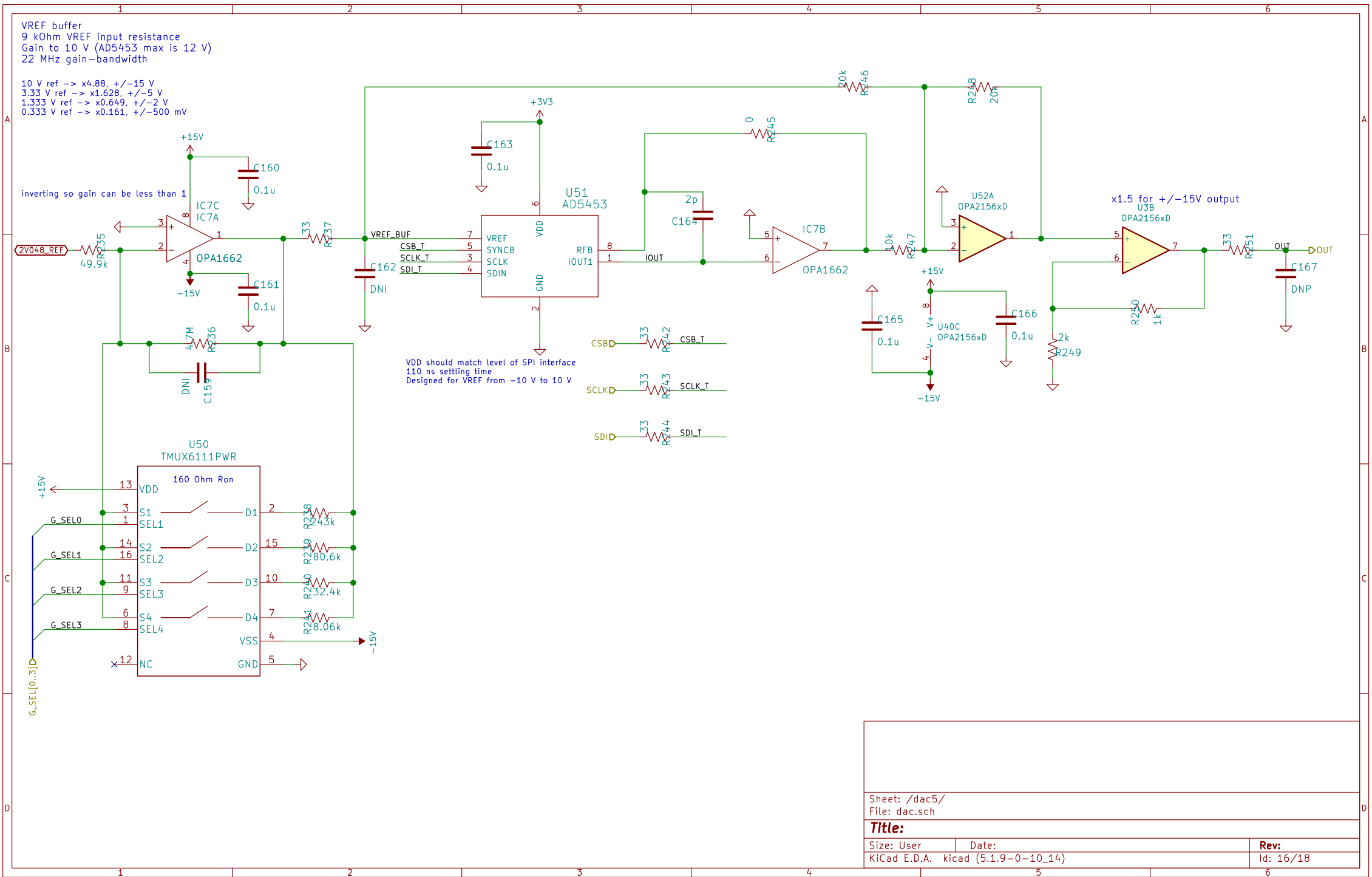
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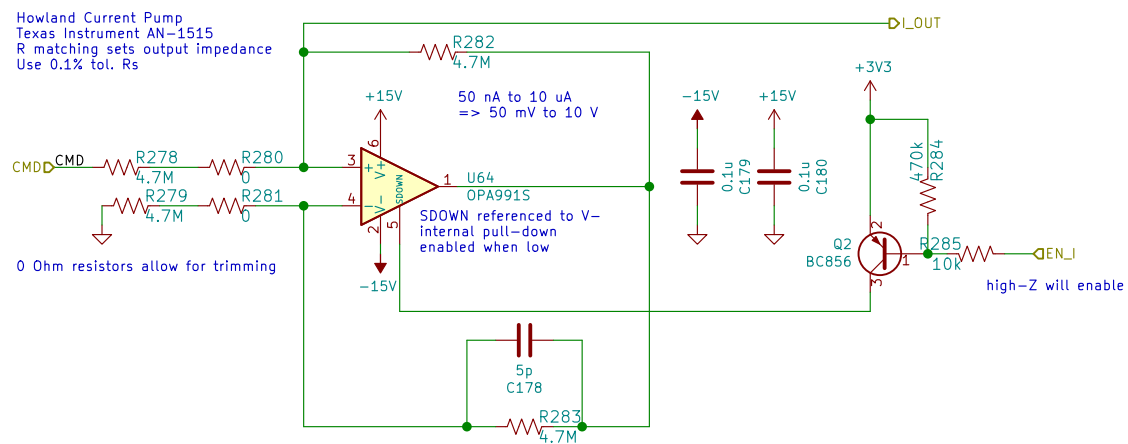
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