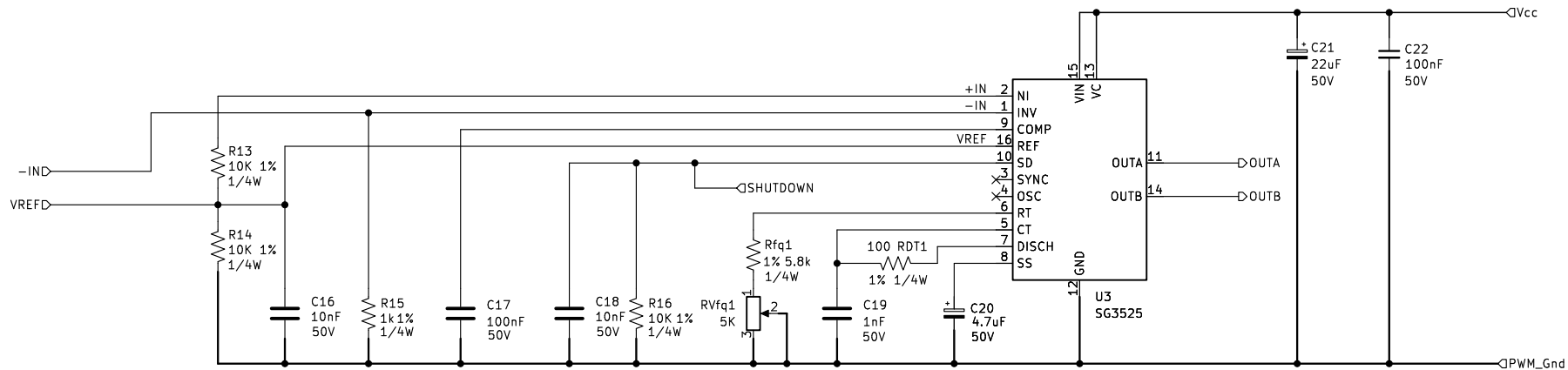


Improve local decoupling.
 3a. Increase the bootstrap capacitor (CB) value to above 0.47 μF using at least one low-ESR capacitor. This will reduce overcharging from severe VS undershoot.
 3b. Use a second low-ESR capacitor from VCC to COM. As this capacitor supports both the low-side output buffer and bootstrap recharge, we recommend a value at least ten times higher than CB.
 3c. Connect decoupling capacitors directly across the appropriate pins as shown in Figure 7.
 3d. If a resistor is needed in series with the bootstrap diode, verify that VB does not fall below COM, especially during start-up and extremes of frequency and duty cycle.
 Granted proper application of the above guidelines, the effects of VS undershoot will be minimized at source. If the level of undershoot is still considered too high, then some reduction of dv/dt may be necessary.

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Title: Driver p/ Mosfet de potencia	
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Calculo Rfq:
 $f_T = 80\text{kHz} \rightarrow f = 160\text{kHz}$
 $C_1 = 1\text{nF}$
 $R_d = 100\ \Omega$
 $f = 1/(C_1(0.7RT + 3R_d))$
 $RT = ((f \cdot C_1)^{-1} - 3R_d)/0.7$
 $RT = Rfq_1 + Rvfq_1$
 $RT = 5.8 \pm 2.5\ \text{k}\Omega$

Calculo Dead time minimo
 (IRFB40):
 $T_{on} = 14\text{nS}$, $T_{off} = 49\text{nS}$
 $T_{onoff} = 63\text{nS} \rightarrow 0.1\mu\text{S}$
 Minimum Dead Time: $0.1\mu\text{S}$
 $100\Omega \cdot 1\text{nF} = 0.1\mu\text{S}$
 $RDT1 = 100\Omega$

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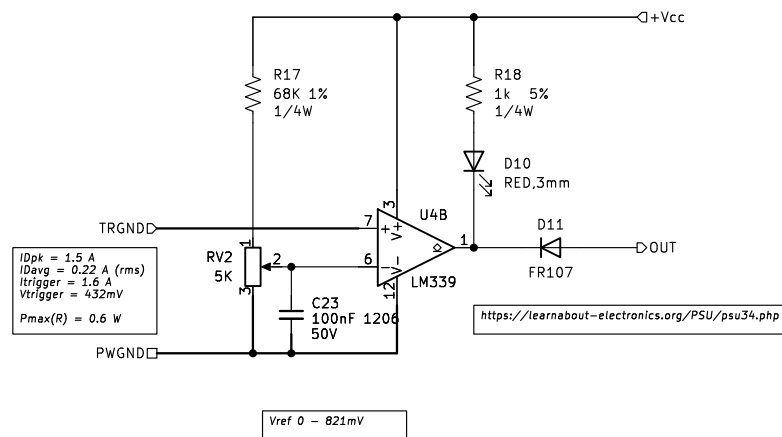
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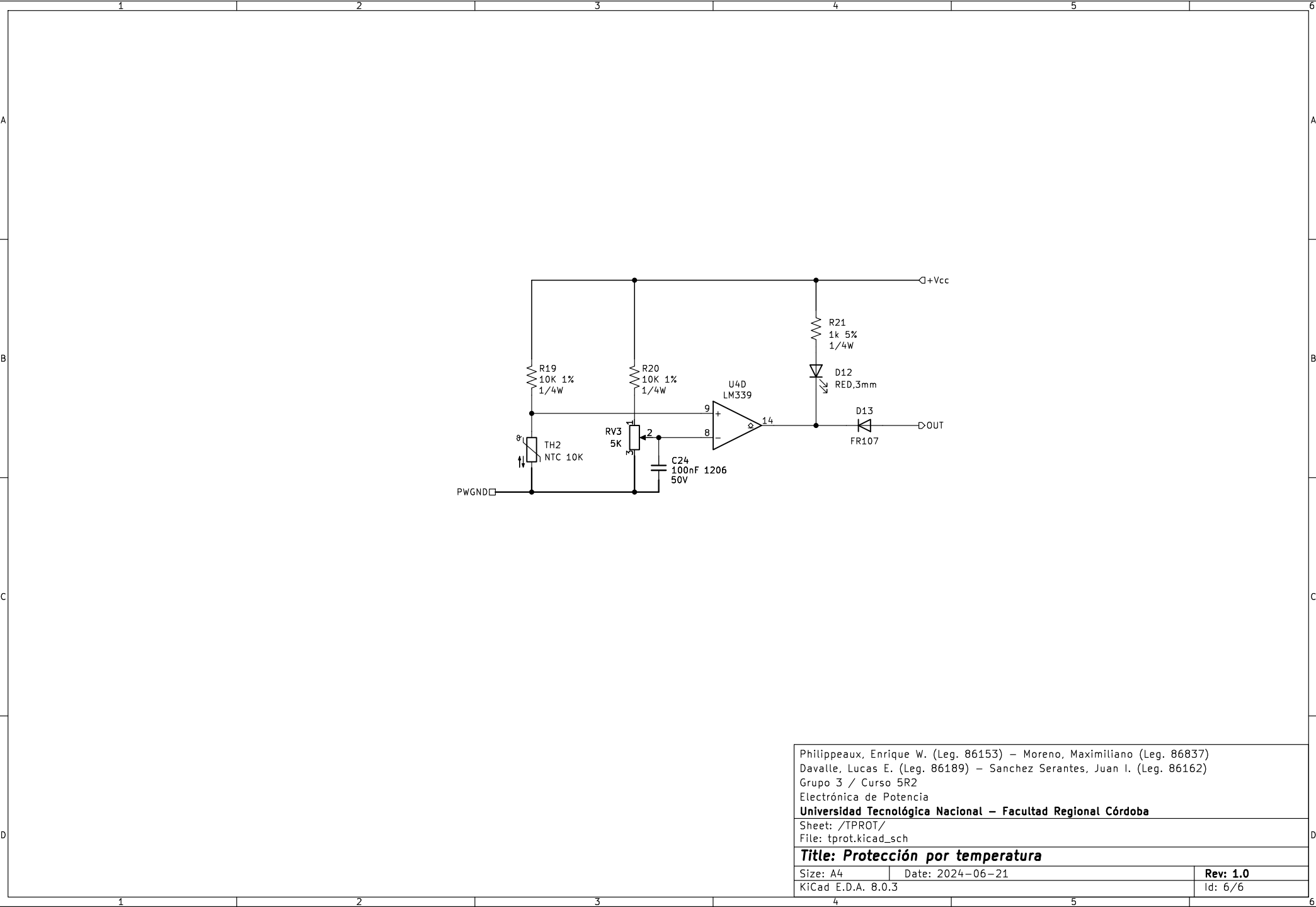


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Sheet: /CPROT/
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Title: Protección por corriente

Size: A4	Date: 2024-06-21	Rev: 1.0
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Sheet: /TPROT/ File: tprot.kicad_sch		
Title: Protección por temperatura		
Size: A4	Date: 2024-06-21	Rev: 1.0
KiCad E.D.A. 8.0.3	Id: 6/6	