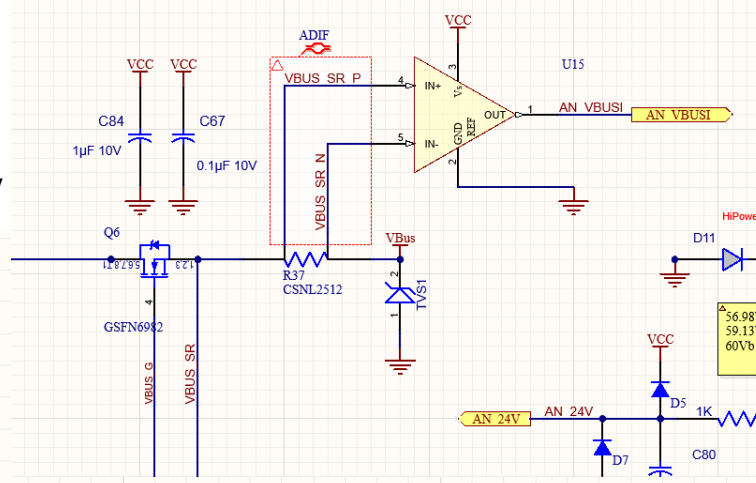
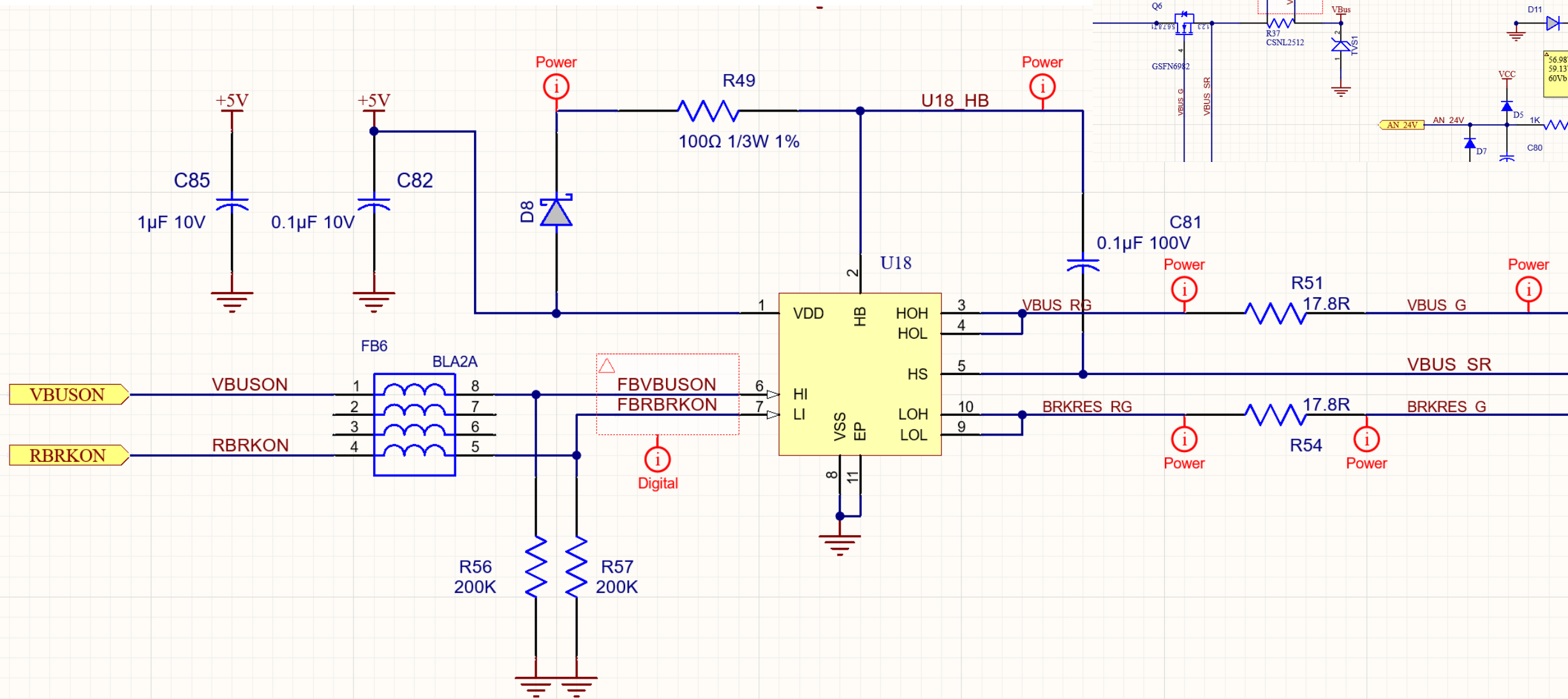
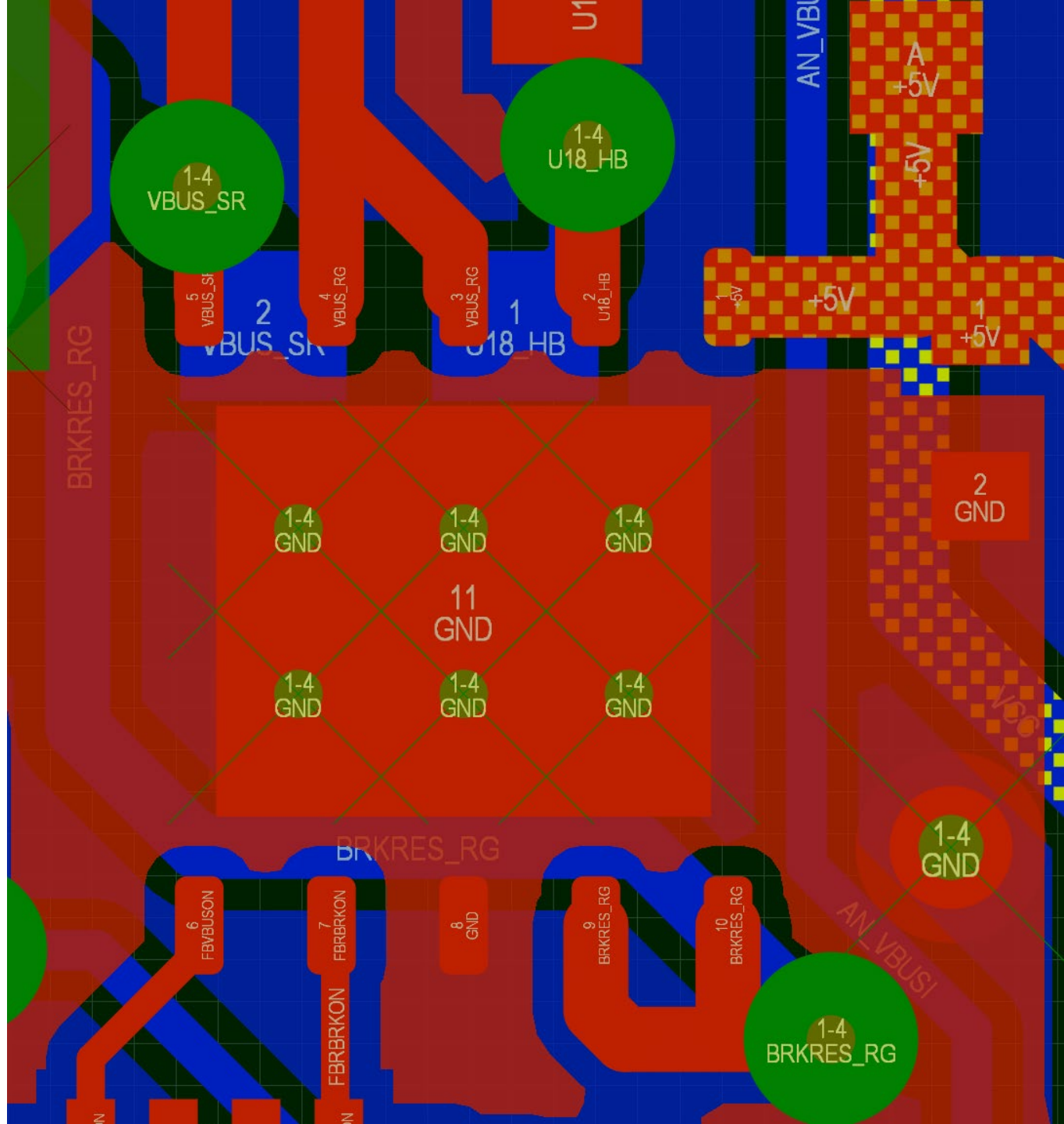
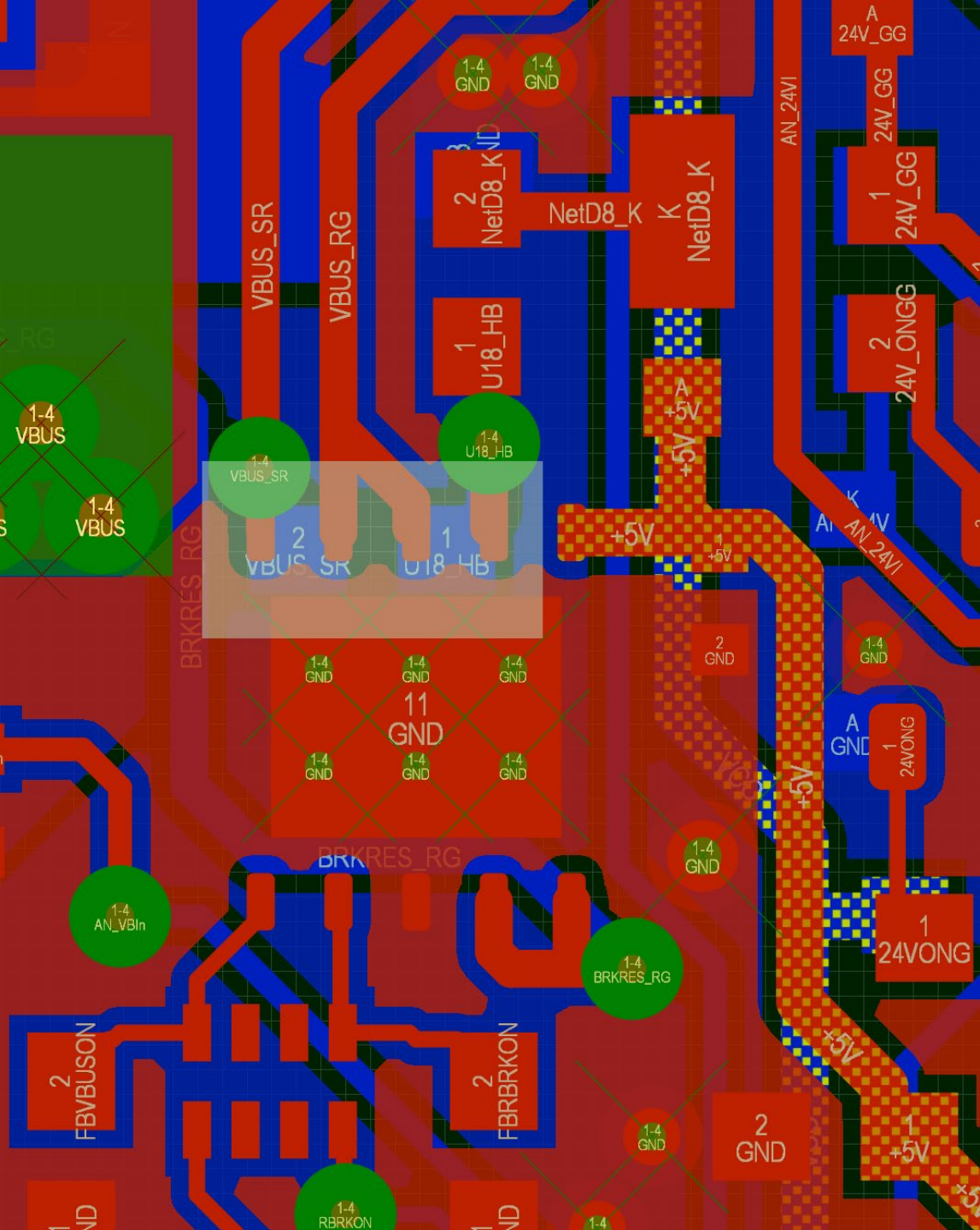


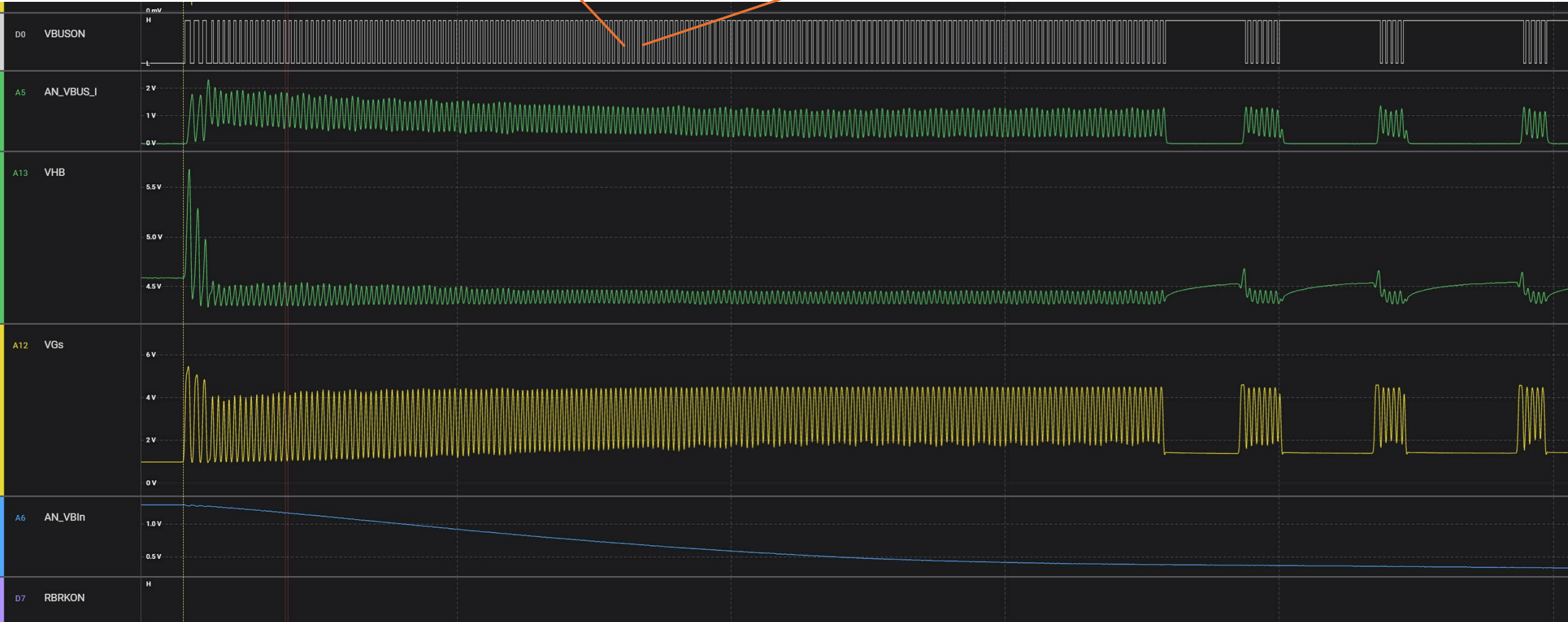
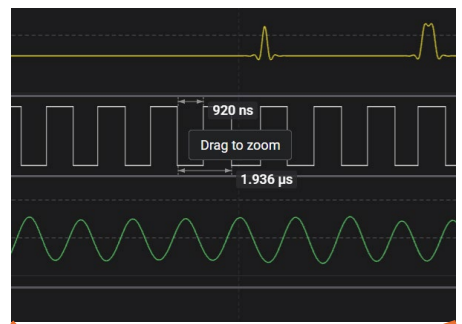
AN_VBUSI is an analog signal that represents the inrush current of the circuit, Q6 is set to limit the inrush current as 1200uF are being charged @ Vbus. VBUSON signal comes from a comparator that limits input current to about 300-500mA (adjustable).

VDrain @ Q6 = 24V





You can see here that:
VHB may be dropping below UVLO.
We have no high state pulses lesser than 700uS (1016uS shown) @ HI input.



Also, the voltage @ VBUS goes up to 1.46V, which correspond to Vgs threshold of the used MOSFET transistor with HB @4.5V, however the charge pump circuit should increase HB up to HS+4.5V in order for the driver to keep HI MOSFET ON.

We did:

Increased C81 to 0.22uF with pretty much the same results.

Removed R49 (left that open so only the internal bootstrap diode was used) VBUS dropped to 1.28-1.44V

Shorted R49, VBUS went up to 1.48V roughly.

My conclusion is that the charge pump circuitry is not working

PD the HI input is driven by a 3.3V circuitry, I have never measured a voltage greater than 3.8V at that pin.