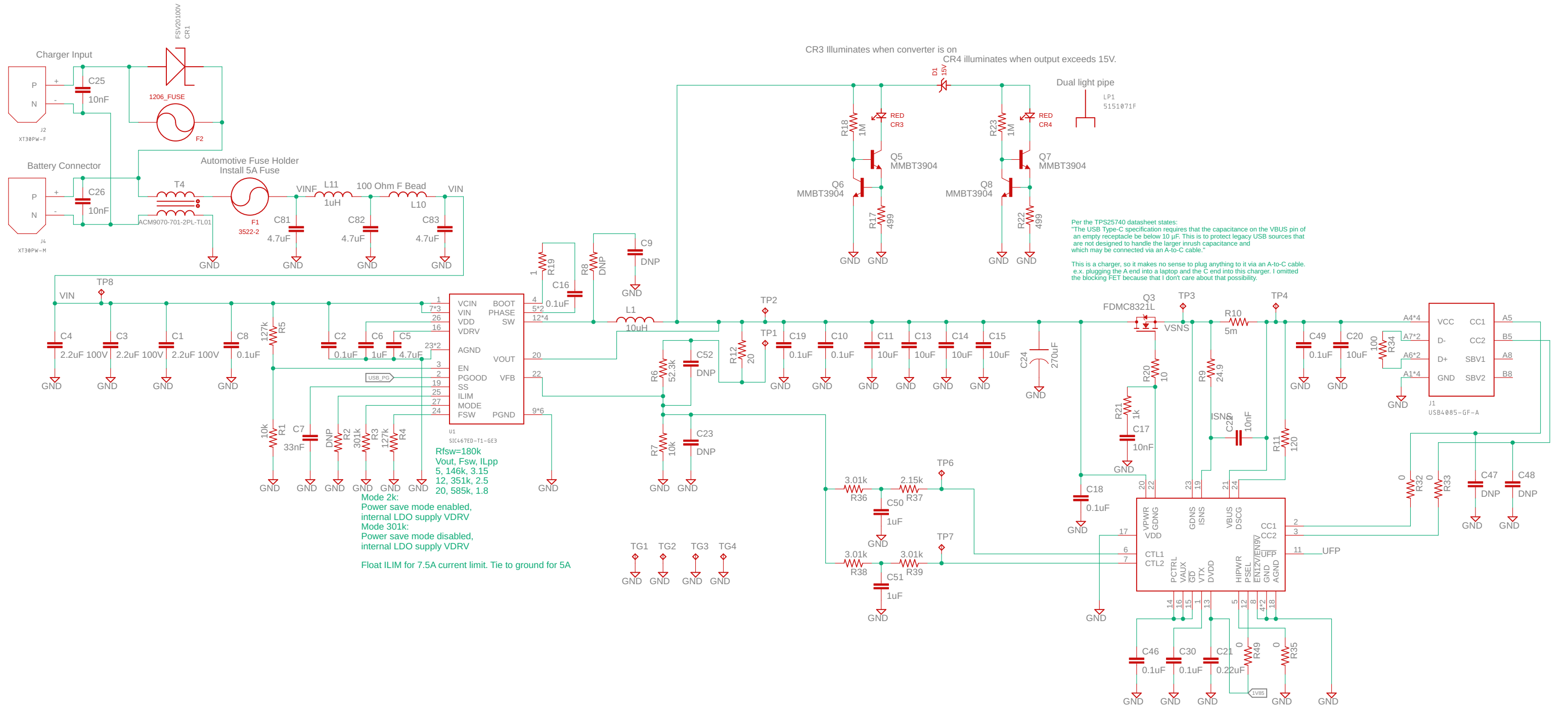


100W USB PD Source



Per the TPS25740 datasheet states:
 "The USB Type-C specification requires that the capacitance on the VBUS pin of an empty receptacle be below 10 μ F. This is to protect legacy USB sources that are not designed to handle the larger inrush capacitance and which may be connected via an A-to-C cable."
 This is a charger, so it makes no sense to plug anything to it via an A-to-C cable. e.x. plugging the A end into a laptop and the C end into this charger. I omitted the blocking FET because that I don't care about that possibility.

U1
 S1C467ED-T1-GE3
 Rfsw=180k
 Vout, Fsw, ILpp
 5, 146k, 3.15
 12, 351k, 2.5
 20, 585k, 1.8
 Mode 2k:
 Power save mode enabled,
 internal LDO supply VDRV
 Mode 301k:
 Power save mode disabled,
 internal LDO supply VDRV
 Float ILIM for 7.5A current limit. Tie to ground for 5A

EN12V enables advertisement of 12V
 Tying PSEL to DVDD sets the advertised power to max (93W due to IEC62368, but that's kind of BS since the load should be able to limit its own power, and to meet 100W LPS limits the source has to enforce that on its own)
 Pulling HIPWR low sets max current to 5A (At 20V, it is assumed that the supply could overshoot to 21.5V, thus the 93W limit)