

Jaakko Kukkohovi

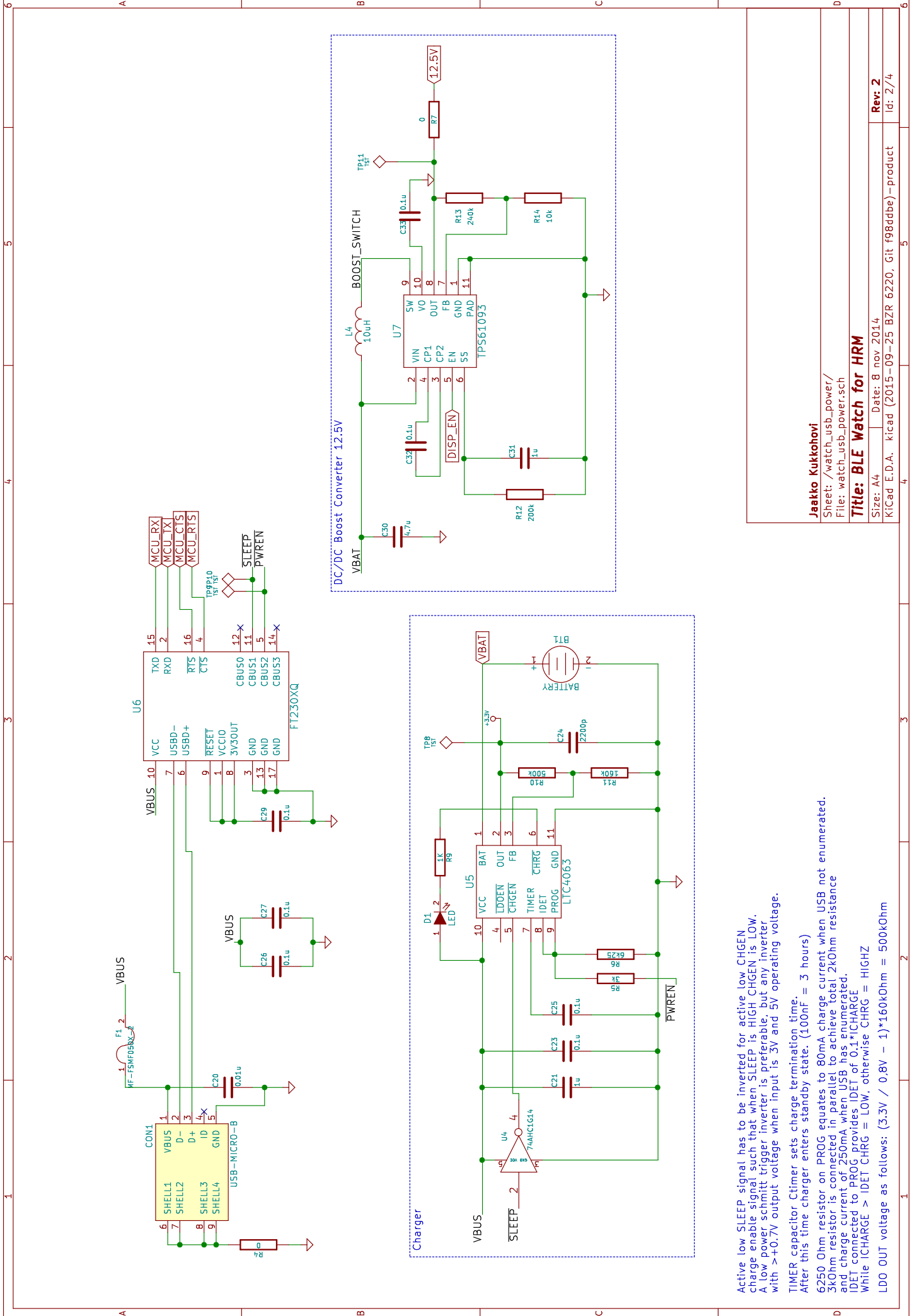
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File: watch.sch

Title: BLE Watch for HRM

Size: A4 | Date: 8 nov 2014
KiCad E.D.A. kicad (2015-09-25 BZR 6220, Git f98ddbe) - product

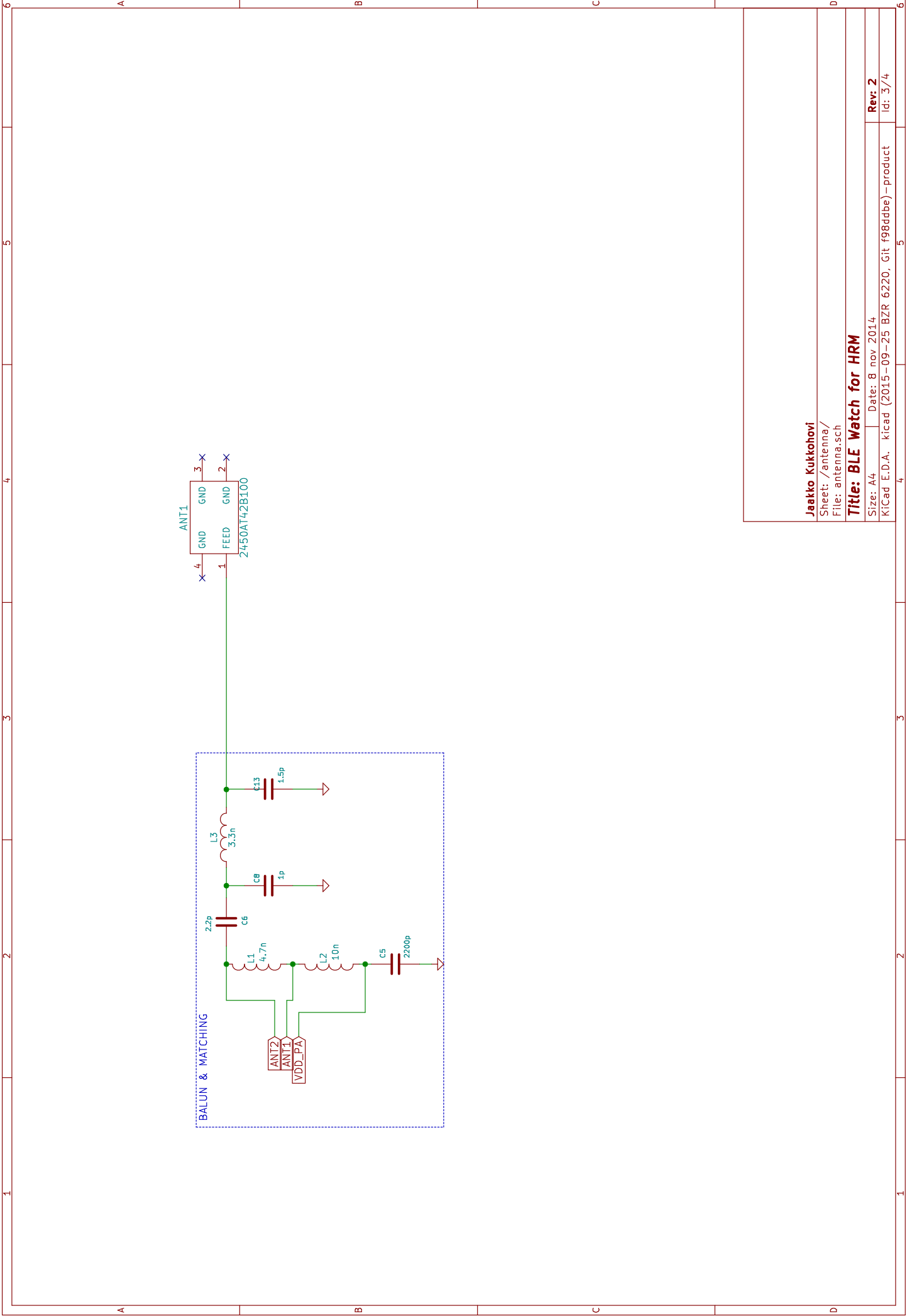
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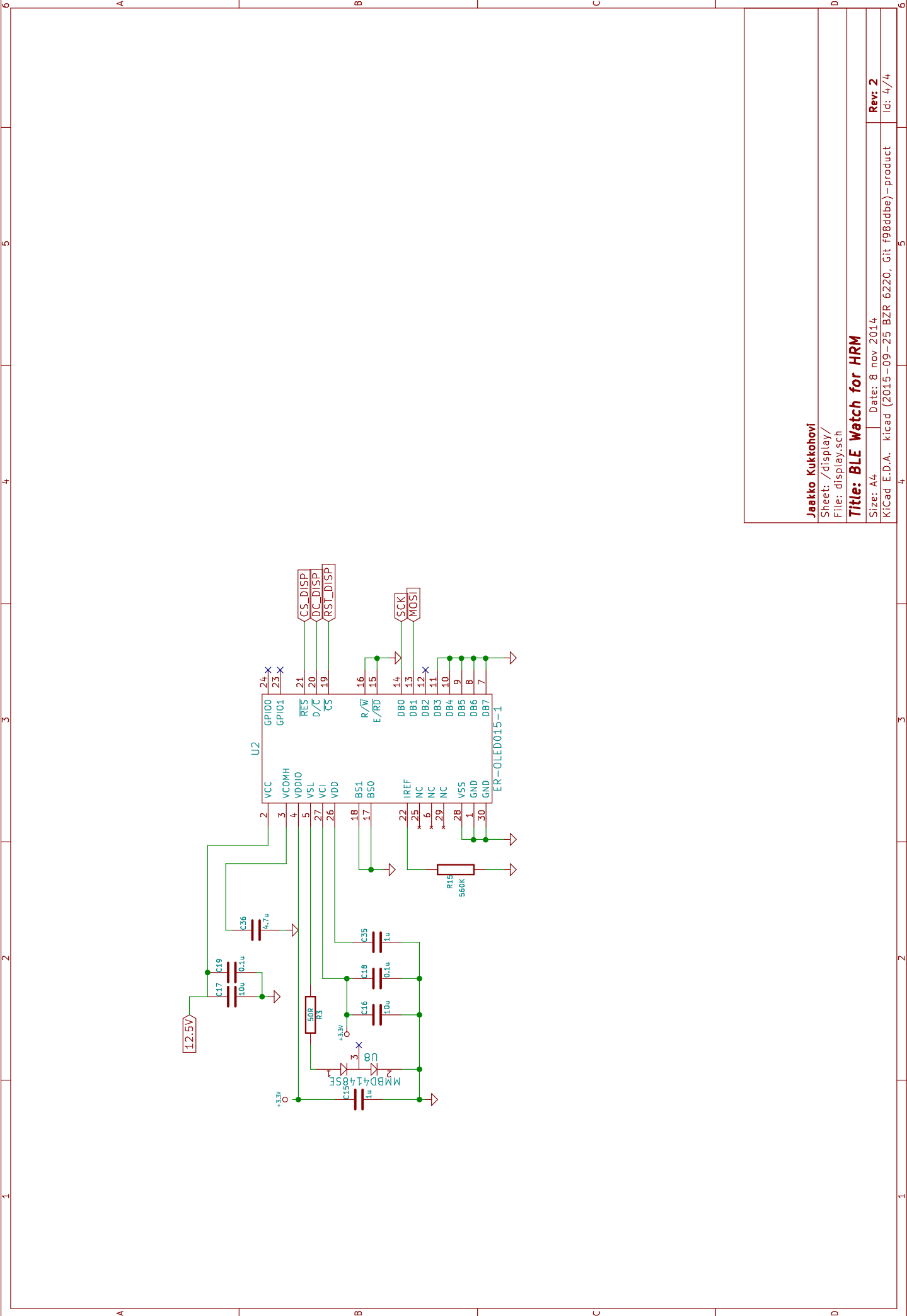
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Sheet: watch_usb_power
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Sheet: antenna
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Active low SLEEP signal has to be inverted for active low CHGEN charge enable signal such that when SLEEP is HIGH CHGEN is LOW. A low power schmitt trigger inverter is preferable, but any inverter with >+0.7V output voltage when input is 3V and 5V operating voltage.

TIMER capacitor Ctimer sets charge termination time. After this time charger enters standby state. (100nF = 3 hours) 6250 Ohm resistor on PROG equates to 80mA charge current when USB not enumerated. 3kOhm resistor is connected in parallel to achieve total 2kOhm resistance and charge current of 250mA when USB has enumerated. IDET connected to PROG provides IDET of 0.1*ICHARGE. While ICHARGE > IDET CHRG = LOW, otherwise CHRG = HIGH. LDO OUT voltage as follows: (3.3V / 0.8V - 1)*160kOhm = 500kOhm





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