



Title: QFHMIX01E

Frontend for QFH active antenna

Author:

Size: A4

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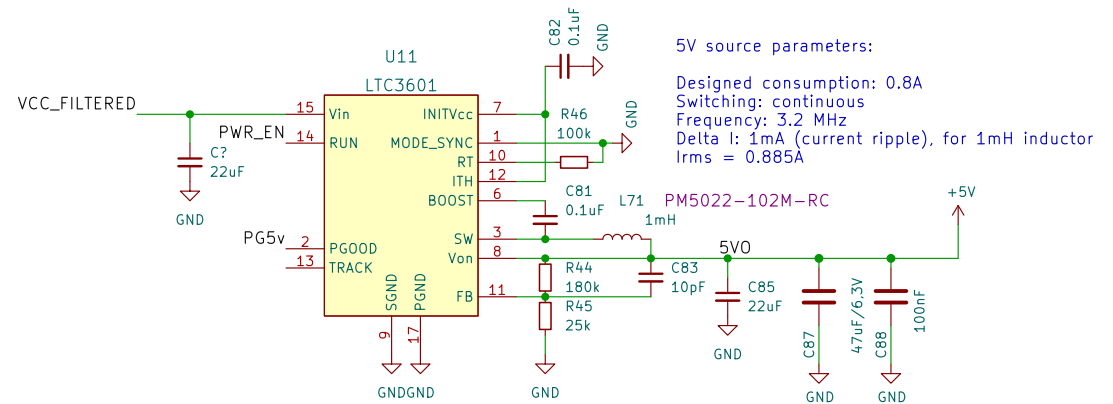
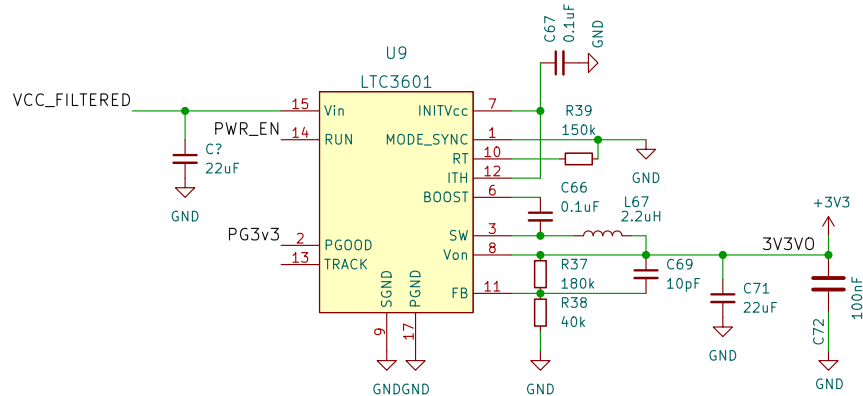


Booth step-down are forced to continuous operation to enforce minimal voltage-ripple and fixed switching frequency.

Frequency is set by external resistor, because according to documentation, it is more accurate and less affected by for example temperature changes then using default frequency by tingting pin to VCC. Switching freq is 2300kHz.

3.3V source parameters:

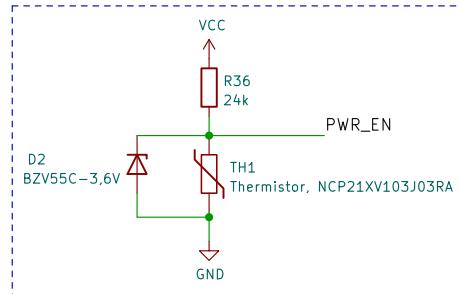
Designed consumption: 0.05A
Switching: continuous
Frequency: 3.2 MHz (same as 5V source)
Delta I: (current ripple), for inductor
I_{rms} =



5V source parameters:

Designed consumption: 0.8A
Switching: continuous
Frequency: 3.2 MHz
Delta I: 1mA (current ripple), for 1mH inductor
I_{rms} = 0.885A

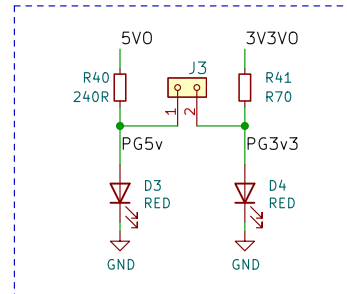
Over-temperature protection



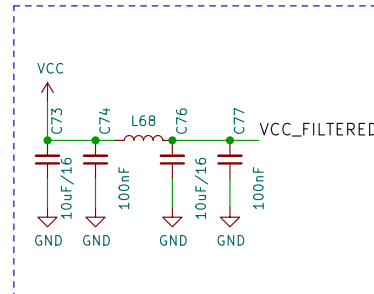
PWR_EN enables power regulation by voltage above 1.25V. Voltage below 1V turn off internal power source.

Thermistor NCP21XV103J03RA with 24k resistor is designed to disconnect electronic at 75C.

Power status LED and header output



LED is powered by 10 mA to ensure that maximum current trough power source PG pin is the same.



Ensures that switching frequency is not "transmitted" by incoming cable and incoming power wires.

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