

# Title: QFHMIX01E

Frontend for QFH active antenna

Author:

Size: A4

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Date: 2022-07-31





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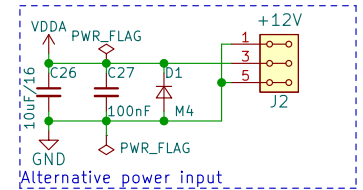
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Booth step-down are forced to continuous operation to enforce minimal voltage-ripple and fixed switching frequency.

Frequency is set by external resistor, to minimize temperature dependency.

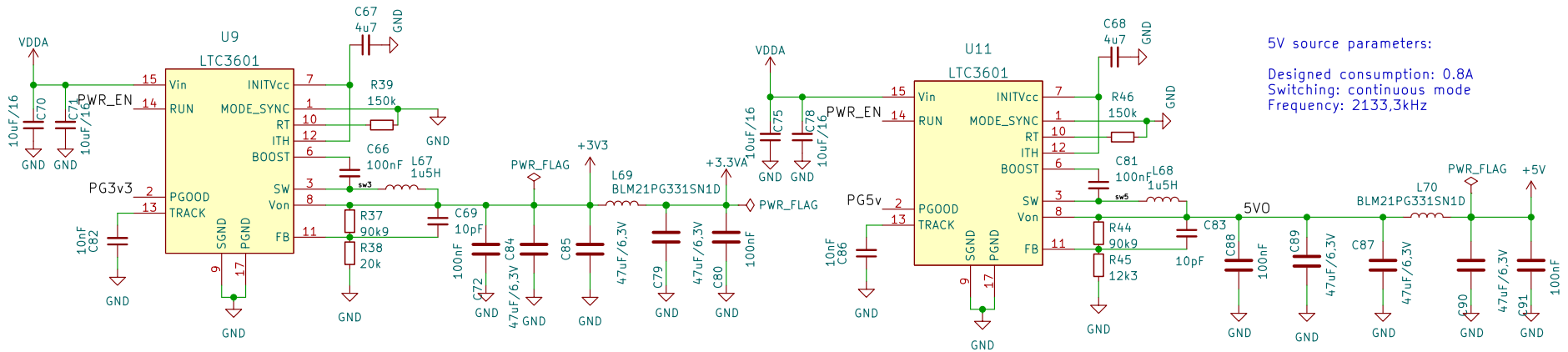


3.3V source parameters:

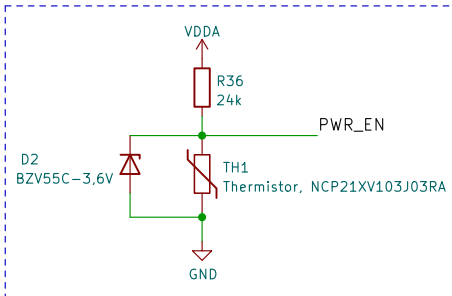
Designed consumption: 0.05A  
Switching: continuous mode  
Frequency: 2133,3kHz (same as 5V source)

5V source parameters:

Designed consumption: 0.8A  
Switching: continuous mode  
Frequency: 2133,3kHz



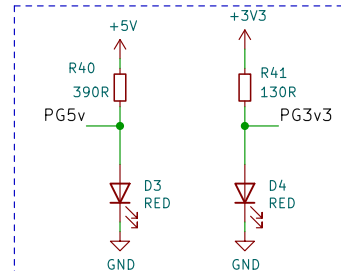
#### Over-temperature protection



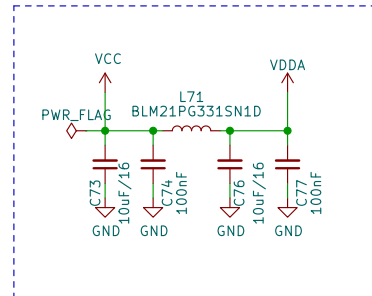
PWR\_EN enables power regulation by voltage above 1.25V. Voltage below 1V turn off internal power source.

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 suggested current trough power source PG pin is not exceed. (PG pin is 15 Ohm open-drain, active in failure condition)



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

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