## EMI-Filter

PSU:
7.1A, 85.2W,
120mVp-p @ 20MHz

Ground-Plane separation on PCB

Notes:

Inductors for EMI-Filter:

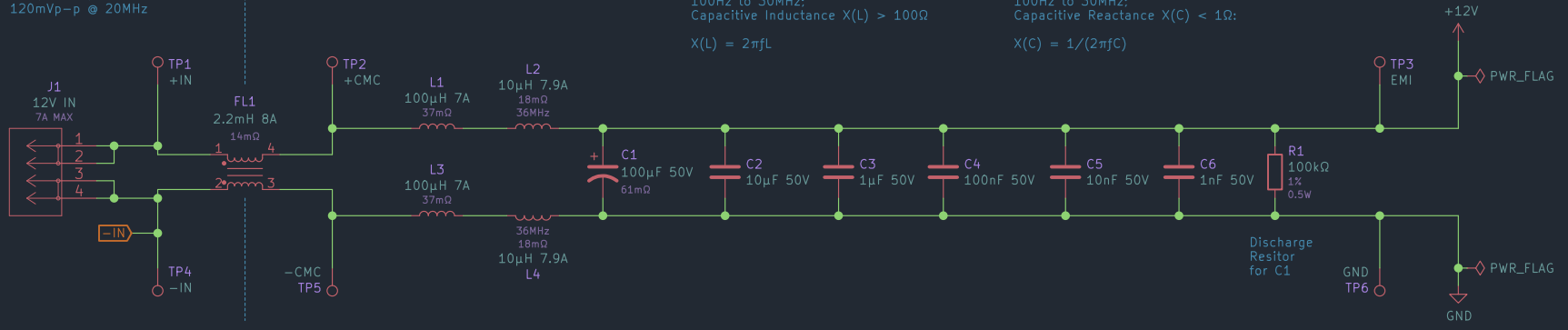
100Hz to 30MHz:
Capacitive Inductance X(L) > 100Ω

X(L) = 2πfL

Capacitors for EMI-Filter:

100Hz to 30MHz:
Capacitive Reactance X(C) < 1Ω:

X(C) = 1/(2πfC)



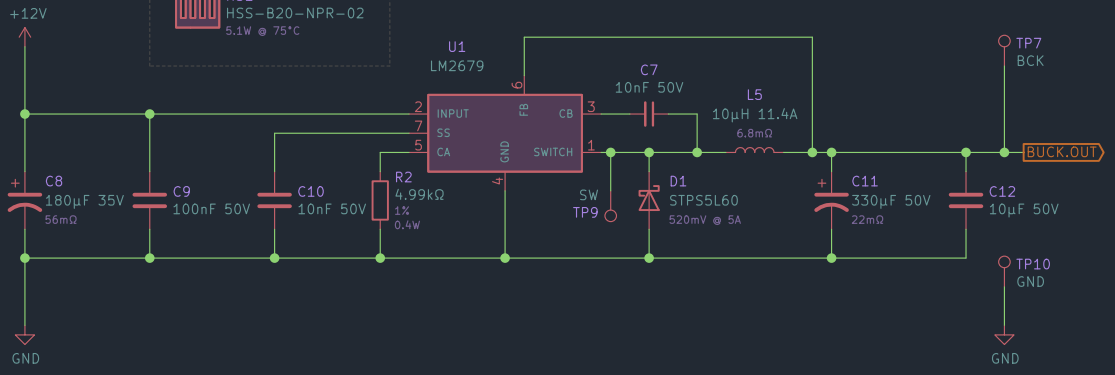

## Buck Regulator

Input: 11.8 – 13.8V
Input(I): 2.24A
Output: 5V (max. 5A)
ƒ(sw): 260kHz

IC Power Dissipation: 2.25W

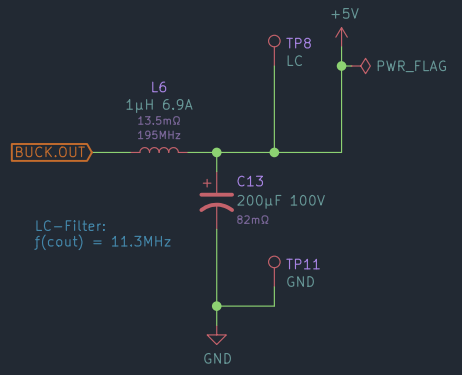
HS1
HSS-B20-NPR-02
5.1W @ 75°C

LC-Filter (L5, C11):
ƒ(cout) = 2.7kHz

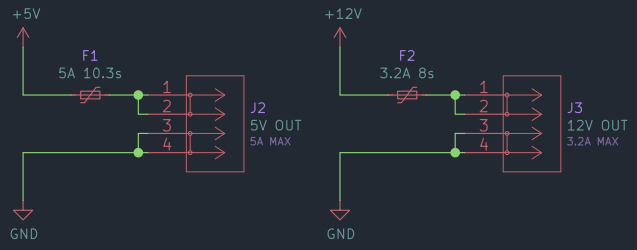



## Second Stage Output Filter

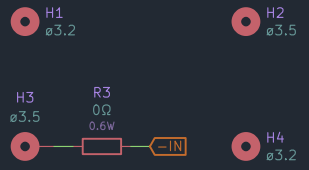
Optional, depedending on IRL measurements




## Output Connectors




## Mounting Holes




r/PrintedCircuitBoard
**u/ergeha**

open source hardware

Sheet: /
File: UG_Power-Input.sch

***Title: Urban Garden MKII - Power Supply***

| Size: A4 | Date: 2021-04-20 | **Rev: 1.04** |
|---|---|---|
| KiCad E.D.A. kicad (5.1.9-0-10_14) | | Id: 1/1 |