

EMI-Filter

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

Ground-Plane
separation
on PCB

Notes:

Inductors for EMI-Filter:

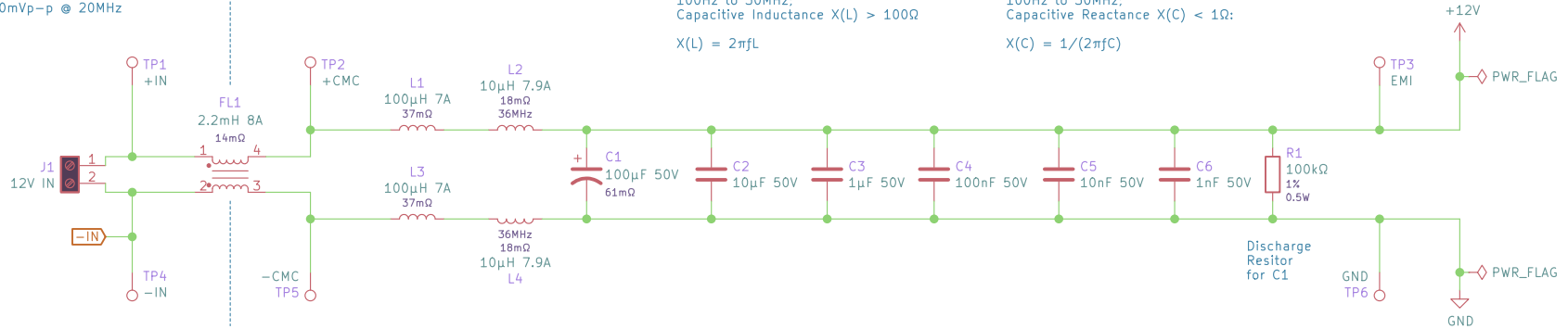
100Hz to 30MHz:
Capacitive Inductance $X(L) > 100\Omega$

$X(L) = 2\pi fL$

Capacitors for EMI-Filter:

100Hz to 30MHz:
Capacitive Reactance $X(C) < 1\Omega$:

$X(C) = 1/(2\pi fC)$



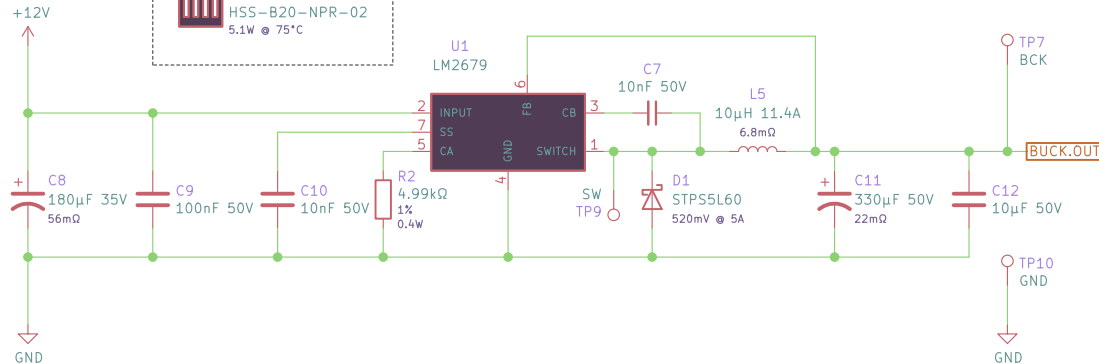
Buck Regulator

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

IC Power Dissipation: 2.25W

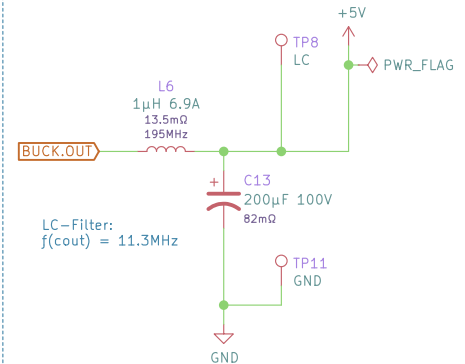
HS1
HSS-B20-NPR-02
5.1W @ 75°C

LC-Filter (L5, C11):
 $f(cout) = 2.7kHz$

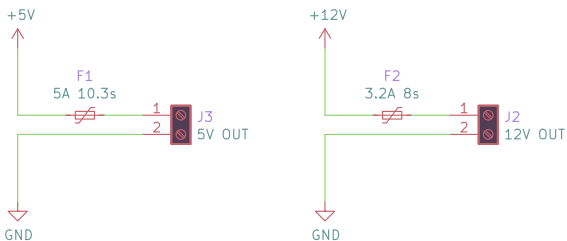


Second Stage Output Filter

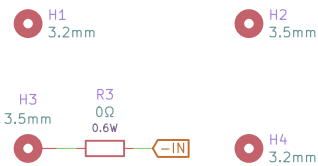
Optional, depending on IRL measurements



Output Connectors



Mounting Holes



u/ergeha

Sheet: /
File: UG_Power-Input.sch

Title: Urban Garden MKII - Power Supply

Size: A4 Date: 2021-04-19

KiCad E.D.A. kicad (5.1.9-0-10_14)

Rev: 1.04

Id: 1/1

