EMI–Filter

PSU:
7.1A, 85.2W,
120mVp–p @ 20MHz

Ground–Plane separation on PCB

Notes:

Inductors for EMI–Filter:

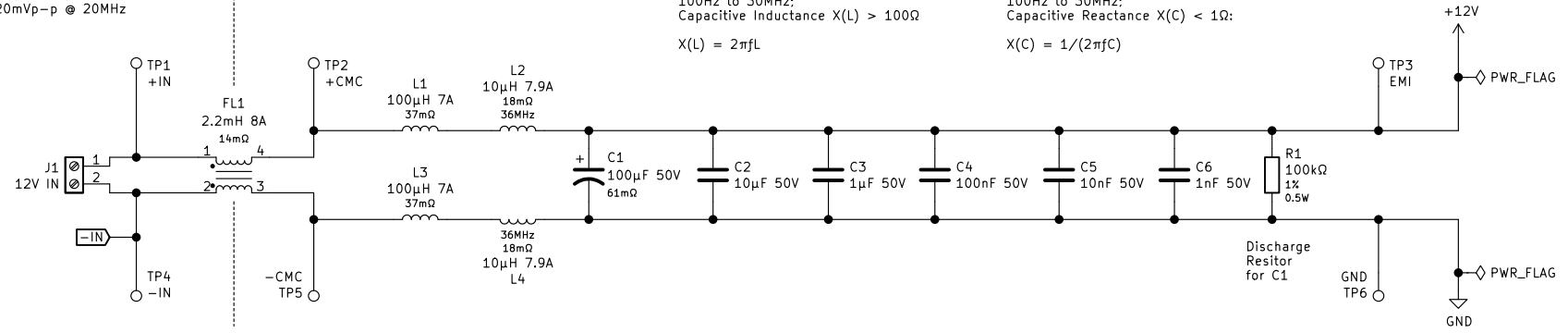
100Hz to 30MHz:
Capacitive Inductance X(L) > 100Ω

X(L) = 2πfL

Capacitors for EMI–Filter:

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

X(C) = 1/(2πfC)



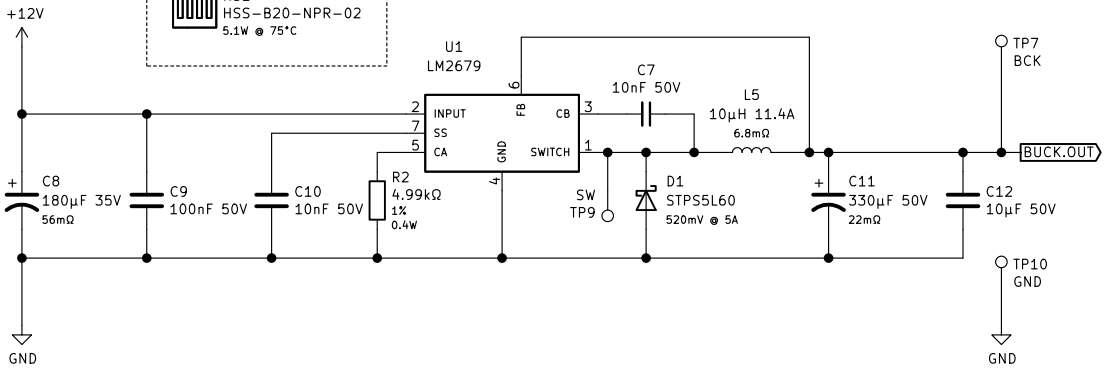
Buck Regulator

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

IC Power Dissipation: 2.25W

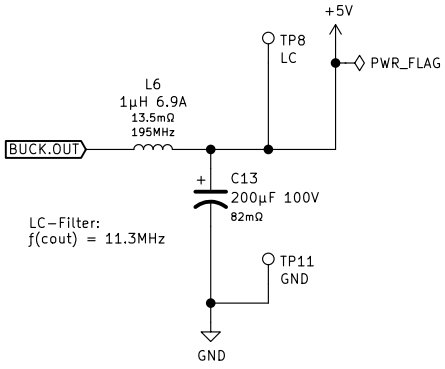
HS1
HSS–B20–NPR–02
5.1W @ 75°C

LC–Filter (L5, C11):
ƒ(cout) = 2.7kHz

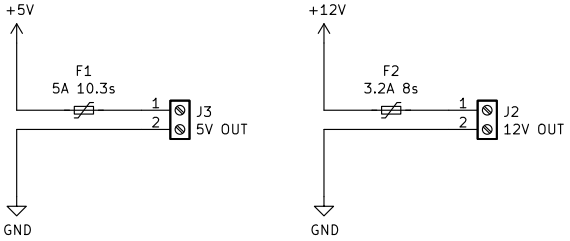


Second Stage Output Filter

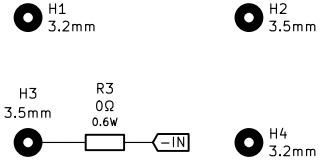
Optional, depedending on IRL measurements



Output Connectors



Mounting Holes



u/ergeha

Sheet: /
File: UG_Power–Input.sch

Title: Urban Garden MKII - Power Supply

Size: A4	Date: 2021–04–19	**Rev: 1.04**
KiCad E.D.A. kicad (5.1.9–0–10_14)		Id: 1/1