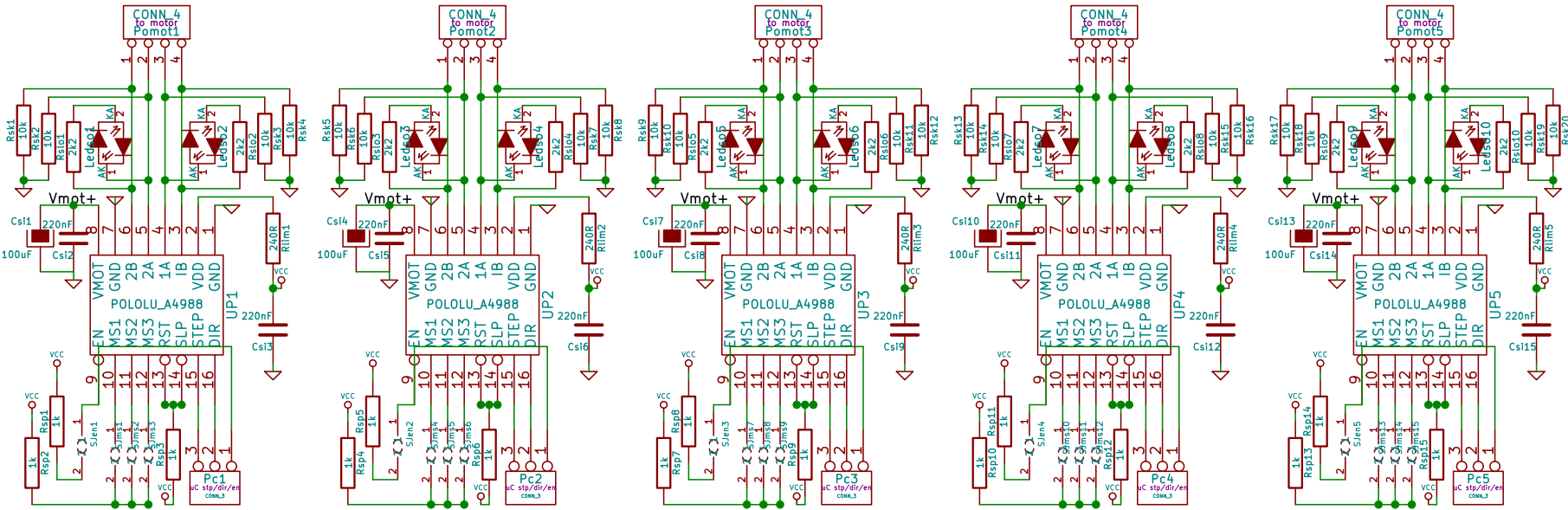


Stepper carrier support

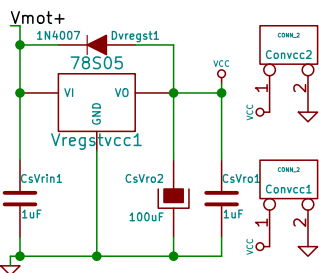


Mounting

- X Hole1
- X Hole2
- X Hole3
- X Hole4

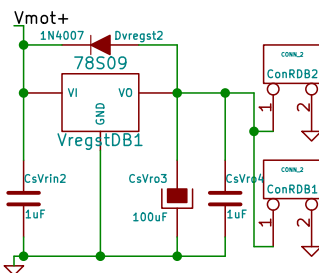
ENABLE: to be low in normal operation, has 100k pulldown onboard (a4988), onchip 100k pulldown (drv8825)
SLEEP: to be high in normal operation & @startup, has 100k pullup onboard (a4988), onchip pulldown 1Mohm (drv8825)
RESET: to be high in normal operation, no default setting onboard (a4988), onchip pulldown 100k (drv8825)
MS: MS1, MS3 pins 100k pulldown, MS2 50k pulldown (a4988), all MS have 100k pulldown for drv8825
DRV8825: to keep faults from pulling sleep low, sleep pullup is 4k7 or less

V.Regulator: logic lvl



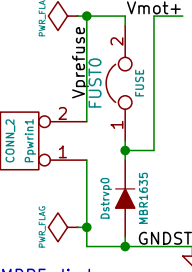
7805 is used coz default 5v logic level for 3.3v use appropriate 3.3v regulator (check pinout compatibility)

V.Regulator: to dev board



7809 currently suits most dev boards can use different regulator (check pinout compatibility)

Power input



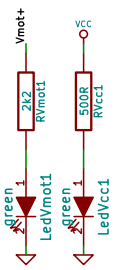
MBRF diode: current compare to fuse, Vbr min = Vin*1.3

Burner



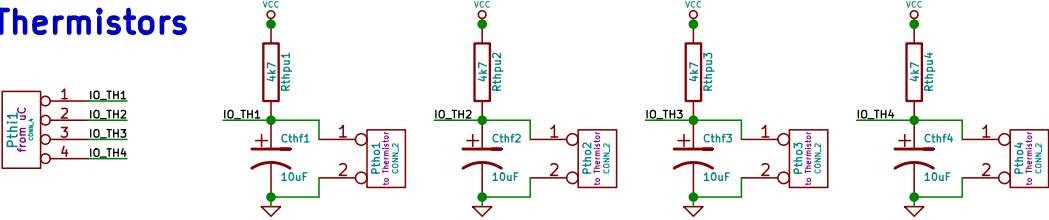
ZENER
1SM5937BT3G Vz: 31.35-33-34.65
1SM5938BT3G Vz: 34.2-36-37.8
To enable peak burn pick a zener with a Vz according to Vin+margin
Rstpburn1 transistor may have intern

Power leds



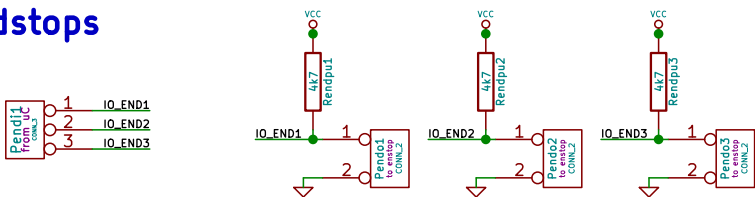
The above section can be physically separated from the below

Thermistors



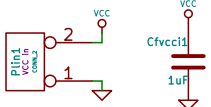
About thermistor voltage divider and pull-up value read wiki http://reprap.org/wiki/Gen7_Research

Endstops



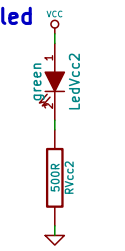
Pull-ups are provisional, alternative to uC internal pull-ups.

Logic supply



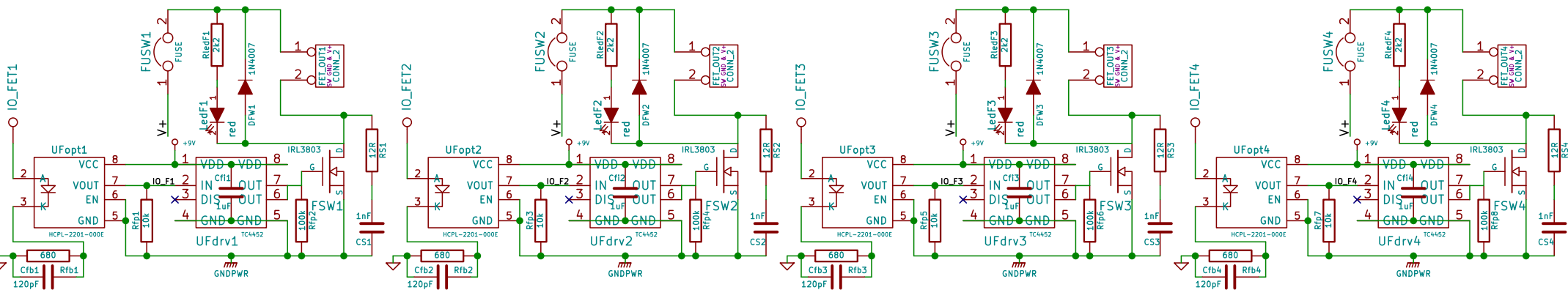
logic voltage connector provision for the case of board separation

Power led



The above section is optoisolated from the below

Switches optoisolated

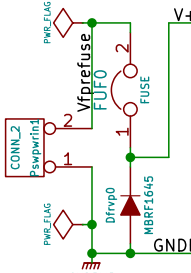


Mounting

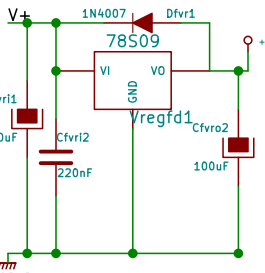
- X Hole5
- X Hole6
- X Hole7
- X Hole8

WARNING: MAIN POWER TRACKS MUST HAVE BUS BARS soldered on pcb to increase current capability
Attention snubbers are optional and have generic values: CS 1nF/50v; RS(12A)=2R; RS(2.76A)=9R; RS(2A)=12R
Info: opto emitter: min 2.5mA, up to 5mA, at 1.6v fwd drop

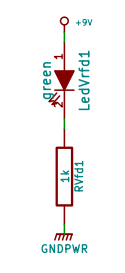
Power input



V.Regulator: to drivers



Power led



MBRF (F=isolated) 1645, should be isolated schottky
Input voltage dc max 32v, peaks max 35v.

This board provides stepper support and switching

www.reprap.org/RDB

Sheet: /
File: RDB_STPTS_002.sch

Title: RDB_STPTS_002_G_DIY

Size: A3 Date: Fri 13 Jun 2014
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Rev: 002beta
Id: 1/1