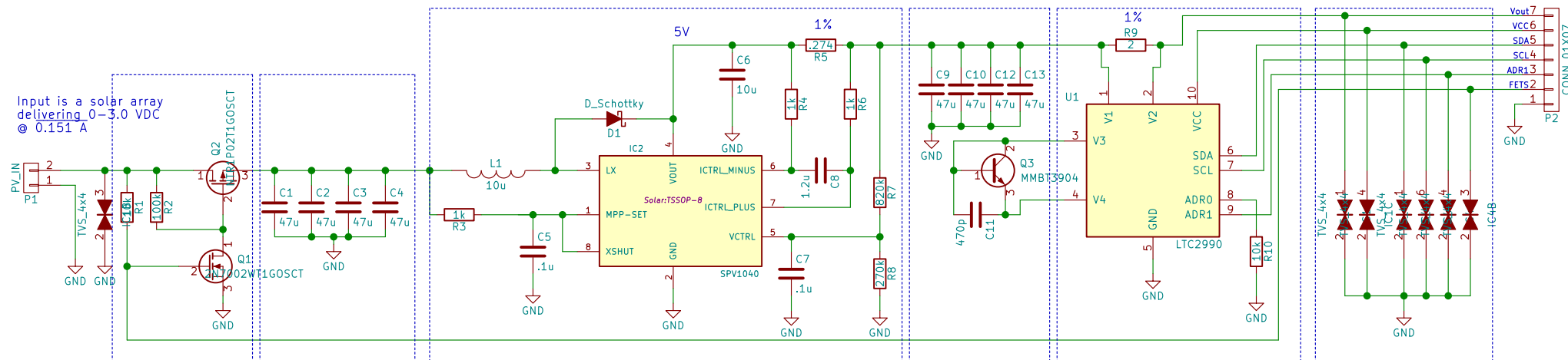


Input is a solar array
delivering 0-3.0 VDC
@ 0.151 A



These Fets act as a
more robust shut-
down than XShut.

Input filter caps
designed for 10mV
ripple voltage.

SPV1040
Maximum Power Point Tracker
Voltage set to 5V.

C5 and C7 need to live very
close to the terminals

All calculations assuming
rough tested values of
Voc 2.9 V
Isc .151 A

Current at Vctrl needs to be
between 2-20 uA

Output Filter Caps
Set for 10mV ripple.

LTC2990
Temperature, Voltage
and Current Monitor
I2C designed on a bus.
LTC2990 should be
powered down when
not being sourced by
AtMega.

sense R must follow
 $0.300 \text{ V} / R_{\text{mea_max}}$
 $.300 / .151 = 2 \text{ ohms}$

I2C addr when inactive x00
I2C addr when sourced x01

Trace shield transistor and
place close to pins.

TVS Diode Array
2 packages TVS diodes
tied to ground Vbr 6V

TODO
--NMOS can be small
--PMOS need to handle 1 amp
--Very good notes please
--Assign TVS to diode symbols on schema,
--find out how to assign to parts of ic's
--NUP4202W1_4INPUT_TV5

Andrew Greenberg
Austin Joseph

Portland State Aerospace Society

Sheet: /

File: Solar_Array_Rev1.sch

Title: Cubesat Power System

Size: A4 Date: 2016-03-29

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Rev: **Rev 1.0**

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