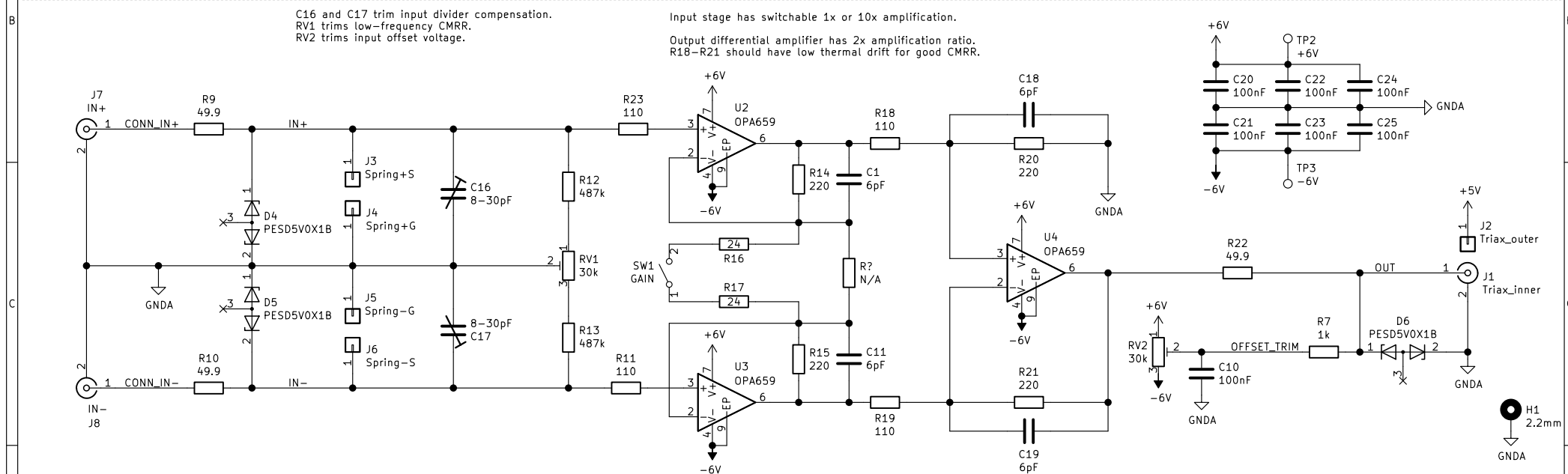


Split ground plane keeps SMPS current spikes from inducing noise voltages to measurement circuit. Plane crossings are through ferrites.



Probe tips have divider resistor and capacitor near the tip to minimize capacitance. For 10x tweezers this is 9.53 Mohm || 1.2 pF. The input impedance is 500 kohm || 10-30 pF. Input voltage range is +3 V.

Input protection: OPA659 internal ESD diodes tolerate up to 30 mA current. D4 and D5 clamp to about 9V and the 110 ohm resistors limit the current that flows to opamp input pins. Input maximum DC voltage is limited by the power handling of the 49.9 ohm resistors to 12V.

Further protection is provided by the larger series resistors in the probe tips, which will protect up to their maximum voltage rating.

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Sheet: /

File: diff_probe_amplifier.sch

Title: *Differential oscilloscope probe*

Size: A4	Date: 2021-06-04
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