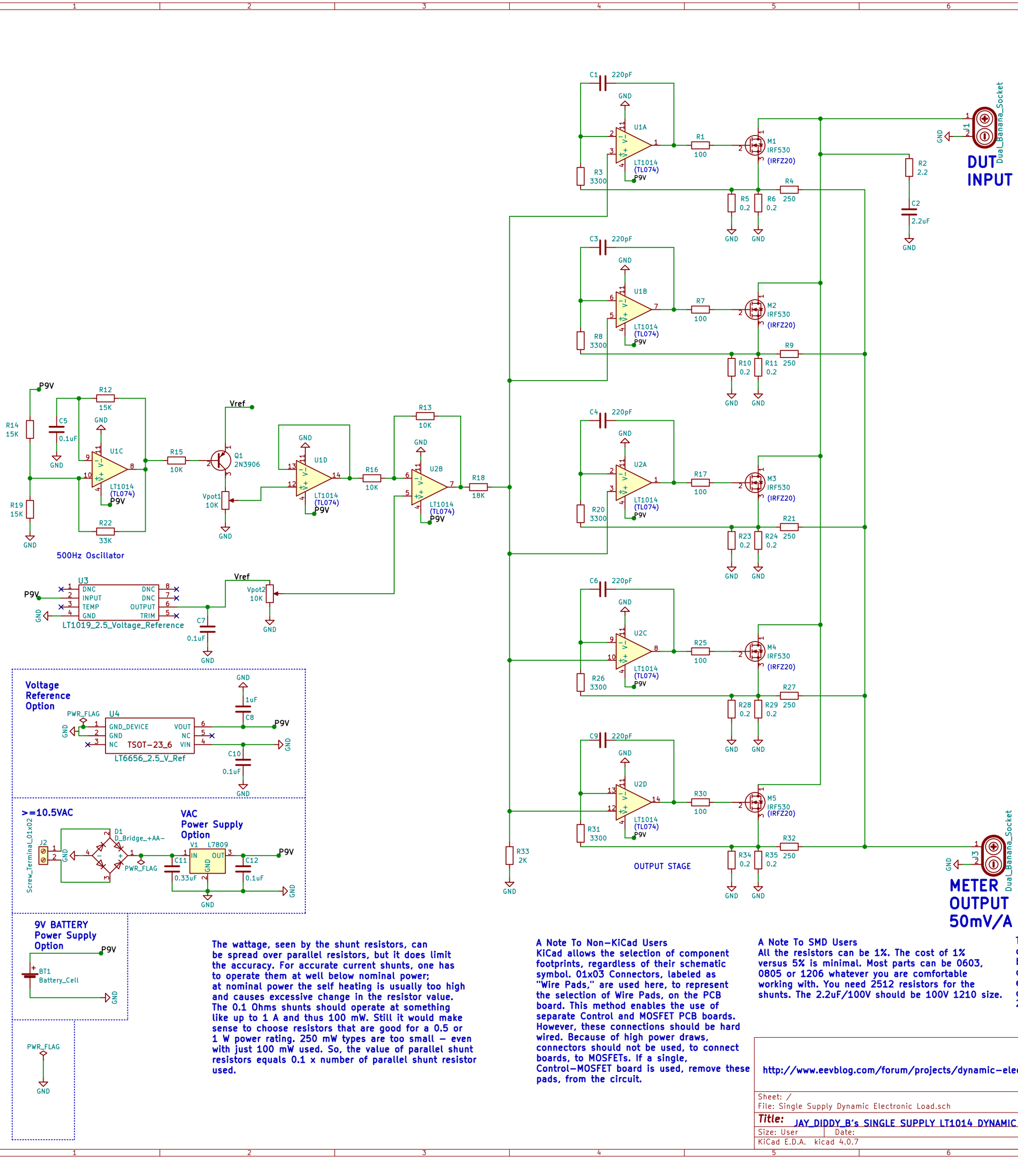

The wattage, seen by the shunt resistors, can be spread over parallel resistors, but it does limit the accuracy. For accurate current shunts, one has to operate them at well below nominal power; at nominal power the self heating is usually too high and causes excessive change in the resistor value. The 0.1 Ohms shunts should operate at something like up to 1 A and thus 100 mW. Still it would make sense to choose resistors that are good for a 0.5 or 1 W power rating. 250 mW types are too small – even with just 100 mW used. So, the value of parallel shunt resistors equals 0.1 x number of parallel shunt resistor used.

A Note To Non–KiCad Users
KiCad allows the selection of component footprints, regardless of their schematic symbol. 01x03 Connectors, labeled as "Wire Pads," are used here, to represent the selection of Wire Pads, on the PCB board. This method enables the use of separate Control and MOSFET PCB boards. However, these connections should be hard wired. Because of high power draws, connectors should not be used, to connect boards, to MOSFETs. If a single, Control–MOSFET board is used, remove these pads, from the circuit.

A Note To SMD Users
All the resistors can be 1%. The cost of 1% versus 5% is minimal. Most parts can be 0603, 0805 or 1206 whatever you are comfortable working with. You need 2512 resistors for the shunts. The 2.2uF/100V should be 100V 1210 size.

The value of the meter output resistor should be 50 ohms x number of output stages. For example, with four output stages use 200 ohm resistors.

http://www.eevblog.com/forum/projects/dynamic–electronic–load–project/

Sheet: /
File: Single Supply Dynamic Electronic Load.sch

Title: JAY_DIDDY_B's SINGLE SUPPLY LT1014 DYNAMIC ELECTRONIC LOAD

Size: User | Date: | Rev:
KiCad E.D.A. kicad 4.0.7 | Id: 1/1