**Title:**

DC Voltage Regulator

**Theory:**

A voltage regulator is designed to maintain the voltage of a power source within acceptable limits. It can be used in any application that uses a regulated DC power. It is needed to keep voltages within prescribed range. If there is any change in the input voltage, output will be constant. The lower supply voltage is, the lower the efficiency of the dc regulator becomes.

**Simulation circuit:**

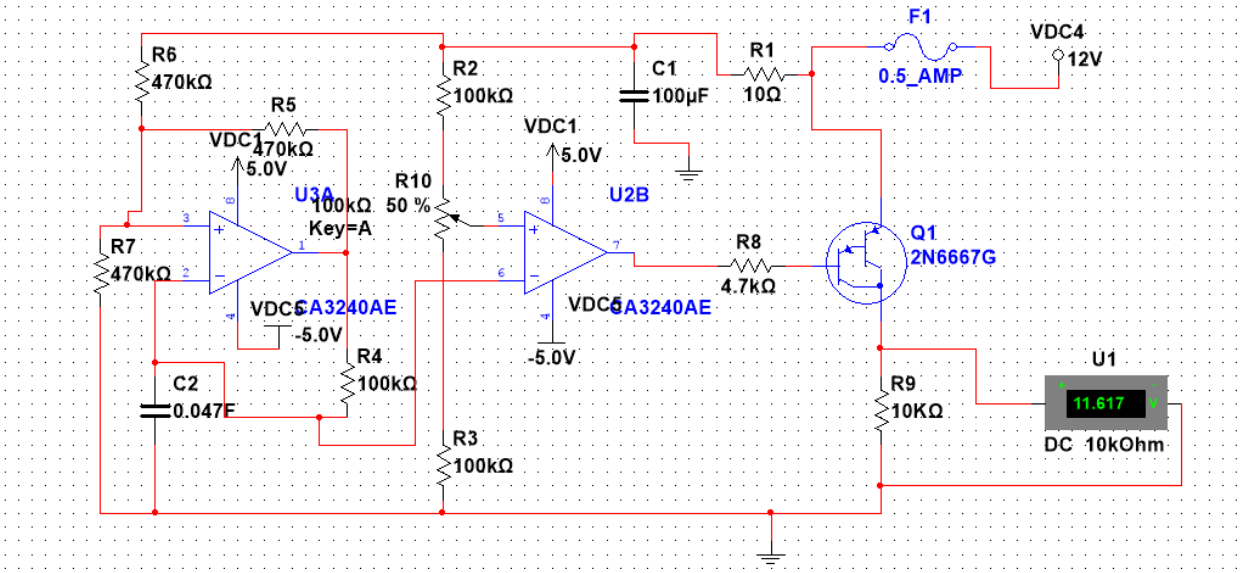


Fig: DC Voltage Regulator

**Simulation result:**

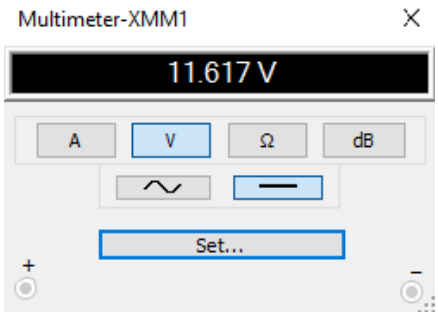


Fig: output in multi-meter

**Simulation result:**

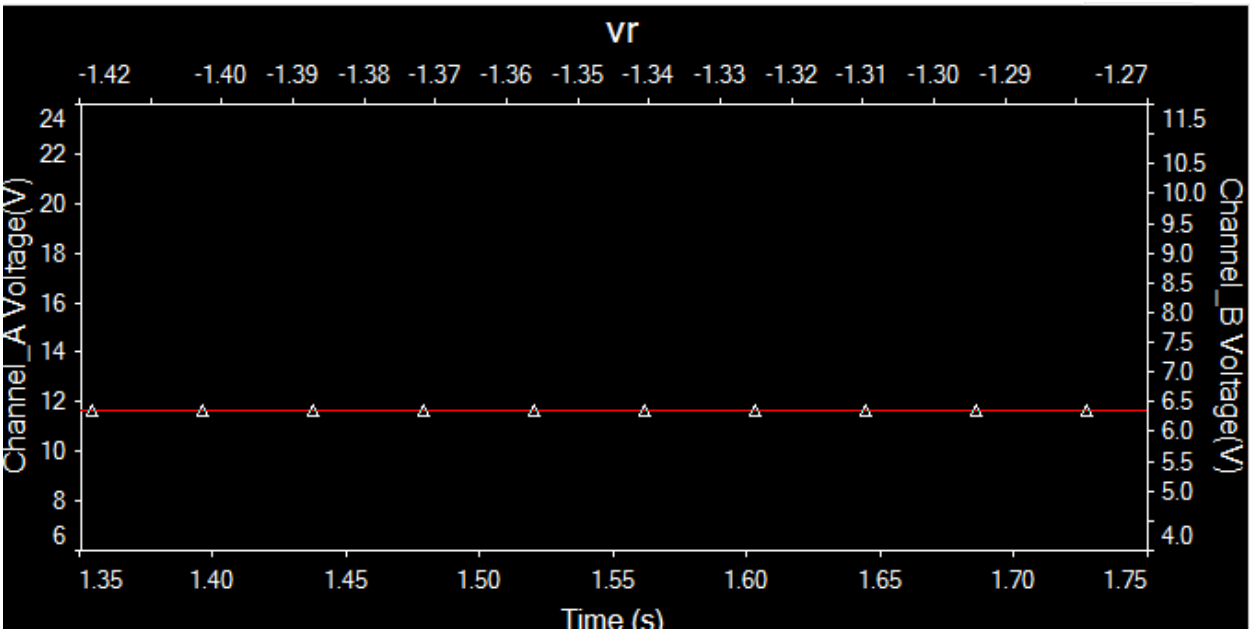


Fig: Oscilloscope output plot (DC 11.617v)

**Conclusion:**

Thus, we have designed the DC Voltage Regulator which have 12v input and stimulate in multisim. The output is plotted.

**Reference:**


1. https://en.m.wikipedia.org>wiki>voltage_regulator
2. https://www.electroschematics.com/922/dc-regulator/