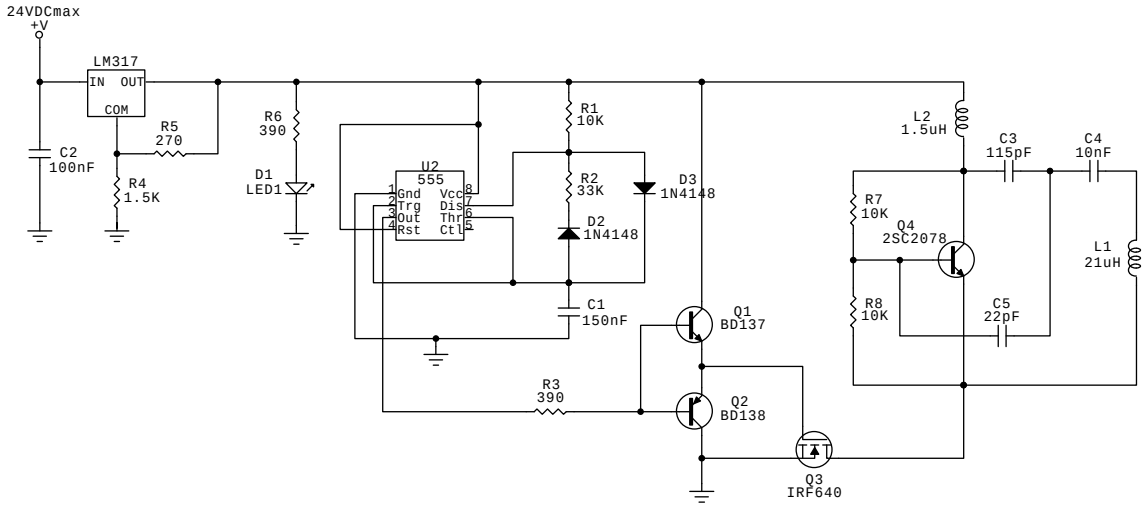
Pulsed LC Oscillator

1 The Circuit

An LC oscillator is driven by pulses which are generated by a 555 IC based oscillator. LC oscillator is built around 2SC2078. The circuit is shown in Fig. 1.



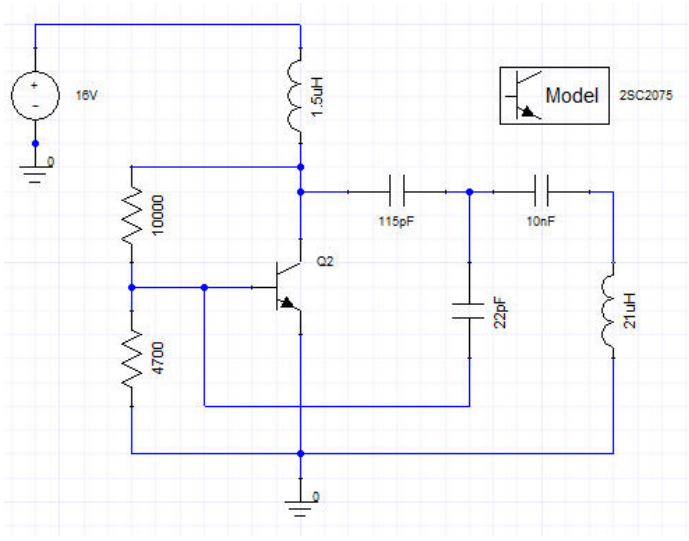


Fig. 1. The circuit and the Ansoft Designer simulation. Measured and simulated resonance frequencies are 2.74 MHz and 2.92 MHz, respectively.

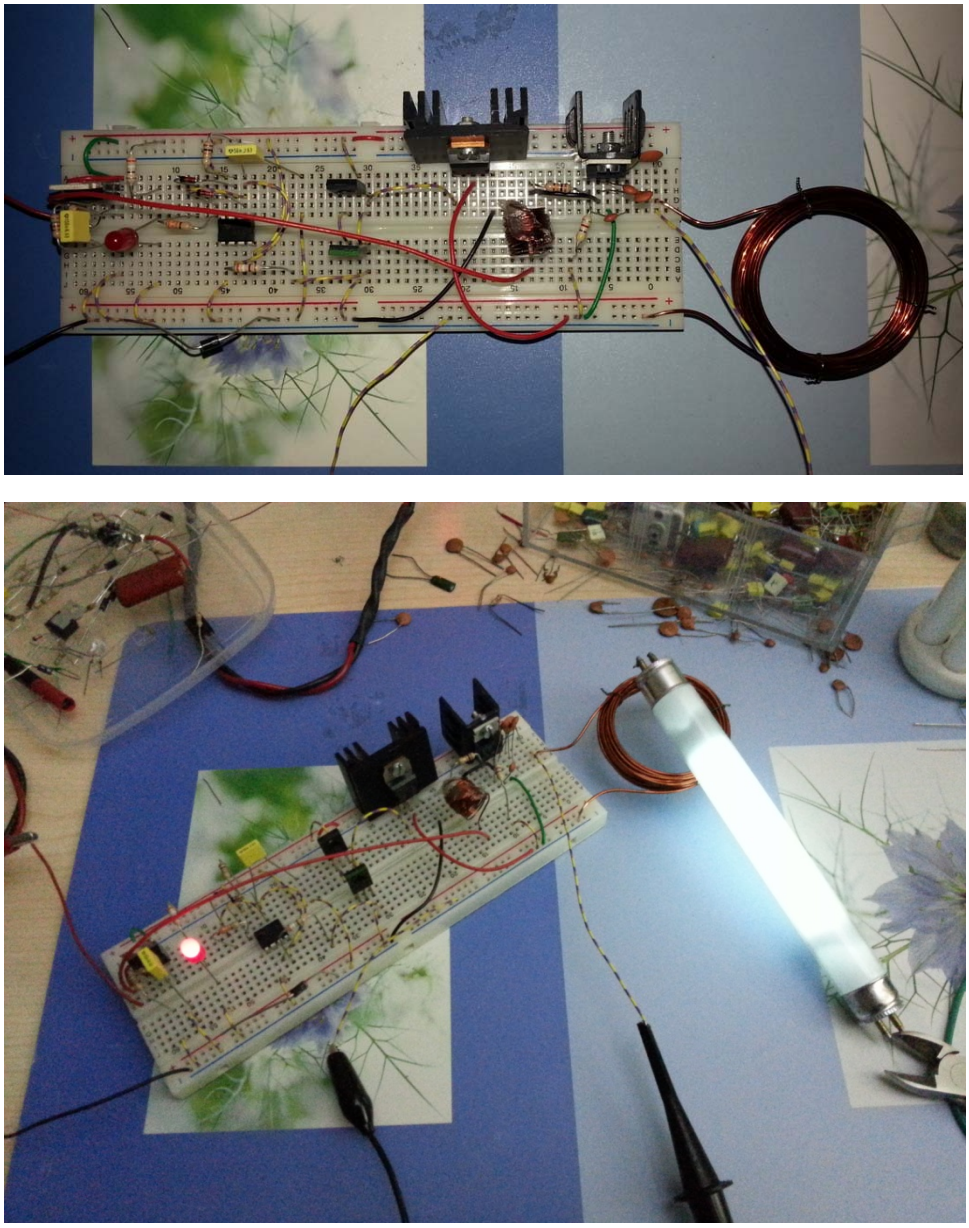


Fig. 2. Photo of the circuit. Larger coil is L2. When the circuit is fed by 24VDC, peak-to-peak voltage across L2 is about 800V.

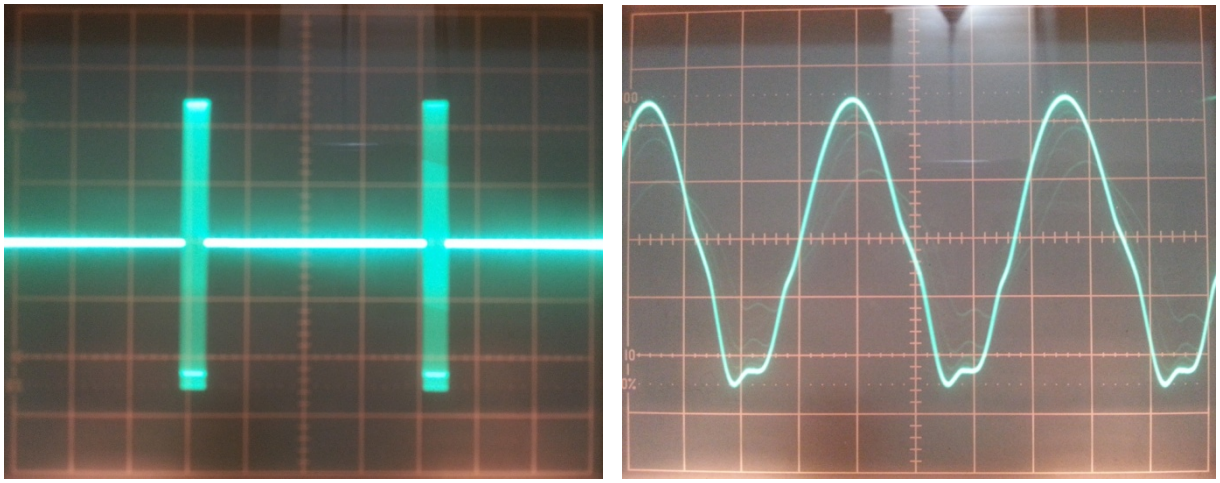


Fig. 3. Pulsed operation and the waveform in each pulse. Oscillation frequency is 2.74 MHz .

For questions and comments:

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