

Title of the experiment

Design of colpitt's oscillator

Theory

We have designed the colpitts oscillator which generates high frequency sinusoidal oscillations with the frequency of 71.17MHz. This is realized by using bipolar junction transistor (BJT). When the power supply is switched ON the capacitor starts charging and after the capacitors get fully charged it starts discharging through the inductor. Hence the generation of oscillations and the frequencies of oscillations are determined by using the resonant frequency of a TANK circuit consisting of inductors and capacitors.

Schematic diagram:

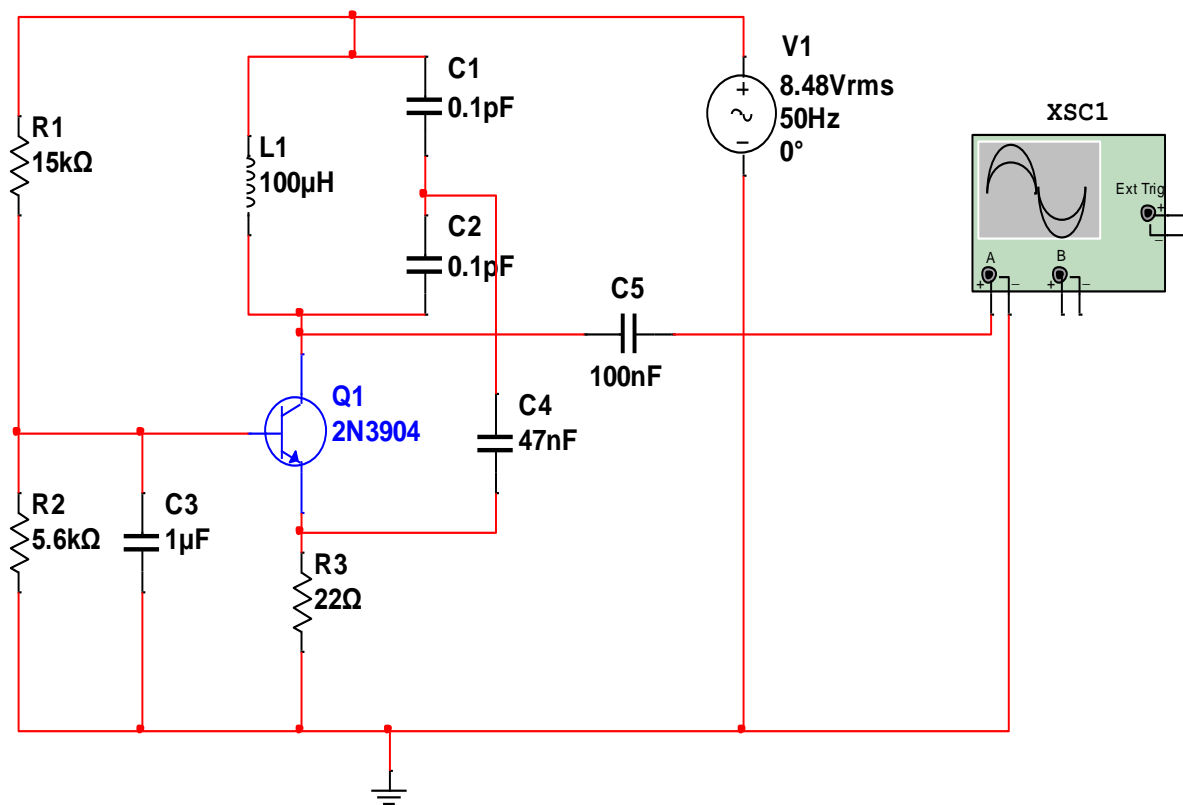


figure 1:schematic of colpitt's oscillator

Simulation diagram:

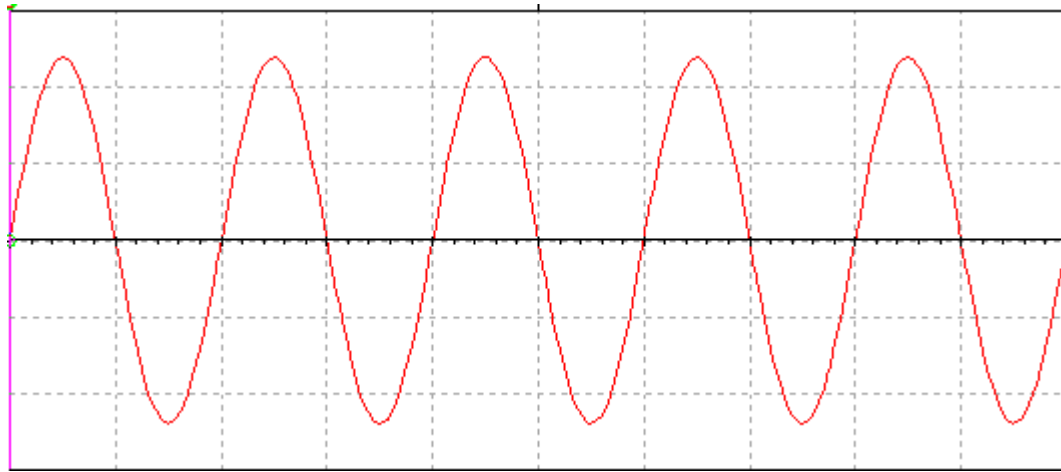


figure 2: output of the colpitt's oscillator

Conclusion:

Thus, we have designed colpitt's oscillator using multisim and we get appropriate output.

Reference:

<https://www.google.co.in/search?q=colpitts+oscillator&oq=colpitts&aqs=chrome..69i57j0l5.6287j0j7&sourceid=chrome&ie=UTF-8>