

DESIGN OF WEIN BRIDGE OSCILLATOR USING OPAMP

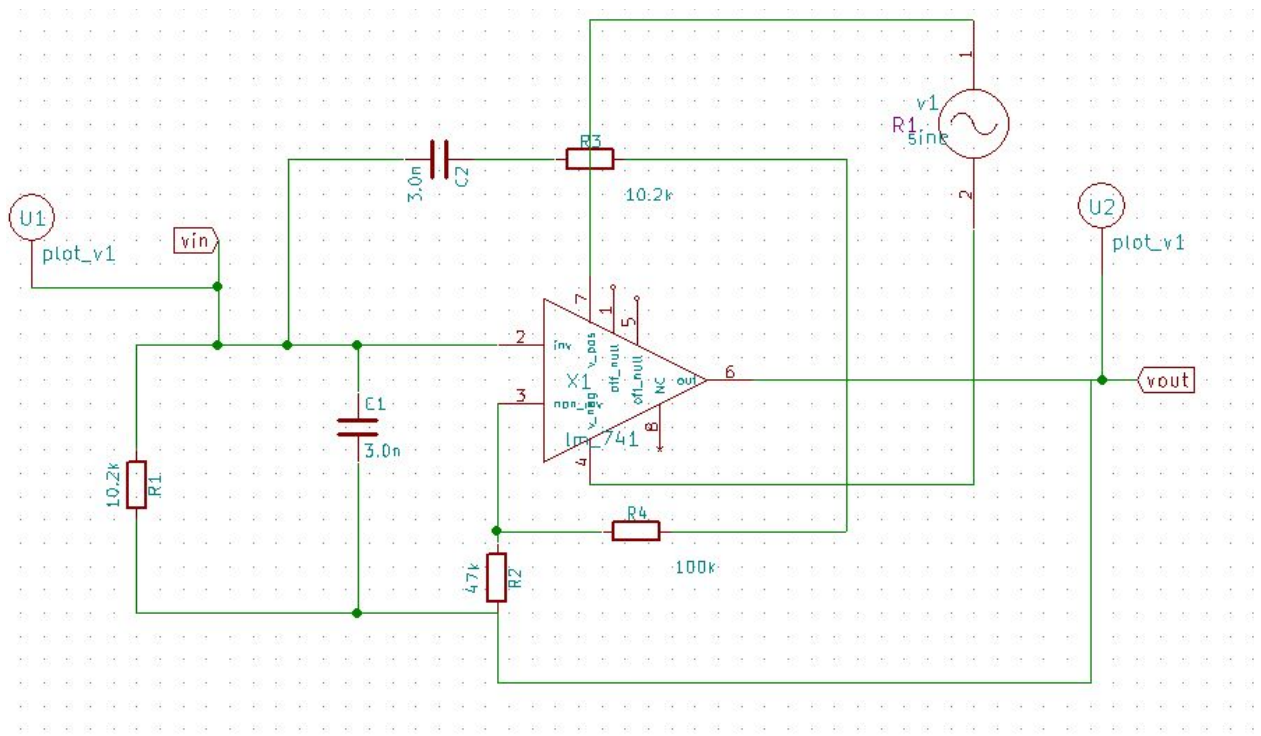
INTRODUCTION:

A Wien bridge oscillator produces sine waves which uses RC network as the frequency determining portion of the circuit. A basic circuit of Wien bridge oscillator with amplifier stage .

The output of the amplifier is applied between the terminals 1 and 3 while the input to the amplifier stage is supplied from terminals 2 and 4 hence the amplifier output becomes input voltage of the bridge whilst the output of the bridge becomes the input voltage of the amplifier.

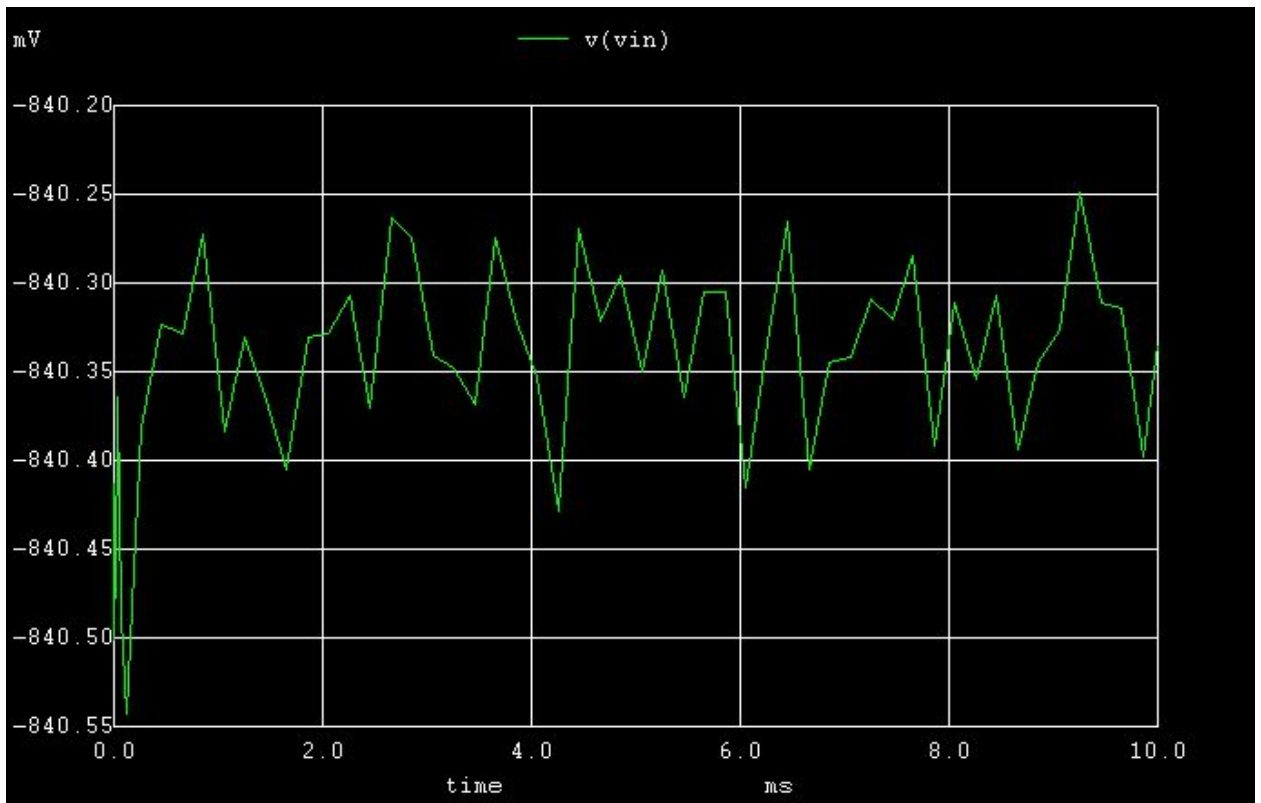
When the bridge is balanced the input voltage to the amplifier becomes zero, so in order to produce the sustained oscillations input to the amplifier must be non-vanishing. Therefore the bridge is unbalanced by adjusting the proper values of the resistor

CIRCUIT DIAGRAM:

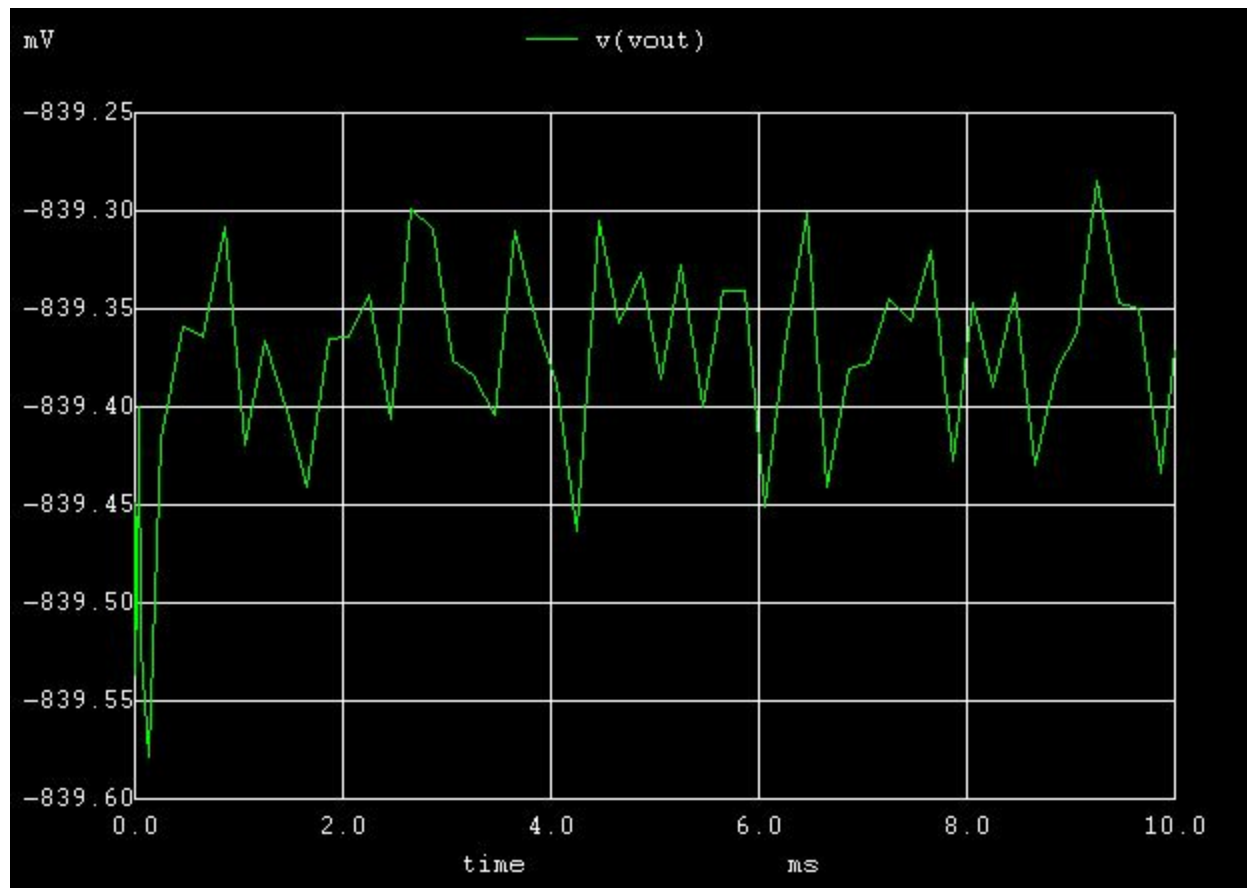


NGSPICE PLOT:

INPUT:

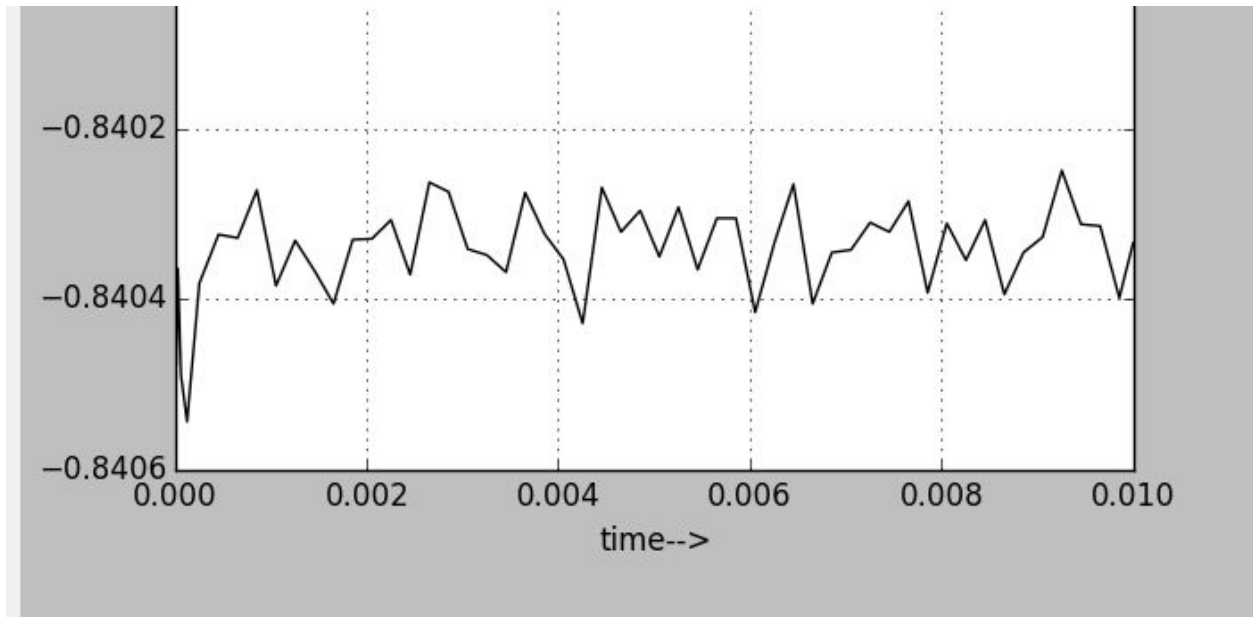


OUTPUT:

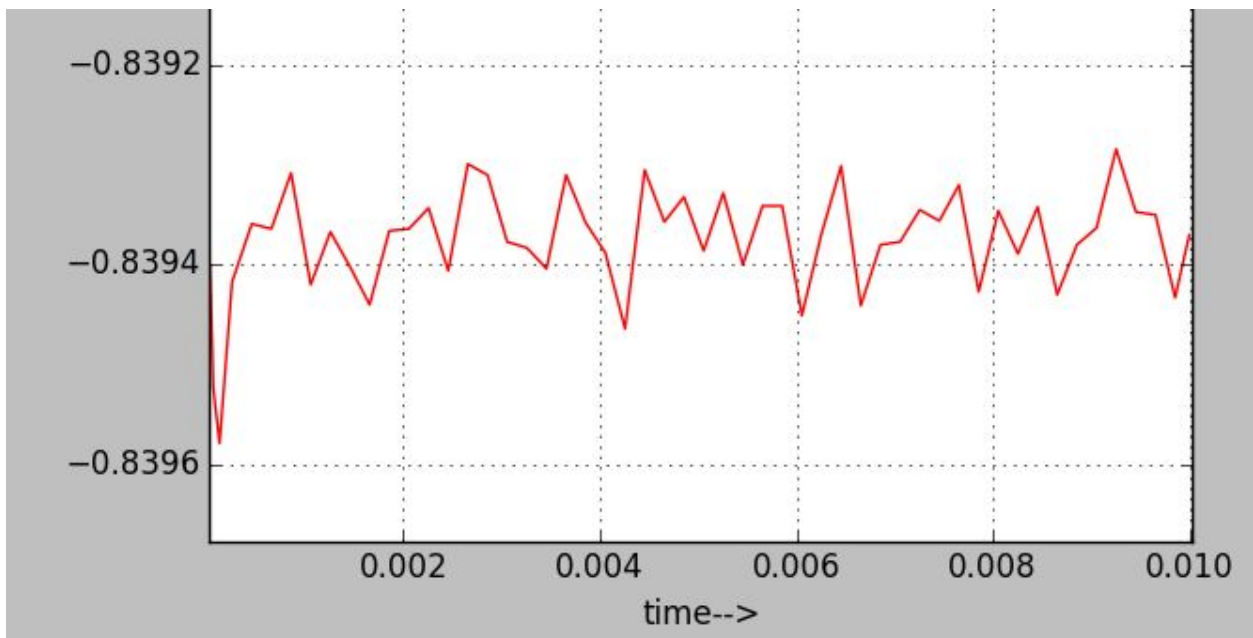


PYTHON PLOT:

INPUT:



OUTPUT:



REFERENCE:

[Wein Bridge Oscillator - Electronics Hub](#)