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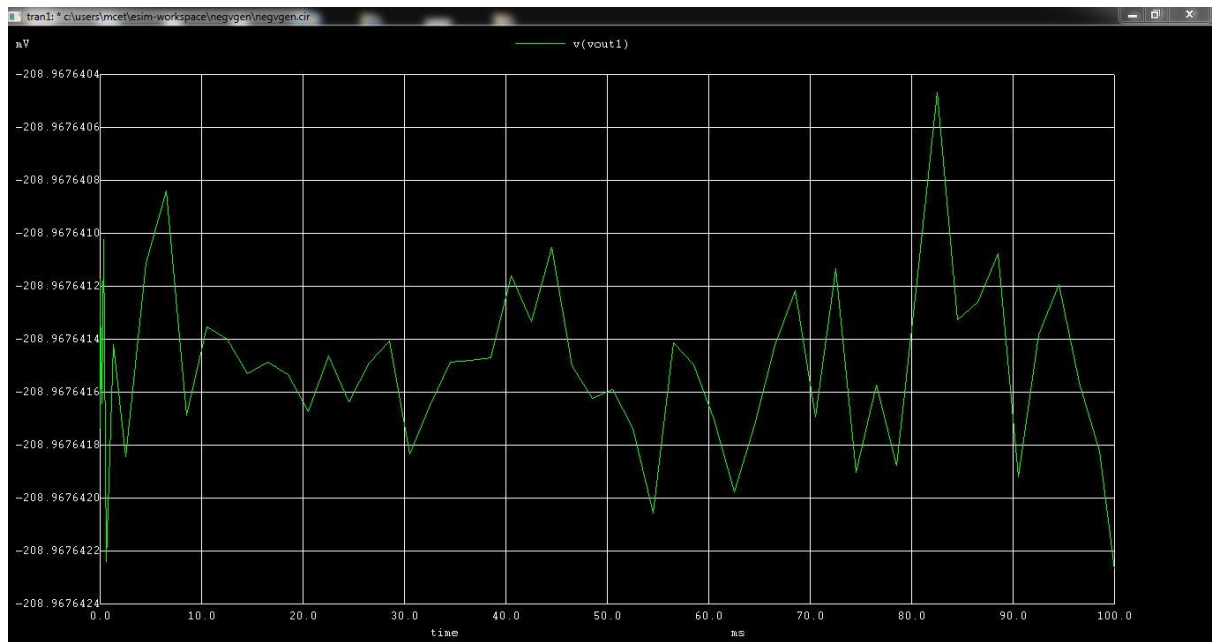
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The above given circuit is Negative voltage generator. Here, the 555IC timer acts as the Astable Multivibrator. The capacitor can be changed but the selection should be pursued for maximum negative voltage. If the selected capacitance is not suited, then maximum voltage at the output will not be obtained. As said earlier, the 555IC timer acts as a Square wave generator and it generates square wave. The square wave will have a positive peak and 0+ ground forming a complete cycle. When there is positive voltage peak at the output, there will be a current flow. During this time, the diode D1 will be forward biased and diode D2 will be reverse biased. Because of this, the capacitor C1 gets charged and voltage VCC appears across it. Now ground appears after the positive peak, will be an current flow. Now, the diode D1 will be reverse biased and the diode D2 will be forward biased. With D2 having forward biased, the capacitor C1 will have a way to flow. So, the capacitor C1 discharge through D2, along it charges the capacitor C2. Hence, during 0V signal there will be an voltage appearing across C2 capacitor. Voltage appeared across C2 will be of negative sign where referred to ground. This charging and discharge occurs at every cycle and there will be stable negative voltage across the output with respect to ground.

**REFERENCE:** <https://circuitdigest.com/electronic-circuits/negative-voltage-generator>

**CIRCUIT DIAGRAM:**





### RMS VALUE:

Node/Branch	RMS Value
vin	8.7918

Node/Branch	RMS Value
vout1	0.20902

### PYTHON PLOT:

