

OPERATIONAL AMPLIFIER

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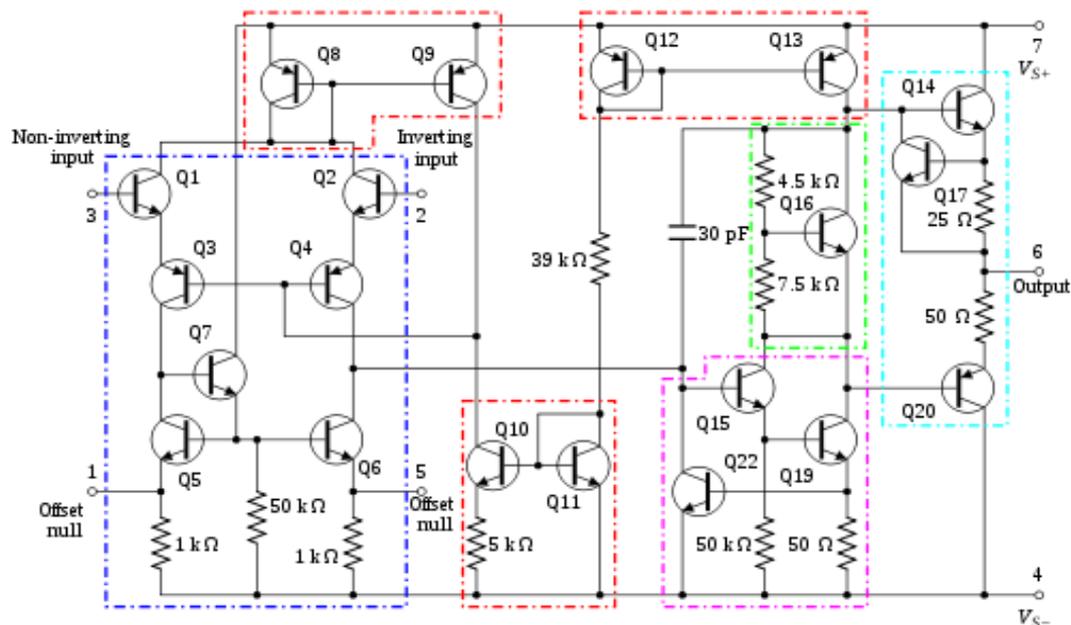
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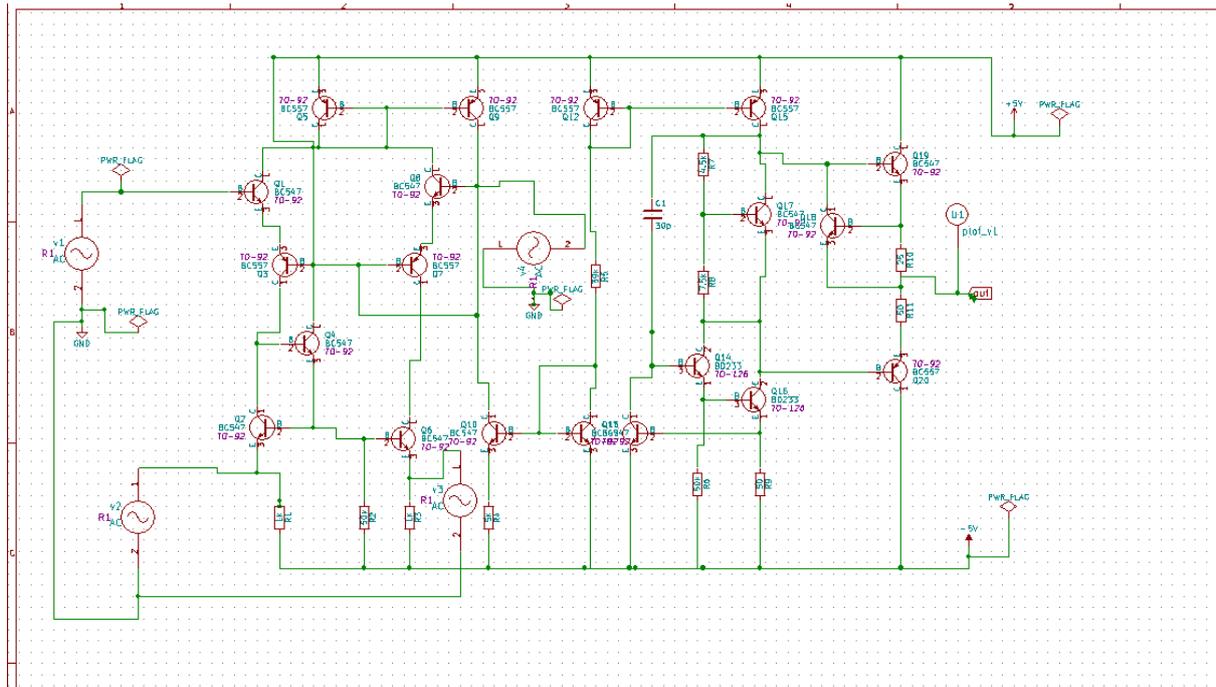
INTRODUCTION:

An Operational Amplifier is basically a three-terminal device which consists of two high impedance inputs, one called the inverting input, marked with a negative sign, and the other one called the non-inverting input, marked with a positive sign. The third terminal represents the operational amplifiers output port which can both sink and source either a voltage or a current. The output voltage signal from an operational amplifier is the difference between the signals being applied to its two individual inputs. Operational amplifiers are one of the building blocks of analogue electronic circuits. Operational amplifiers are linear devices that have all the properties required for nearly ideal DC amplification and are used extensively in signal conditioning, filtering or to perform mathematical operations such as addition, subtraction, integration and differentiation.

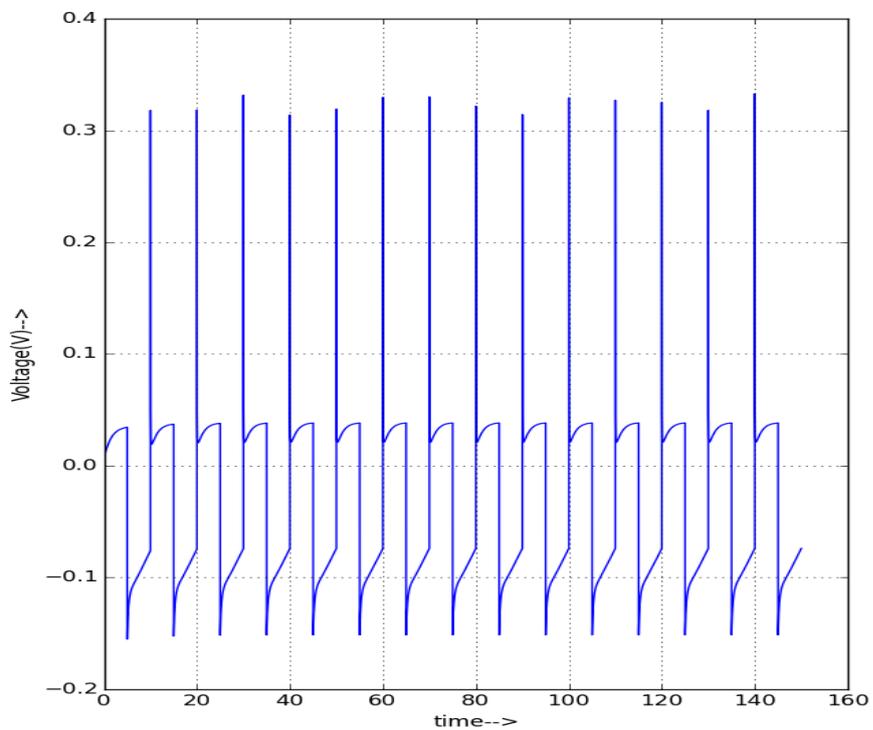
CIRCUIT DIAGRAM:



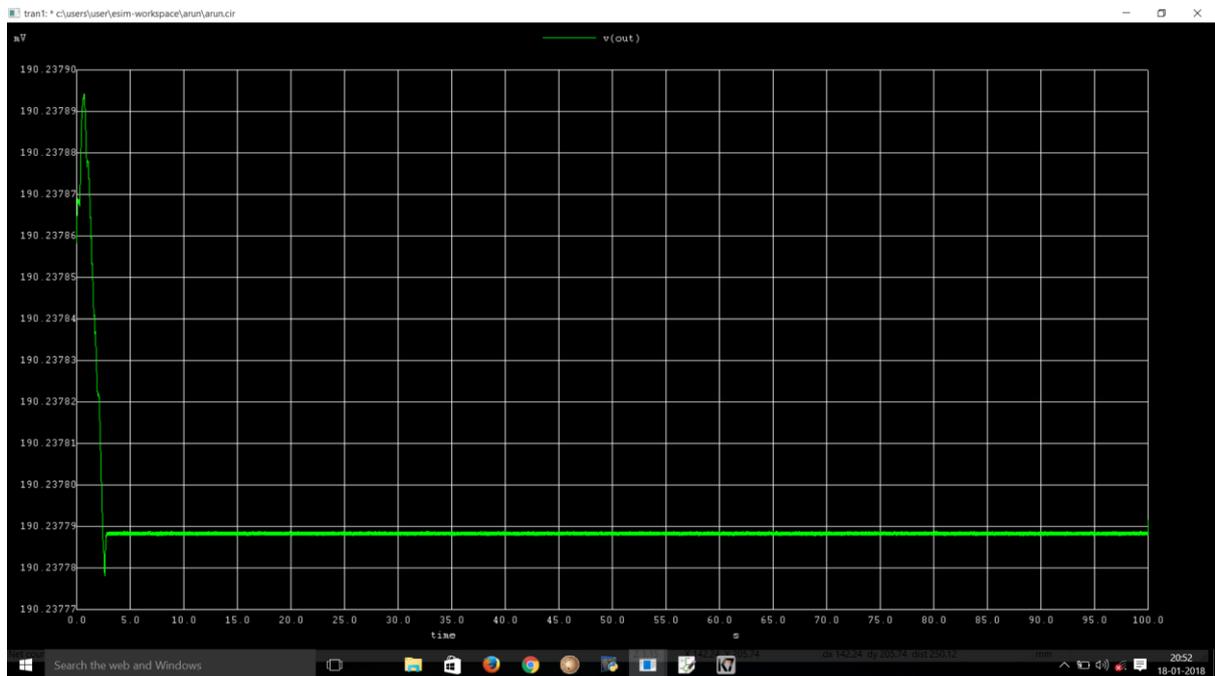
RTL SCHEMATIC GENERATED USING ESIM:



SIMULATION OUTPUT:



SPICE OUTPUT:



REFERENCE:

https://www.bing.com/images/search?view=detailV2&ccid=qip52vTj&id=4B427A707AF74A6377A3F10C2674E9E2AF11D5C2&thid=OIP.qip52vTjuyyv9_ovtwqRGNgHaEj&q=opamp+images&simid=608048237400687368&selectedIndex=87&ajaxhist=0