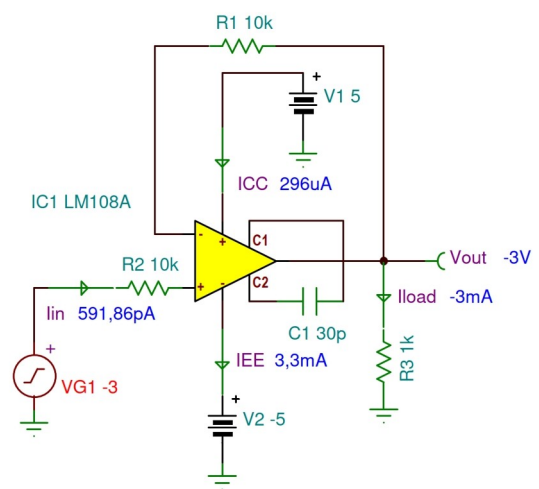
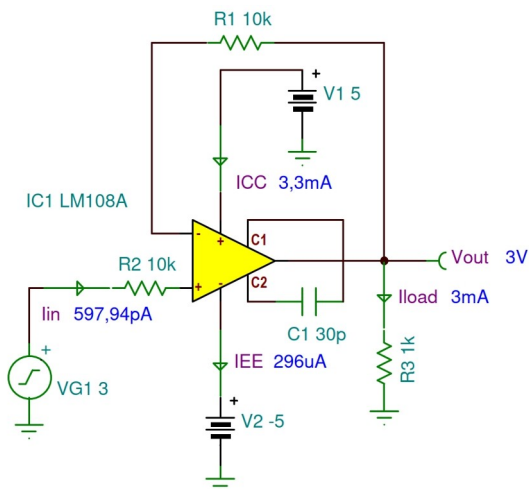
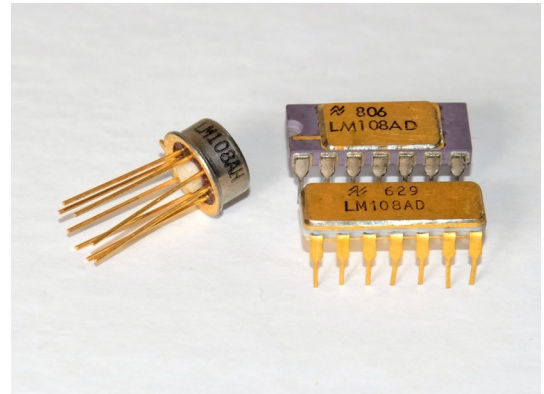
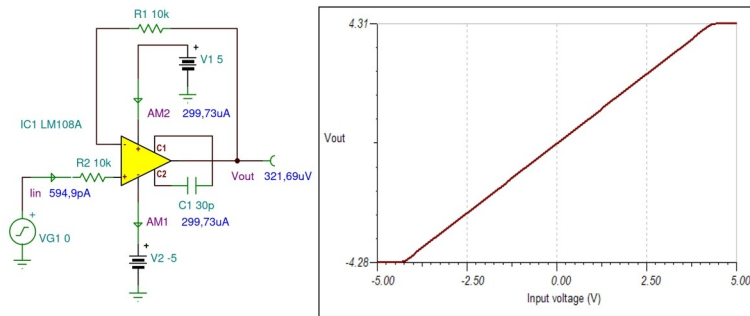
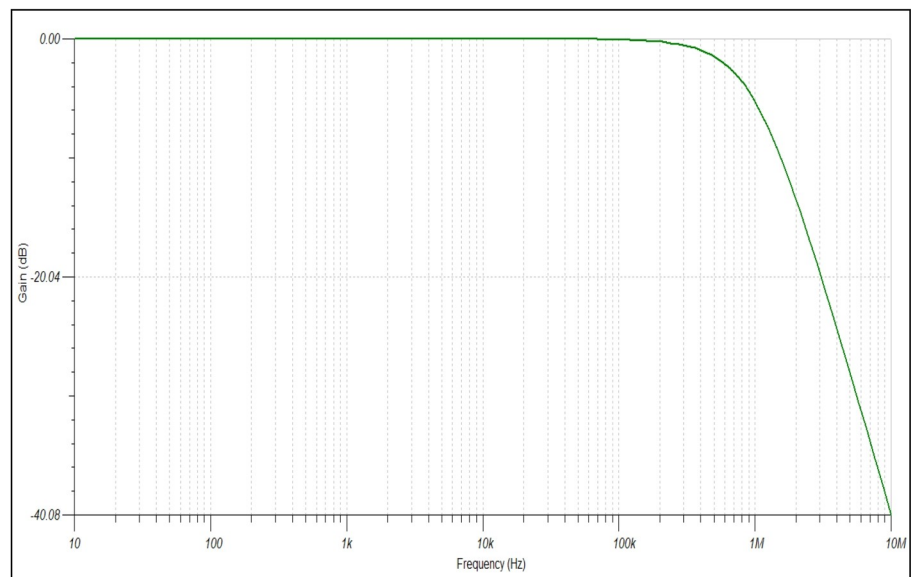
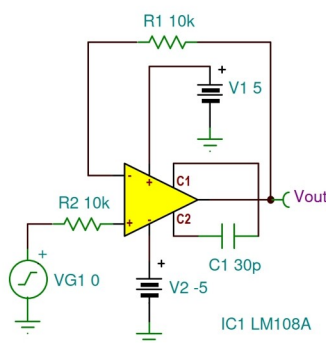


LM108A /NS/ Operational Amplifier Macro Model

DC Characteristics



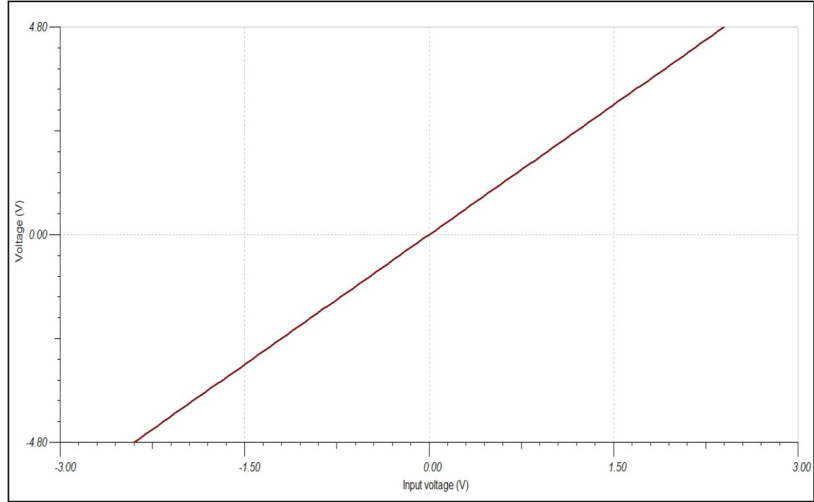
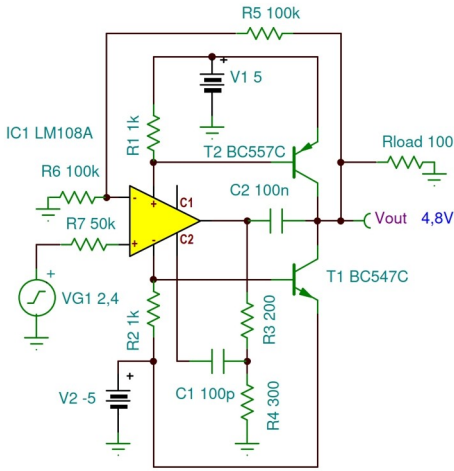
AC Characteristics



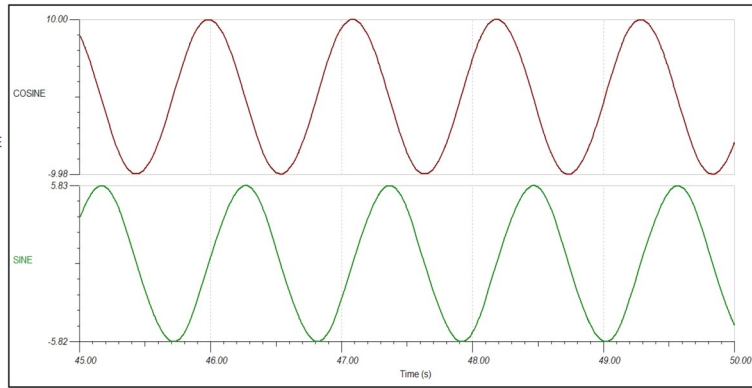
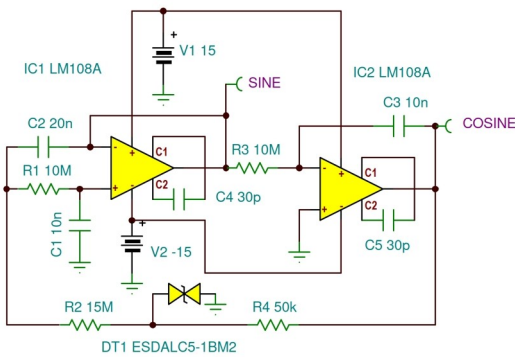
Power Booster

The LM108, which was designed for low power consumption, is not able to drive heavy loads. However, a relatively simple booster can be added to the output to increase the output current to 50 mA. This circuit has the added advantage that it swings the output up to the supplies, within a fraction of a volt. The output transistors are driven from the supply leads of the op amp.

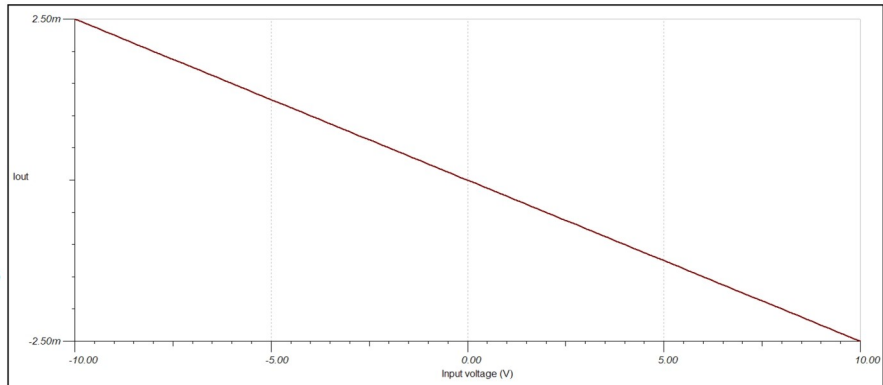
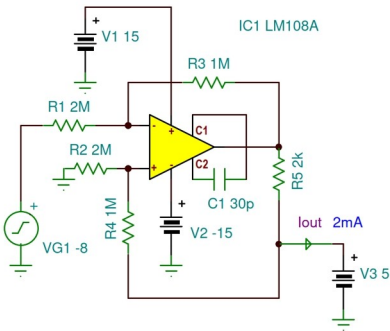
The output of the op amp is loaded heavily to ground with R3 and R4.



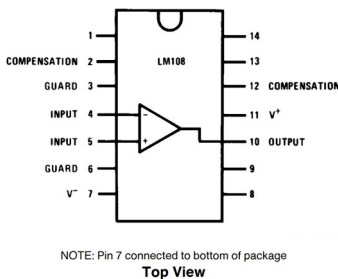
Low Frequency Sine Wave Oscillator



Bilateral Current Source



When the output is not at zero, it would seem that the current through R2 and R4 would reduce accuracy. Nonetheless, if $R1 = R2$ and $R3 = R4 + R5$, the output current will be independent of the output voltage.



The guard, which is a conductive ring surrounding the inputs, is then connected to a low impedance point that is at the same potential as the inputs.

References

R. J. Widlar, "IC Op Amp Beats FETs on Input Current"
National Semiconductor Application Note 29 1969

Zabb Csaba