

LM321

PRODUCT DESCRIPTION

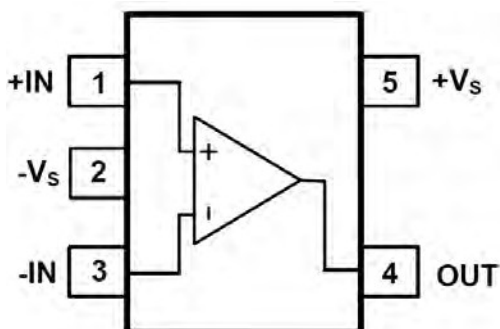
The LM321 brings performance and economy to low power systems. With a high unity gain frequency and a guaranteed $0.4\text{V}/\mu\text{s}$ slew rate, the quiescent current is only $430\mu\text{A}/\text{amplifier}$ (5V). The input common mode range includes ground and therefore the device is able to operate in single supply applications as well as in dual supply applications. It is also capable of comfortably driving large capacitive loads. The LM321 is available in the SOT package. Overall the LM321 is a low power, wide supply range performance op amp that can be designed into a wide range of applications at an economical price without sacrificing valuable board space.

APPLICATIONS

- Chargers
- Power supplies
- controls, instruments
- Industrial: Communicationsesktops infrastructure

PIN CONFIGURATIONS

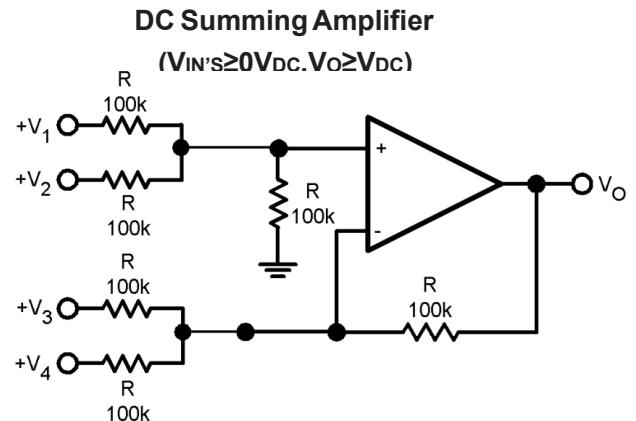
LM321
(Top View)



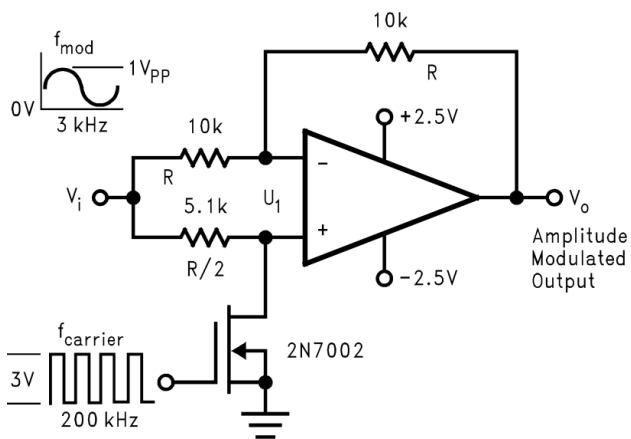
FEATURES

- Gain-Bandwidthproduct: 1MHz
- ($V_{CC} = 5\text{V}$, $T_A = 25^\circ\text{C}$. Typical values unless specified).
- Low supply current: $430\mu\text{A}$
- Low input bias current: 45nA
- Wide supply voltage range
- Operates on 24V or $\pm 12\text{V}$ Supplies
- Stable with high capacitive loads
- Small Packaging: LM321 Available in SOT-23-5L.

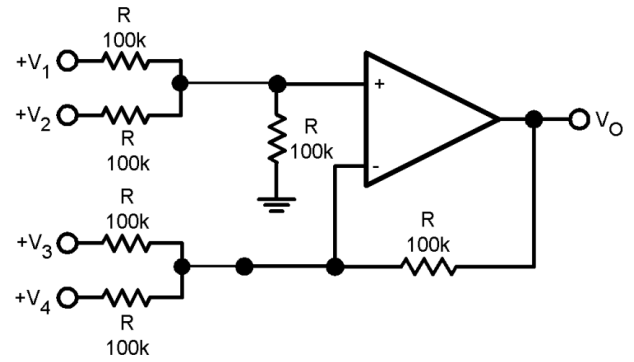
APPLICATION Circuit



Where: $V_O = V_1 + V_2 - V_3 - V_4$, $(V_1 + V_2) \geq (V_3 + V_4)$ to keep $V_O \geq 0V_{DC}$



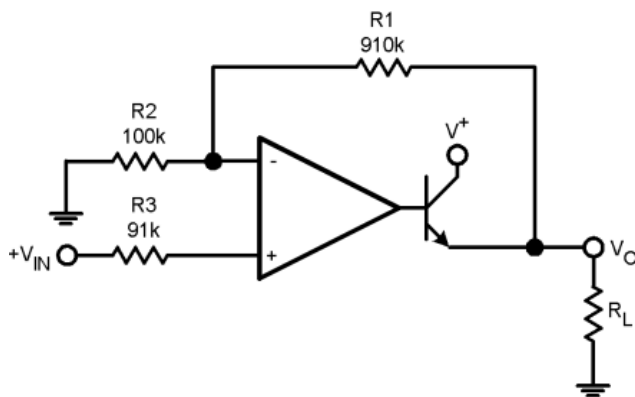
Amplitude Modulator Circuit



Where: $V_0 = V_1 + V_2 - V_3 - V_4$, $(V_1 + V_2) \geq (V_3 + V_4)$ to keep $V_0 \geq 0V_{DC}$

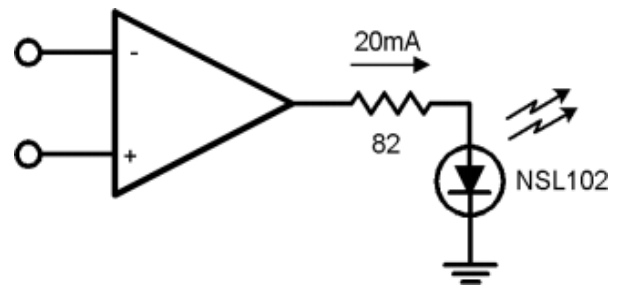
DC Summing Amplifier

($V_{IN'S} \geq 0V_{DC}, V_O \geq V_{DC}$)

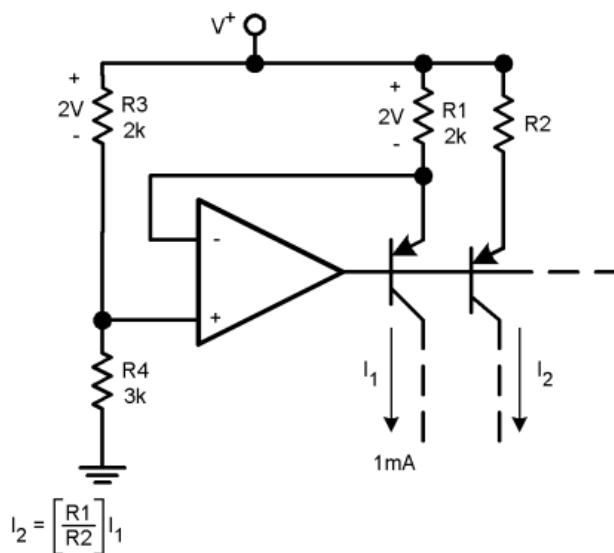


$V_0 = 0V_{DC}$ for $V_{IN} = 0V_{DC}$, $A_V = 10$

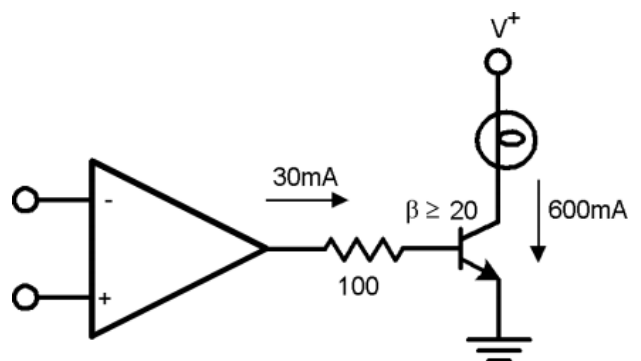
Power Amplifier



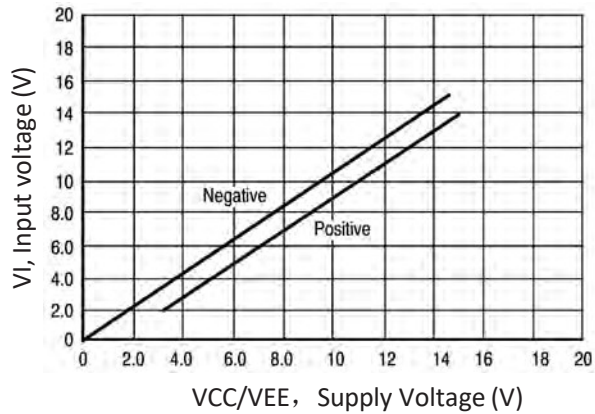
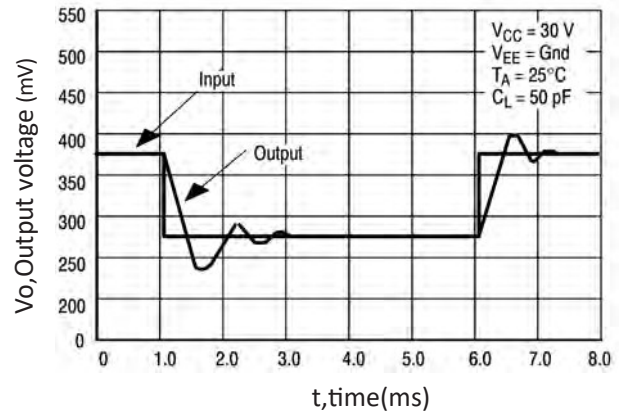
LED Driver



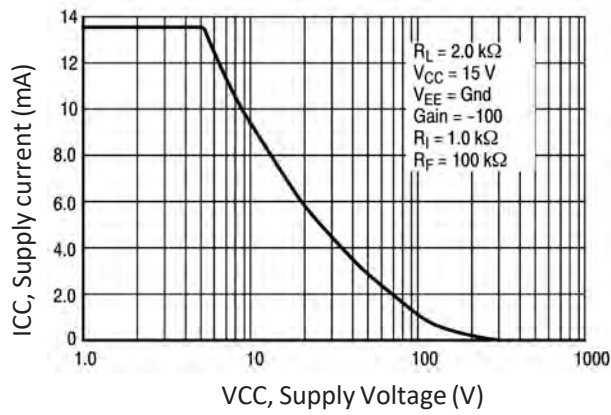
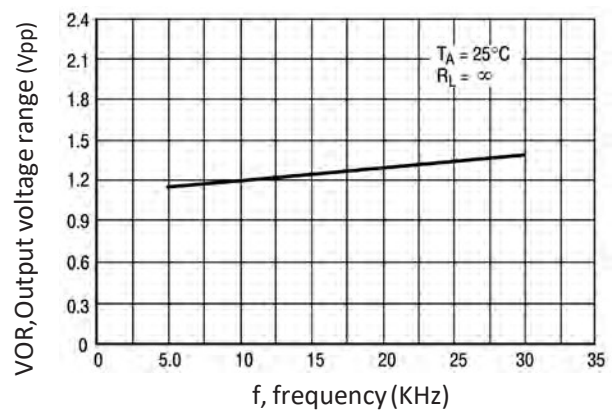
Fixed Current Sources



Lamp Driver


Input voltage range

Small signal voltage follower impulse response

(same direction)


Supply current (static power consumption)

Large signal frequency response