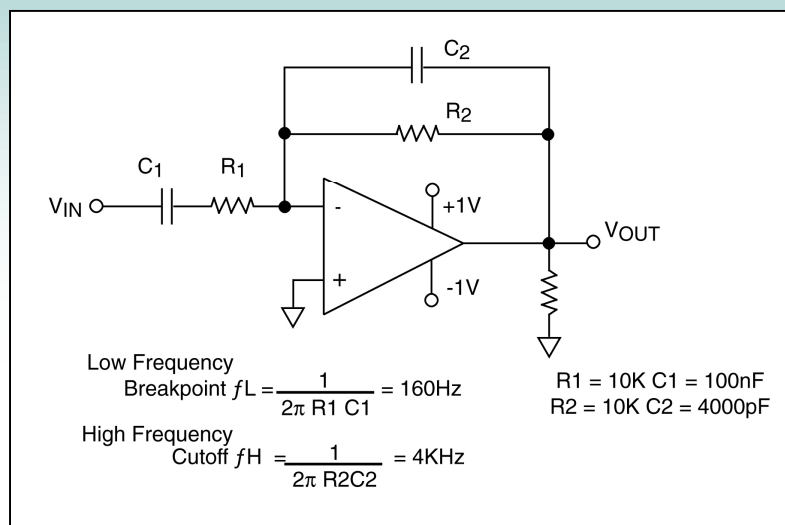


Micro-power Band-pass Network



Description

This circuit utilizes an operational amplifier with relatively high slew rate per unit power consumption configured as a band-pass filter circuit. The input is ac coupled with the low frequency cutoff point determined by R_1C_1 . The feedback network cutoff at a high frequency determined by R_2C_2 . Start the operational amplifier selection process by determining a) the available voltage supplies; b) the high frequency response time required; c) the offset voltages required. An operational amplifier with very high input impedance (a few pA input currents) and an output settling time specification, such as the ALD1704, would help to implement the filter while minimizing other unexpected surprises, such as ringing within the band. If the power consumption of the operational amplifier is important, select an operational amplifier with the maximum slew rate per unit current consumed that would be just adequate for the frequency range of interest. Having selected a suitable limited bandwidth operational amplifier with docile settling characteristics, such as the ALD1702, calculate if the necessary gain bandwidth of the operational amplifier would be adequate for the band-pass range required.

Recommended Components

ALD1706, ALD1726, ALD1701, ALD1721
 ½ ALD2701, ½ ALD2706

Other Related Circuit Ideas

Schematic no. wf_47002.0 Band-pass Network

Schematic no. wf_47003.0 Function Generator

Schematic no. wf_47004.0 Low-Pass Filter (RFI Filter)