



Category: Amplifiers

CIRCUIT IDEAS FOR DESIGNERS

Schematic no. amp_27004.0

Discrete Differential Amplifier

Description

This is a version of a discrete differential amplifier consisting of an N channel matched-pair MOSFET Array and a P channel matched-pair MOSFET Array. Whenever a circuit required for an application cannot be met by an existing component available as an IC function such as an operational amplifier or a voltage comparator, a discrete circuit version would have to be designed and built. This differential amplifier is biased by a separate external N-channel current source (see current source cs-series circuits). With this type of differential circuit, it is possible to set each individual circuit parameters separately to produce a more optimized differential amplifier circuit for many types of specialized situations and applications. As an example, a differential amplifier operating at less than 1V supply can be constructed. As a second example, an amplifier with the current bias tweaked to run on trickle supply current of mere nano-amperes can be implemented using discrete MOSFET components.

For full schematic diagram and notes, please register and login at aldinc.com