Abstract

Today's world is the world of speed, convenience and accuracy. With the growing demand of consumer electronics and advancing technology, developers have numerous options available for selecting ICs for a particular application, which might also make finding appropriate IC a tedious task. Hence, a smart tool is developed which is software capable of searching appropriate IC based on selected performance determining parameters, such as CMRR, Slew rate, etc. Among different ICs, op amps are used for various purpose like in amplifiers, oscillators, filters, comparators, detectors and thus are one of the most widely used chips. This paper proposes a totally new method for smart selection of operational amplifiers. It describes the design of new software that could search a suitable IC depending upon the specifications entered by the user. The software is developed using C programming. The coding of the tool is being done on GNU environment-Dev C++, which can also be implemented with GUI.

References
Smart Tool for Integrated Chips Selection

- Linear stock list IC&apos;s website Available: http://LinearIC&apos;sOPAMPS.htm.
  - &apos;AD795&apos;&apos; datasheet Lower power, lower noise, precision FET Op Amp.
  - &apos;AD8000&apos;&apos; datasheet 1. 5 GHz ultrahigh speed Op Amp.
  - &apos;AD8001&apos;&apos; datasheet 800 MHz, 50mw current Feedback amplifier.
  - &apos;AD8002&apos;&apos; datasheet Dual 600 MHz, 50 mw current feedback amplifier.
  - &apos;AD8003&apos;&apos; datasheet Triple 1. 5 GHz Op Amp.
  - &apos;AD8004&apos;&apos; datasheet Quad 3000 V/ms, 35 mW Current Feedback Amplifier.
  - &apos;AD8007&apos; / &apos;AD8008&apos;&apos; datasheet Ultralow Distortion High Speed Amplifiers.
  - &apos;AD8011&apos;&apos; datasheet 300 MHz, 1 mA Current Feedback Amplifier.
  - &apos;AD8013&apos;&apos; datasheet Single Supply, Low Power, Triple Video Amplifier.
  - &apos;AD8014&apos;&apos; datasheet 400 MHz Low Power High Performance Amplifier.
  - &apos;AD8017&apos;&apos; datasheet Dual High Output Current, High Speed Amplifier.
  - &apos;AD8022&apos;&apos; datasheet Dual High-Speed Low-Noise Op Amps.
  - &apos;AD8023&apos;&apos; datasheet High Current Output, Triple Video Amplifier.
  - &apos;AD8033 / AD8034&apos;&apos; datasheet Low Cost, 80 MHz Fast FET™ Op Amps.
  - &apos;AD8047&apos; / &apos;AD8048&apos;&apos; datasheet 250 MHz, General Purpose Voltage Feedback Op Amps.
  - &apos;AD8065 / AD8067&apos;&apos; datasheet High Performance, 145 MHz Fast FET™ Op Amps.
  - &apos;AD8065/AD8066*&apos;&apos; datasheet High Performance, 145 MHz Fast FET™ Op Amps.
  - &apos;AD8067&apos;&apos; datasheet High Gain Bandwidth Product Precision Fast FET™ Op Amp.
  - &apos;AD8072 / AD8073&apos;&apos; datasheet Low Cost, Dual/Triple Video Amplifiers.
  - &apos;AD8074/AD8075&apos;&apos; datasheet 500 MHz, G = +1 and +2 Triple Video Buffers with Disable.
  - &apos;AD8099&apos;&apos; datasheet Ultralow Distortion, High Speed 0. 95 nV/?Hz Voltage Noise Op Amp.
  - &apos;AD80131&apos;&apos; datasheet Low-Cost, High-Speed Differential Driver.
  - &apos;AD4896/AD4897&apos;&apos; datasheet 1 nV/?Hz, Low Power, Rail-to-Rail Output Amplifiers.
  - &apos;AD8538&apos;&apos; datasheet Low Power, Precision Auto-Zero Op Amp.
  - &apos;AD4817-1 / AD4817-2&apos;&apos; datasheet Low Noise, 1 GHz Fast FET Op Amps.
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- "ADA4310-1" datasheet Low Cost, Dual, High Current Output Line Driver with Shutdown.
- "ADA4857-1/ ADA4857-2" datasheet Ultralow Distortion, Low Power, Low Noise, High Speed Op Amp.
- "ADA859-3" datasheet Single-Supply, Fixed G = 2, High Speed, Video Amplifier with Charge Pump.
- "ADA4860-1" datasheet High Speed, Low Cost, Op Amp.
- "ADA4861-3" datasheet High Speed, Low Cost, Triple Op Amp.
- "ADA4862-3" datasheet High Speed, G = +2, Low Cost, Triple Op Amp.
- "ADA4898-1" datasheet High Voltage, Low Noise, Low Distortion, Unity Gain Stable, High Speed Op Amp.
- "ADA4899-1" datasheet Unity Gain Stable, Ultralow Distortion, 1 nV/Hz Voltage Noise, High Speed Op Amp.
- "LF353" datasheet Wide Bandwidth Dual JFET Input Operational Amplifier.
- "MCP6001/1R/1U/2/4" datasheet 1 MHz, Low-Power Op Amp.
- "OP-37" datasheet low noise, precision, High speed Operational amplifier.
- "LT1970" datasheet 500mA Power Op Amp with Adjustable Precision Current Limit.

Index Terms

Computer Science
Integrated Circuits

Keywords
Op-amp Parameters  Smart search  Pseudo code  Selected IC