Current Series and Current Shunt Negative Feedback Amplifier using JFET

Model : SD-150

SINCOM SD-150 Current Series and Current Shunt Negative Feedback Amplifier using JFET is a Two-In-One remarkable simply designed trainer for the purpose to study the concept, operation, Frequency response and determine the Bandwidth, Voltage gain and other parameters of a Current Series and Current Shunt negative feedback Amplifier using JFET in a simple experimental way.

Features

- Two Separate modules of Current Series and Current Shunt negative feedback circuits
- Current Series Negative feedback amplifier uses N Channel JFET in CS mode with voltage divider gate bias and source resistor capacitor feedback elements.
- Current Shunt negative feedback uses two stage RC Coupled CS Amplifier using N Channel JFET in voltage divider bias mode, with the feedback from the second stage source to the first stage gate input through RC network.
- Output with and without Feedback
- N-Channel JFET of TO-72 package on board
- Resistive Drain and Output Load for Current series circuit
- Resistive Drain Load for Current Shunt circuit
- Switch to select/deselect the RC feedback elements in the circuit
- Input and Output Coupling Capacitors
- In-Built Fixed regulated DC Power Supply
- User friendly Design
- Very Easy for Operation
- Multi color Circuit Diagram is printed on the front panel of the white board
- Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- Facility to connect external Function Generator and Oscilloscope
- Interconnections by 2mm high quality banana sockets and pins

- ❖ Maximum Test points to explore all the corners of experiment
- ❖ 1 Year Warranty

Technical Specifications

- AC Mains Power Supply : 230V ±10%, 50Hz
- DC Power Supply : IC Regulated Fixed +12V/500mA
- Amplifier Types : Current Series and Current Shunt Negative F/B Amplifier
- Transistor Type and Package : N-Channel JFET, TO-72 Package
- JFET Used : Three BFW10
- Max. Drain Source Voltage : 12 VDC
- Gate Source Voltage V_{GS} : 5V
- Transistor Configuration : CS mode for Current Series and Two stage RC coupled CS mode for Current Shunt
- Biasing Method : Voltage Divider Bias
- Gate Resistors : Two for Current Series and four for Current shunt
- Source Resistors : One No. with capacitor for each type
- Feedback Elements : RC Network with a Feedback select Switch for both types
- Input Output Coupling Capacitors : Two No. Electrolytic type
- Drain Output Load : 10KΩ Fixed Resistive Load for both types
- Input Signal Type : Sine wave
- Max. Input Frequency Range : 60Hz-500KHz approx.
- Output Frequency Response : 60Hz-100KHz approx.
- Weight : 3.0 kg (approx)
- Dimensions (mm) : L 245 x W 320 x H 115
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50^{0}C, 80% RH

Learning Scope

- **To study Current Series Negative Feedback Amplifier using JFET.**
  To observe and Note the change in O/P voltage w.r.t. change in I/P frequency. To Plot the Frequency response curve and to Determine Voltage Gain and Bandwidth.
- **To study Current Shunt Negative Feedback Amplifier using JFET.**
  To observe and Note the change in O/P voltage w.r.t. change in I/P frequency. To Plot the Frequency response curve and to Determine Voltage Gain and Bandwidth.

Other Instruments Required : Oscilloscope, Function Generator 1MHz.

Accessories Included : Set of Patch Cord and Details Instruction Manual

Subject to Change