Voltage Series and Voltage Shunt Negative Feedback Amplifier using JFET

Model : SD-149

SINCOM SD-149 Voltage Series and Voltage 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 Voltage Series and Voltage Shunt negative feedback Amplifier using JFET in a simple experimental way.

Features

- ❖ Two Separate modules of Voltage Series and Voltage Shunt negative feedback circuits
- ❖ Voltage Series Negative feedback amplifier uses N Channel JFET JFET in CD mode with voltage divider gate bias and source feedback resistor.
- ❖ Voltage Shunt Negative feedback amplifier uses N Channel JFET JFET in CS mode with drain to gate bias and source resistive capacitive feedback network.
- ❖ N-Channel JFET of TO-72 package on board
- ❖ Resistive source Load for Voltage series circuit
- ❖ Resistive Drain Load for Voltage Shunt 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 : Voltage Series and Voltage Shunt Negative F/B Amplifier
- Transistor Type and Package : N-Channel JFET, TO-72 Package
- JFET Used : Two BFW10
- Max. Drain Source Voltage : 12 VDC
- Gate Source Voltage V_{GS} : 5V
- Transistor Configuration : CD mode for Voltage Series and CS mode for Voltage Shunt
- Biasing Method : Voltage Divider Bias for Voltage Series and Drain to Gate bias for Voltage Shunt
- Gate Resistors : One for Voltage Series and Two for Voltage Shunt
- Source Load : 10KΩ Fixed Resistive Load for Voltage Series
- Drain Load : 10KΩ Fixed Resistive Load for Voltage Shunt
- Source Resistors : One No. with capacitor for Voltage Shunt
- Input Output Coupling Capacitors : Two No. Electrolytic type
- 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 Voltage 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 Voltage 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