BJT,JFET and MOSFET as Amplifier

Model : SD-151

SINCOM SD-151 BJT,JFET and MOSFET as Amplifier is Three-In-One simply designed trainer for the purpose to study the concept, operation, Frequency response and determine the Bandwidth, Voltage gain and other parameters of BJT, JFET and MOSFET as an Amplifiers in a simple experimental way.

Features

- User friendly Design
- BJT NPN BC548 with Self base biasing operates as a Single stage CE amplifier circuit
- N Channel JFET with voltage divider biasing in CS mode operates as a JFET amplifier circuit
- N Channel E type MOSFET with voltage divider biasing in CS mode operates as a MOSFET amplifier circuit
- Silicon NPN BJT TO-92,N-Channel JFET TO-72 and N-Channel E type MOSFET TO-220 package on board
- Resistor Bank at Emitter to control the gain, Resistive Collector Load
- Resistive Drain Load
- In-Built Fixed regulated DC Power Supply
- 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
- Transistor Type and Package : BJT Silicon-NPN TO-92, N-Channel JFET TO-72 and N Channel Enhancement type MOSFET TO-220 Package
- Transistor Used : BJT BC 548, JFET BFW10 and MOSFET IRF540/840
- Transistor Configuration : CE mode for BJT, CS mode for JFET & MOSFET
- Biasing Method : Voltage Divider Bias
- Max. Collector Emitter Voltage : 12 VDC
- Emitter Base Voltage V_{BE} : 5V
- Max. Drain Source Voltage : 12 VDC
- Gate Source Voltage V_{GS} : 5V
- Base, Gate Resistors : Two No. for BJT, JFET and MOSFET
- Source Resistor : One No. with bypass capacitor for JFET and MOSFET
- Input Output Coupling Capacitors : Two No. Electrolytic type for BJT,JFET and MOSFET
- Resistive Load : 10KΩ Fixed Resistive Load for BJT, JFET and MOSFET
- Input Signal Type : Sine wave

- Max. Input Frequency Range : 60Hz-500KHz approx.
- Output Frequency Response : 100Hz-50KHz approx.
- Weight : 3.0 kg (approx)
- Dimensions (mm) : L 270 x W 390 x H 130
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50^{0}C, 80% RH

Learning Scope

- To study the Single Stage CE Amplifier .
- To Study JFET as Amplifier circuit.
- To Study MOSFET as Amplifier circuit.
- To Observe & Note change in output w.r.t. change in I/P Frequency.
- To Plot frequency response & To Determine Bandwidth, Voltage Gain.

Other Instruments Required : Oscilloscope, Function Generator 1MHz.

Accessories Included : Set of Patch Cord and Details Instruction Manual

Subject to Change