



An ISO 9001:2015 Co.

## JFET and MOSFET as Amplifier

### Model : SD-118

**SINCOM SD-118 JFET and MOSFET as Amplifier** is Two-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 JFET and MOSFET as an Amplifiers in a simple experimental way.

### Features

- ❖ User friendly Design
- ❖ 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
- ❖ N-Channel JFET TO-72 and N-Channel E type power MOSFET TO-220 package on board
- ❖ 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 $\pm$ 10%, 50Hz
▪ DC Power Supply	: IC Regulated Fixed +12V/500mA
▪ Transistor Type and Package	: N-Channel JFET TO-72 Package and N Channel Enhancement type MOSFET TO-220 Package
▪ Transistor Used	: JFET BFW10 and MOSFET IRF540/840
▪ Transistor Configuration	: Common Source (CS) mode
▪ Biasing Method	: Voltage Divider Bias
▪ Max. Drain Source Voltage	: 12 VDC
▪ Gate Source Voltage $V_{GS}$	: 5V
▪ Gate Resistors	: Two No. for JFET and MOSFET
▪ Source Resistor	: One No. with bypass capacitor for JFET and MOSFET
▪ Input Output Coupling Capacitors	: Two No. Electrolytic type for JFET and MOSFET
▪ Drain Load	: 10K $\Omega$ Fixed Resistive Load for JFET and MOSFET
▪ Input Signal Type	: Sine wave
▪ Max. Input Frequency Range	: 60Hz-500KHz approx.
▪ Output Frequency Response	: 100Hz-50KHz approx.
▪ AC Mains Power Supply	: 230V $\pm$ 10%, 50Hz
▪ Weight	: 3.0 kg (approx)



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- Dimensions (mm) : L 245 x W 320 x H 115
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50<sup>0</sup>C, 80% RH

### Learning Scope

- 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