

## MOSFET as Amplifier

**Model : SD-117**



**SINCOM SD-117 MOSFET as Amplifier** is simply designed trainer for the purpose to study the concept, operation, Frequency response and determine the Bandwidth, Voltage gain and other parameters of MOSFET as an Amplifier in a simple experimental way.

### Features

- ❖ User friendly Design
- ❖ N Channel E type MOSFET with voltage divider biasing in CS mode operates as a MOSFET amplifier circuit
- ❖ N-Channel Enhancement type power MOSFET of TO-220 package on board
- ❖ Resistive Drain Load
- ❖ Input and Output Coupling Capacitors
- ❖ 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 Enhancement type MOSFET, TO-220 Package
▪ MOSFET Used	: IRF540/840
▪ MOSFET Configuration	: Common Source (CS) mode
▪ Biasing Method	: Voltage Divider Bias
▪ Max. Drain Source Voltage	: 12 VDC



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- Gate Source Voltage  $V_{GS}$  : 5V
- Gate Resistors : Two No.
- Source Resistor : One No. with bypass capacitor
- Input Output Coupling Capacitors : Two No. Electrolytic type
- Drain Load : 10K $\Omega$  Fixed Resistive Load
- Input Signal Type : Sine wave
- Max. Input Frequency Range : 60Hz-500KHz approx.
- Output Frequency Response : 100Hz-50KHz approx.
- Weight : 2.0 kg (approx)
- Dimensions (mm) : L 220 x W 270 x H 110
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50 $^{\circ}$ C, 80% RH

### Learning Scope

- 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