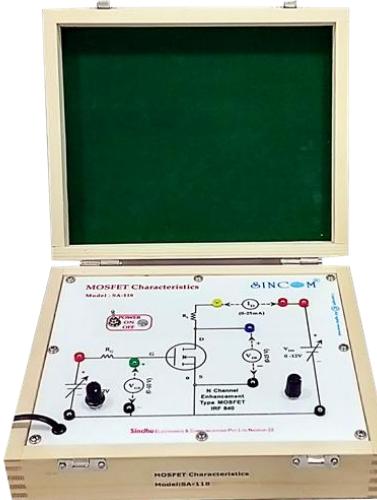


MOSFET Characteristics

Model : SA-118



SINCOM SA-118 MOSFET Characteristics is useful to study Drain and Transfer characteristics of N-Channel Enhancement type Power MOSFET. The power MOSFET is widely used for very fast switching operations as well as for amplification processes. The trainer is simply designed to plot its characteristics and determine the various operational parameters in a simple experimental way. The trainer is without meters and has the facility to connect the external analog or digital voltmeter and ammeter in the circuit.

Features

- ❖ N-Channel Enhancement type power MOSFET is provided
- ❖ TO-220 Metal Transistor package
- ❖ Low ON-State Resistance, Fast Switching and low thermal Resistance
- ❖ Individual control of Gate and Drain Input DC voltages
- ❖ Current controlling resistors in Gate and Drain
- ❖ In-Built Variable regulated DC Power Supply
- ❖ Multi color Circuit Diagram printed on the front of the white board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ Facility to connect the external Digital/ Analog Voltmeter and Ammeter
- ❖ User friendly Designed
- ❖ Very Easy for Operation
- ❖ 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	: Two Nos. Variable +12V/500mA
▪ Gate-Source Voltage V_{GS}	: IC Regulated variable 0V to +12V/500mA
▪ Drain-Source Voltage V_{DS}	: IC Regulated variable 0V to +12V/500mA



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■ Transistor Package	: TO-220
■ MOSFET Type	: N Channel Enhancement type
■ MOSFET Used	: IRF540/840
■ Pin Count	: 3 Gate, Drain and Source
■ Gate Current Controlling Resistor	: MFR 10KΩ, ±5%
■ Drain Current Controlling Resistor	: MFR 10KΩ, ±5%
■ Max. Drain-Source Voltage V_{DS}	: 100V DC
■ Max. Gate-Source Voltage V_{GS}	: 20V DC
■ Max. Gate Threshold Voltage V_{Gsth}	: 4V DC
■ Max. Drain Current	: 30A
■ Drain Source Resistance (R_{DS})	: 0.85 Ohms
■ Operating Junction Temperature	: -65 to +150°C
■ Weight	: 2.0 kg (approx)
■ Dimensions (mm)	: L 220 x W 270 x H 110
■ Interconnections	: 2mm Banana sockets
■ Operating Temperature	: 0-50°C, 80% RH

Learning Scope

- To Study the Drain characteristics of N-channel Enhancement type MOSFET
- To Study the Transfer characteristics of N-channel Enhancement type MOSFET
- To Determine V_{GS} Threshold Voltage of given MOSFET.

Other Instruments Required

SINCOM Digital Multi VI meter (DMVI) : Model DMVI-03 Range V_1 -20V, I_1 -20mA, V_2 -20V, I_2 -200mA DC

Accessories Included

Set of Patch Cord and Details Instruction Manual