

MOSFET Characteristics with Digital Meters

Model : SA-118DM



SINCOM SA-118DM MOSFET Characteristics with Digital meters is comprehensive remarkable trainer 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 equipped with on board Digital voltmeter and Digital Ammeter.

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
- ❖ On Board 3^{1/2} Digit Digital 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

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| ▪ AC Mains Power Supply | : 230V \pm 10%, 50Hz |
| ▪ DC Power Supply | : Two Nos. Variable +12V/500mA |
| ▪ Gate-Source Voltage V_{GG} | : IC Regulated variable 0V to +12V/500mA |
| ▪ Drain-Source Voltage V_{DD} | : IC Regulated variable 0V to +12V/500mA |
| ▪ Transistor Package | : TO-220 |



An ISO 9001:2015 Co.

▪ MOSFET Type	: N Channel Enhancement type
▪ MOSFET Used	: IRF540/840
▪ Pin Count	: 3 Gate, Drain and Source
▪ Gate Current Controlling Resistor	: MFR 10K Ω , $\pm 5\%$
▪ Drain Current Controlling Resistor	: MFR 10K Ω , $\pm 5\%$
▪ 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 $^{\circ}$ C
▪ Total Digital Meters	: 03 (2 Voltmeter and 1 Ammeter)
▪ Digital Voltmeters	: 0-20V (Two Nos.)
▪ Digital Ammeter	: 0-20mA (One No.)
▪ Meter Display	: Red Color, 3 $^{1/2}$ Digit , LED Display
▪ 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 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 : Nil

Accessories Included : Set of Patch Cord and Details Instruction Manual