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SINC 

Sindhu ELECTRONICS & COMMUNICATIONS PVT. LTD.

Electronics Educational Trainer Kits

Transistor Characteristics in CE Mode with Digital Meters

Model : SA-112DM



SINCOM SA-112DM Transistor Characteristics in CE mode with Digital meters is comprehensive remarkable trainer to study Input and Output characteristics of Silicon NPN BJT in CE mode/configuration. The transistors are widely used as a basic element in every electronic circuits. Hence it is necessary to study and determine the various functional parameters of the BJT. The trainer is simply designed to study its characteristics and the various functional parameters in a simple experimental way. The trainer is equipped with on board Digital voltmeter and Digital Ammeter.

Features

- ❖ Silicon NPN Bipolar Junction Transistor of TO-92 package in CE mode is provided
- ❖ Individual control of Base and Collector DC Input voltage
- ❖ In-Built Variable regulated DC Power Supply
- ❖ Current controlling resistor in base and Collector
- ❖ 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 |
| ▪ Base-Emitter DC Supply | : IC Regulated variable 0V to +12V/500mA |
| ▪ Collector-Emitter DC Supply | : IC Regulated variable 0V to +12V/500mA |
| ▪ Transistor Package | : TO-92 |
| ▪ Transistor Type | : BJT-Silicon-NPN |
| ▪ Transistor Used | : BC548 |
| ▪ Transistor Configuration | : CE mode |



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- Junction Voltage : 0.7V
- Max. Collector Emitter Voltage : 12 VDC
- Max. Collector Base Voltage : 12 VDC
- Max. Emitter Base Voltage : 12 VDC
- Maximum Collector Current : 20mA DC
- Base Current Controlling Resistor : MFR 10K Ω , $\pm 5\%$
- Collector Current Controlling Resistor : MFR 1K Ω , $\pm 5\%$
- Operating Junction Temperature : -55 to +150 $^{\circ}$ C
- Total Digital Meters : 04 (2 Voltmeter and 2 Ammeter)
- Digital Voltmeters : 0-2V and 0-20V (Two Nos.)
- Digital Ammeter : 0-2mA and 0-20mA (Two Nos.)
- 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 Transistor characteristics in CE Mode.
- To Study and Plot Input and Output Characteristics of BJT in CE Mode.
- To Determine Dynamic Input and Output resistance, DC and AC Current Gain of given Transistor

Other Instruments Required : Nil

Accessories Included : Set of Patch Cord and Details Instruction Manual