

Transistor Characteristics in CE,CB,CC Mode

Model : SA-115



SINCOM SA-115 Transistor Characteristics in CE/CB/CC mode is an **All-In-One Trainer** to study Input and Output characteristics of Silicon NPN BJT in CE/CB/CC modes. 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 CE/CB/CC configuration characteristics and the various functional 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

- ❖ Silicon NPN Bipolar Junction Transistor of TO-92 package in CE,CB,CC mode is provided
- ❖ Individual modules of BJT CE, CB and CC modes
- ❖ Individual control of Base/Emitter 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
- ❖ 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

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| ▪ AC Mains Power Supply | : 230V \pm 10%, 50Hz |
| ▪ DC Power Supply | : Two Variable \pm 12V/500mA for each mode |
| ▪ Base-Emitter DC Supply | : IC Regulated variable 0V to +12V/500mA |
| ▪ Collector-Emitter DC Supply | : IC Regulated variable 0V to +12V/500mA |
| ▪ Emitter-Base DC Supply | : IC Regulated variable 0V to -12V/500mA |



An ISO 9001:2015 Co.

- Transistor Package : TO-92
- Transistor Type : BJT-Silicon-NPN
- Transistor Used : BC548-Three No.
- Transistor Configuration : CE/CB/CC mode
- 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
- Maximum Emitter Current : 20mA DC
- Base Current Controlling Resistor : MFR 10K Ω , \pm 5%
- Emitter Current Controlling Resistor : MFR 1K Ω , \pm 5%
- Collector Current Controlling Resistor : MFR 1K Ω , \pm 5%
- Operating Junction Temperature : -55 to +150^oc
- Weight : 3.0 kg (approx)
- Dimensions (mm) : L 270 x W 390 x H 130
- Interconnections : 2mm Banana sockets
- Operating Temperature : 0-50^oC, 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.
- **To Study the Transistor characteristics in CB Mode.** To Study and Plot Input and Output Characteristics of BJT in CB Mode. To Determine Dynamic Input and Output resistance at a given operating point.
- **To Study the Transistor characteristics in CC Mode.** To Study and Plot Input and Output Characteristics of BJT in CC Mode.

Other Instruments Required

SINCOM Digital Multi VI meter (DMVI) : Model DMVI-01 Range V_1 -2V, I_1 -2mA, V_2 -20V, I_2 -20mA DC

Accessories Included

Set of Patch Cord and Details Instruction Manual