

## Transistor Characteristics in CB Mode

**Model : SA-113**



**SINCOM SA-113 Transistor Characteristics in CB mode** is very useful to study Input and Output characteristics of Silicon NPN BJT in CB 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 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 Cb mode is provided
- ❖ Individual control of Emitter and Collector DC Input voltage
- ❖ In-Built Variable regulated DC Power Supply
- ❖ Current controlling resistor in Emitter 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 Nos. Variable $\pm$ 12V/500mA      |
| ▪ Emitter-Base DC Supply   | : IC Regulated variable 0V to -12V/500mA |
| ▪ Collector-Base DC Supply | : IC Regulated variable 0V to +12V/500mA |
| ▪ Transistor Package       | : TO-92                                  |
| ▪ Transistor Type          | : BJT-Silicon-NPN                        |



An ISO 9001:2015 Co.

- Transistor Used : BC548
- Transistor Configuration : CB 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
- Emitter Current Controlling Resistor : MFR 10K $\Omega$ ,  $\pm 5\%$
- Collector Current Controlling Resistor : MFR 1K $\Omega$ ,  $\pm 5\%$
- Operating Junction Temperature : -55 to +150 $^{\circ}$ C
- 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 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.

### Other Instruments Required

**SINCOM Digital Multi VI meter (DMVI) : Model DMVI-06** Range  $V_1$ -20V,  $I_1$ -20mA,  $V_2$ -20V,  $I_2$ -20mA DC

### Accessories Included

Set of Patch Cord and Details Instruction Manual