



An ISO 9001:2015 Co.

## To Study H – Parameters hoe & hre of Transistor

### Model : SD-143

**SINCOM SD-143 To study H-Parameters hoe & hre of Transistor** is simply designed trainer for the purpose to study the hoe & hre parameters of Transistor in common emitter mode in a simple experimental way with facility to connect the external voltmeter, ammeter and AF signal in the circuit.

### Features

- ❖ BJT NPN BC548 wired in base biasing single stage CE amplifier to study H- parameters hoe & hre.
- ❖ One Silicon NPN BJT of TO-92 package on board
- ❖ Variable Resistive Collector Load
- ❖ In-Built Fixed regulated DC Power Supply
- ❖ User friendly Design
- ❖ Very Easy for Operation
- ❖ Multi color Circuit Diagram is printed on the front panel of the white board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ Facility to connect external Voltmeters, Milliammeter, Function Generator and Oscilloscope
- ❖ 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                  | : IC Regulated Fixed +12V/500mA            |
| ▪ Biasing Method                   | : Fixed Base Bias without Emitter Feedback |
| ▪ Transistor Type and Package      | : BJT-Silicon-NPN, TO-92 Package           |
| ▪ Transistor Used                  | : One BC 548                               |
| ▪ Transistor $\beta$               | : @170-180                                 |
| ▪ Transistor Configuration         | : CE mode                                  |
| ▪ H-Parameters                     | : hoe and hre                              |
| ▪ BJT Junction Voltage             | : 0.7V                                     |
| ▪ Max. Collector Emitter Voltage   | : 12 VDC                                   |
| ▪ Resistor Bank                    | : At Base and Collector                    |
| ▪ Collector Load                   | : Fixed and Variable Resistive Load        |
| ▪ Input Output Coupling Capacitors | : Two Nos.                                 |
| ▪ Input Signal Type                | : Sine wave                                |
| ▪ Max. Input Frequency Range       | : 60Hz-100KHz approx.                      |
| ▪ Output Frequency Response        | : 60Hz-50KHz approx.                       |
| ▪ Weight                           | : 2.0 kg (approx)                          |
| ▪ Dimensions (mm)                  | : L 220 x W 270 x H 110                    |
| ▪ Interconnections                 | : 2mm Banana sockets                       |
| ▪ Operating Temperature            | : 0-50 <sup>0</sup> C, 80% RH              |



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### **Learning Scope**

- To Study h-parameters  $h_{oe}$  &  $h_{re}$  of CE Transistor in Common Emitter mode.
- To Observe the change in this parameter for the change in DC collector current  $I_C$ .

**Other Instruments Required :** Digital Multimeter, Oscilloscope, Function Generator 1MHz.

**Accessories Included :** Set of Patch Cord and Details Instruction Manual