BJT Collector to Base Biasing

Model : SC-102

SINCOM SC-102 BJT Collector to Base Biasing is simply designed trainer for the purpose to study BJT Collector to Base Bias method and determine the various operational parameters with a wide range of components bank in a simple experimental way.

Features

- User friendly Design
- One Silicon NPN BJT of TO-92 package on board
- NPN BJT with higher β
- Resistor Bank at Base
- Resistive Collector Load
- In-Built Fixed regulated DC Power Supply
- Easy to select the different biasing resistors
- Facility to plot DC Load Line
- Very Easy for Operation
- Multi color Circuit Diagram is printed on the front panel of the board
- Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- Facility to connect external Digital/Analog Voltmeter and Ammeter or Digital Meters
- Interconnections by 2mm high quality banana sockets and pins
- Maximum Test points to explore all the corners of experiment
- 1 Year Warranty

Technical Specifications

DC Power Supply	: IC Regulated Fixed +12V/500mA
Biasing Method	: Collector to Base Bias
Transistor Type and Package	: BJT-Silicon-NPN, TO-92 Package
Transistor Used	: One SL/CL100
Transistor β	: @170-180
Transistor Configuration	: CE mode
BJT Junction Voltage	: 0.7V
Max. Collector Emitter Voltage	: 12 VDC
Base Resistor Bank	: Three Base Resistor includes Two Fixed and One Variable
Fixed Base Resistor Bank	: Two Fixed-MFR 10KΩ & 22KΩ, ±5%
Variable Base Resistor Bank	: One Variable 1MΩ Potentiometer
Collector Load	: 2.2KΩ Fixed Resistive Load
AC Mains Power Supply	: 230V ±10%, 50Hz
Weight	: 2.0 kg (approx)
Dimensions (mm)	: L 220 x W 270 x H 110
Interconnections	: 2mm Banana sockets
Operating Temperature	: 0-50^{0}C, 80% RH

Learning Scope

- To study BJT Collector to Base Biasing circuit.
- To Determine the various currents & voltages I_B,I_C,V_B,V_C,V_{CE},V_E and Stability factor
- To Plot DC load line & observe the change w.r.t. change in base resistors.

Other Instruments Required

SINCOM Digital Multi VI meter (DMVI) : Model DMVI-03 Range V_1-20V, I_1-20mA,V_2-20V,I_2-200mA DC

Accessories Included : Set of Patch Cord and Details Instruction Manual

Subject to Change