BJT Fixed Base Biasing With & Without Emitter Resistor

Model : SC-101

SINCOM SC-101 BJT Fixed Base Biasing with and without Emitter Resistor is simply designed trainer for the purpose to study BJT Fixed Base Bias method with and without Emitter Resistor 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 and Emitter
- 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	: Fixed Base Bias with and without Emitter Feedback
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	: Two- MFR 100KΩ and 180KΩ, ±5%
Emitter Resistor Bank	: Two- MFR 180Ω and 0 Ω, ±5%
Collector Load	: 470Ω 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 Fixed Bias circuit with & without Emitter feedback Resistor.
- 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 resistor & emitter feedback resistor.

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