

Single Stage CE Amplifier

Model : SD-101



SINC SD-101 Single Stage CE Amplifier is simply designed trainer for the purpose to study the concept, operation, Frequency response and determine the Bandwidth, Voltage gain and other parameters of a BJT as Single Stage CE Amplifier with a gain control in a simple experimental way.

Features

- ❖ User friendly Design
- ❖ BJT NPN BC548 with Self base biasing operates as a Single stage CE amplifier circuit
- ❖ Silicon NPN BJT of TO-92 package on board
- ❖ Resistor Bank at Emitter to control the gain
- ❖ Resistive Collector Load
- ❖ In-Built Fixed regulated DC Power Supply
- ❖ 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 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
▪ Amplifiers Type	: Single Stage CE Amplifier
▪ Transistor Type and Package	: Bi-Polar Silicon-NPN BC548, TO-92 Package
▪ Transistor Configuration	: CE mode
▪ Biasing Method	: Self Bias
▪ BJT Junction Voltage	: 0.7V
▪ Max. Collector Emitter Voltage	: 12 VDC



An ISO 9001:2015 Co.

- Emitter Base Voltage V_{BE} : 5V
- Base Resistors : Two No.
- Input Output Coupling Capacitors : Two No. Electrolytic type
- Gain Control Emitter Resistor Bank : Two- MFR 1K Ω and 2.2K Ω , $\pm 5\%$
- Collector Load : 10K Ω Fixed Resistive Load
- Input Signal Type : Sine wave
- Max. Input Frequency Range : 60Hz-500KHz approx.
- Output Frequency Response : 100Hz-30KHz approx.
- 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 Single Stage CE Amplifier .
- To Observe & Note the change in O/P w.r.t. change in I/P Frequency.
- To Plot the frequency response & To Determine Bandwidth of circuit for the different Values of emitter resistor RE.

Other Instruments Required : Oscilloscope, Function Generator 1MHz.

Accessories Included : Set of Patch Cord and Details Instruction Manual