



An ISO 9001:2015 Co.

Colpitts Oscillator

Model : SE-103

SINCOM SE-103 Colpitts Oscillator is a useful trainer to study the concept and operation of Colpitts Oscillator with LC positive feedback to generate RF Output Frequency using BJT with facility to select multiple radio frequencies in a simple experimental way.

Features

- ❖ BJT Transistor circuit of a self bias CE Amplifier mode with LC Feedback elements.
- ❖ One Inductors and Two Capacitor Feedback components
- ❖ Capacitor Bank to provide Two output frequency in RF range.
- ❖ Facility to select the two output frequencies.
- ❖ 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 Oscilloscope and 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

▪ AC Mains Power Supply	: 230V $\pm$ 10%, 50Hz
▪ DC Power Supply	: IC Regulated Fixed +12V/300mA
▪ Transistor Type and Package	: BJT Silicon-NPN BC548, TO-92 Package
▪ Amplifier Type	: BJT Single Stage CE Amplifier in a Self Bias mode
▪ Feedback Type	: Positive
▪ Feedback Elements	: One Inductor and Two Capacitors
▪ Output Control	: By two capacitors
▪ Output Frequencies	: Two RF O/Ps in MHz
▪ Max. Collector Emitter Voltage	: 12 VDC
▪ Weight	: 2.0 kg (approx)
▪ Dimensions (mm)	: L 220 x W 270 x H 110
▪ Interconnections	: 2mm Banana sockets
▪ Operating Temperature	: 0-50°C, 80% RH

Learning Scope

- To Study operation of Colpitts Oscillator Circuit.
- To Determine the Quiescent Operating Point of Transistor.
- To Observe & Note Change in Frequency of Oscillation w.r.t. change in feedback elements.
- Compare the Theoretical & Practical values.

Other Instruments Required : Digital Multimeter and Oscilloscope

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