

Effect of various filters for HWR & FWR

Model : SB-106

SINCOM SB-106 Effect of Various Filters for HWR and FWR is remarkable simply designed trainer to study the various operational aspects of a effect of various filter for Half and Center tap Full wave Rectifier using two PN Junction Diodes, with the facility to select different filters and variable load in a simple experimental way. This includes C,CLC,CL,LC & π filters with variable resistive load. This has the facility to connect the external analog or digital Voltmeter, Ammeter and Oscilloscope in the circuit.

Features

- ❖ User friendly Design
- ❖ Two Silicon PN junction Diode based Half wave and center tap Full wave rectifier circuit
- ❖ Five Filters C,CLC,CL,LC & π types are provided
- ❖ HWR and FWR output for with and without filters
- ❖ Single Phase center tap step down Transformer
- ❖ Easy selection of filters using SPDT Switch
- ❖ Variable Resistive Load
- ❖ Very Easy for Operation
- ❖ Multi color Circuit Diagram 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 Digital/Analog Voltmeter and Ammeter
- ❖ Facility to connect Oscilloscope for signal analysis
- ❖ 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
▪ No. of Filters	: 05
▪ Filter Types	: Selectable C,CLC,CL,LC & π types
▪ Filters Selection	: SPDT Switch
▪ Filter Capacitors	: Two Electrolytic Capacitors of 100 μ F and 1000 μ F
▪ Filter Inductor	: One Inductor 68mH
▪ Load Resistor	: Variable Resistive Load of 10K Ω
▪ Rectifier Types	: Half wave and Center tap Full wave
▪ HWR Output Voltage	: +12V DC @
▪ FWR Output Voltage	: +12V DC @
▪ Diodes Used	: Two Silicon PN Junction Diodes 1N4007
▪ Diode Package	: DO-41 Tape and Reel type
▪ Transformer ratings	: Center tap Step Down 12V-0V-12V/500mA/50Hz
▪ 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



An ISO 9001:2015 Co.

Learning Scope

- To Study the Half Wave Rectifier (HWR) with C, CLC, CL, LC & π filter.
- To Study the Center tap Full Wave Rectifier (FWR) with C, CLC, CL, LC & π filter..
- To observe & Note the change in Ripple factor with respect to change in different filters.
- To Observe and note Input and Output waveforms on Oscilloscope.

Other Instruments Required

SINCOM Digital VI meter (DVI) : Model DVI-01 Range V-20V,I-20mA DC, Oscilloscope.

Accessories Included

Set of Patch Cord and Details Instruction Manual