

SMPS for Mobile Phone

Model : SB-127



SINCOM SB-127 SMPS for Mobile Phone is a remarkable very useful simply designed trainer to study the operation, line and load regulation characteristics of a Switching Mode Power supply (SMPS) for Mobile Phone application in a simple experimental way. The Trainer is without meters and has the facility to connect the external analog or digital Voltmeter and Ammeter in the circuit.

Features

- ❖ User friendly Design
- ❖ +5V SMPS Regulated DC Output voltage
- ❖ Wide AC Input Voltage range
- ❖ IC Based PWM Controller and Fly-back converter
- ❖ Opto-coupler IC based Feedback signal converter
- ❖ EMI Filter and Flyback SMT Transformer
- ❖ MOSFET as Switching Device
- ❖ Schottky Diode as a Rectifier with Capacitor Feedback
- ❖ Variable Resistive Load
- ❖ Low Output voltage Ripples
- ❖ High operating Temperature range
- ❖ Facility to apply variable single phase AC Input voltage from Dimmerstat
- ❖ Very Easy for Operation
- ❖ Multi color Circuit Diagram is screen printed on the front of the white color acrylic board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ Facility to connect external Digital/Analog Voltmeter and Ammeter
- ❖ Interconnections by 2mm high quality banana sockets and pins
- ❖ Maximum Test points to explore all the corners of experiment
- ❖ 1 Year Warranty

Technical Specifications

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| ▪ AC Mains Power Supply | : 230V \pm 10%, 50Hz |
| ▪ AC Input Voltage Range Vin | : Single Phase AC 10V-280V, 50Hz |



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| ▪ Regulated DC Outputs Vo | : +5V |
| ▪ Output Load Current | : 1A Max |
| ▪ Transformer type | : Flyback SMT Transformer |
| ▪ Input Rectifier and Filter | : Full Wave bridge Rectifier with Capacitor filter |
| ▪ Output Rectifier and Filter | : Schottky Diode Rectifier with Capacitor filter |
| ▪ Switching | : MOSFET Based |
| ▪ Controller | : IC Based PWM controller with Fly-back |
| ▪ Load Resistor | : Variable Resistive Load of 10K Ω |
| ▪ Regulation type | : Line and Load Regulation |
| ▪ 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 operation of Switching Mode Power Supply (SMPS) for Mobile Phone Circuit.
- To Observe & Note the regulated DC O/P.
- To observe & Note the time period/frequency of Switching.
- To Study Change in O/P Voltage w.r.t. change in I/P Voltage with Load RL constant (Line Regulation)
- To Study Change in O/P Voltage w.r.t change in Load RL with I/P voltage constant (Load Regulation)

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
Digital Multimeter, Oscilloscope

Accessories Included : Set of Patch Cord and Details Instruction Manual