

UJT (Uni-Junction Transistor) Characteristics

Model : SA-116

SINCOM SA-116 Uni-Junction Transistor (UJT) Characteristics is useful to study V-I characteristics of UJT. The UJT are widely used in Pulse, Switching, Timing, Sensing, Thyristor Phase control and voltage detector circuit. The trainer is simply designed to plot its characteristics and determine the various operational parameters 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

- ❖ Silicon PN Uni-junction TO-18 Metal Transistor type UJT is provided
- ❖ Individual control of Emitter and Base-2 Input DC voltages
- ❖ Current controlling resistors in Emitter, Base-1 and Base-2
- ❖ In-Built Variable regulated DC Power Supply
- ❖ Multi color Circuit Diagram printed on the front of the white board
- ❖ Enclosed in an attractive, light weight, High Quality, Poly Coated Imported Pine Wooden cabinet
- ❖ Facility to connect the external Digital/ Analog Voltmeter and Ammeter
- ❖ User friendly Designed
- ❖ Very Easy for Operation
- ❖ 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	: Two Nos. Variable +12V/500mA
▪ Emitter-Base1 V_{EB}	: IC Regulated variable 0V to +12V/500mA
▪ Base2-Base1 V_{BB}	: IC Regulated variable 0V to +12V/500mA
▪ Transistor Package	: TO-18
▪ UJT Type	: Silicon PN Uni-Junction Transistor
▪ UJT Used	: 2N2646
▪ Emitter Current Controlling Resistor	: MFR 1K Ω , \pm 5%
▪ Base2 Current Controlling Resistor	: MFR 10K Ω , \pm 5%
▪ Base1 Current Controlling Resistor	: MFR 470 Ω , \pm 5%
▪ Intrinsic Standoff Ration η	: 0.56 -0.75 (V_{B2B1} =10V)
▪ Max. Two bases Voltage V_{B2B1}	: 35V
▪ Max. Emitter Reverse Voltage V_{B2E}	: 30V
▪ Max. RMS Emitter Current (I _e)	: 50mA
▪ Max. Peak Emitter Current (I _e)	: 2A
▪ Max. Power Dissipation	: 300mW
▪ Operating Junction Temperature	: -65 to +150 $^{\circ}$ C
▪ Weight	: 2.0 kg (approx)



An ISO 9001:2015 Co.

- 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 the operation of UJT.
- To Study the V-I characteristics of UJT for the Different Values of applied V_{BB} Voltage.
- To Determine Peak-Point (V_p) & Valley-Point (V_v) Voltage of UJT.

Other Instruments Required

SINCOM Digital Multi VI meter (DMVI) : Model DMVI-03 Range V₁-20V, I₁-20mA, V₂-20V, I₂-200mA DC

Accessories Included

Set of Patch Cord and Details Instruction Manual