



OMEGA TYPE PET-401 Power Electronic Training Board has been designed specifically for the study of Electrical Characteristics of Uni-Junction Transistor. The UJTs are widely used for Relaxation Oscillator, waveform & pulse generators and firing circuits of SCR's and TRIAC's. This Training Board can also make use for designing firing circuits and control circuits for thyristors.

Practical experience on this board carries great educative value for Science and Engineering Students.

OBJECT

- 01 Study of Zener Diode as Voltage Regulator
- 02 Study of Static Emitter Characteristics of UJT-Unijunction Transistor on oscilloscope. & Study of effect of V_{BB} on peak point and valley point voltage and valley point current.
- 03 Operation of UJT Relaxation Oscillator and its use as SCR trigger circuit.
- 04 Control of UJT trigger Pulses with shunt transistor.
- 05 Study of Variations in gate resistance & capacitance, resistance of source & drain and their effect on trigger pulse characteristics of UJT relaxation oscillator.
- 06 Various Configurations of UJT relaxation oscillator
 - 6.1. low output impedance
 - 6.2. Moderate output impedance
 - 6.3. High output impedance

FEATURES

The board consists of following built-in parts:

- 01 An isolation transformer 230V AC at 100mA. This protects external instruments from damage if they are not isolated.
 - 02 IC Regulated Power Supply 0-20V DC at 100mA.
 - 03 Bridge rectifier and zener regulator.
 - 04 Potentiometer for frequency control.
 - 05 Selecting different value of resistance and capacitance provided panel.
 - 06 Pulse transformer 1:1:1.
 - 07 UJT 2N 2646 under experiment.
 - 08 Adequate no. of other Electronic Components.
 - 09 Mains ON/OFF switch, Fuse and Jewel light.
 - 10 The unit is operative on 230V $\pm 10\%$ at 50Hz A.C. Mains.
 - 11 Adequate no. of patch cords stackable 4 mm spring loaded plug length 50cm.
 - 12 Good Quality, reliable terminal/sockets are provided at appropriate places on panel for connections/ observation of waveforms.
 - 13 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.
 - 14 Weight : 3.600 Kg. (Approx.)
 - 15 Dimension : W 340 x H 125 x D 210
- OTHER APPARATUS REQUIRED:**
- 01 Digital Multimeter $3\frac{3}{4}$ digit OMEGATYPE DMM-201
 - 02 Dual trace CRO 20MHz OMEGATYPE CRO-20
 - 03 Single Phase Variac Input 0-230V
Output 0-270V at 2Amp

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

OMEGA ELECTRONICS