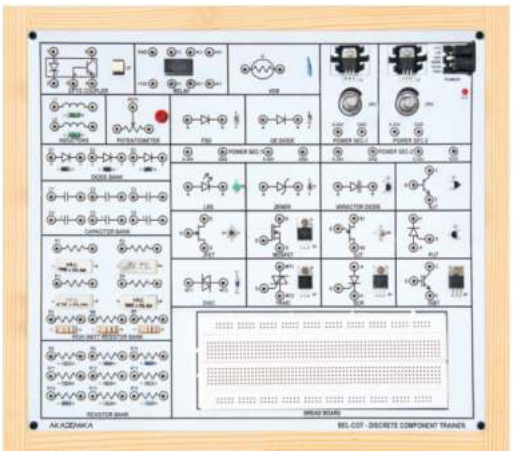
BEL - COT
Discrete Component Trainer



FEATURES

- Covers basic semiconductor devices such as Diodes, BJT, FET, JFET, MOSFET, UJT, PUT, DIAC, TRIAC, SCR, IGBT, LDR, VDR, various Diodes, Opto-Coupler, Relay and fundamental components like R, C and L
- IEEE Symbols of all components are provided on the PCB
- Board components : on-board variable regulated dual power supply (500mA) range from 0V to 30V, external power range from -12V to +35V, Resistor range from100E to 200kΩ, Capacitor range from 0.1µF to 100µF, Inductor (1mH), Potentiometer(10K)
- On-board resources such as Resistor, Capacitor, Diode and Potentiometer banks of different values are available
- On-board Relay and opto-coupler
- On-board regulated variable positive and negative power supply

SPECIFICATIONS

- Dual DC 0 to 30V, variable on-board power supply
- Basic component study like Resistors, Capacitors, Inductors and Potentiometer
- Germanium-Diode(1N60),
- Fast Switching Diode(1N4148),
- Zener Diode(5.1V),
- Light Emitting Diode (Green LED 5mm)
- Bipolar Transistor 2N2646 (UJT-N channel),
- Field Effect Transistor (JFET BF245),
- MOSFET(IRF-Z44N),
- DIAC (Db3),
- TRIAC(BT136),
- IGBT(IRG4BC30S),
- Controlled Rectifier (SCR TYN604),
- Voltage Dependant Resistor (VDR),
- Opto-Coupler (MCT2E) ,
- Varactor Diode(1N4007),
- Relay etc.
- 5 different types of transistors characteristics study like BJT, JFET, MOSFET, UJT and PUT
- 4 different types of power component study like DIAC, TRIAC, SCR and IGBT
- Opto-Coupler and Relay study
- Resistors bank with different wattages
- Capacitor bank
- Inductors
- Potentiometer
- Diodes
- High quality 'Bread board' (175mmX63mm)

EXPERIMENTS

Characteristics experiments

- Study the working of Resistors, Capacitors, Inductors, Potentiometer, Relay
- Study the frequency response working of Opto- Coupler
- Characteristics study of Si-Diode, FSD-Diode, Ge-Diode, Zener Diode, LED, Varactor Diode, VDR
- Characteristics study of BJT in CE, CB and CC mode
- Characteristics study of JFET, MOSFET, UJT, PUT, DIAC, TRIAC, SCR, IGBT

Application experiments

- To find the value of unknown resistance
- Study of Ohm's law
- Study of Kirchoff's voltage and current law
- Study of voltage and current divider rule
- Diode capacitance variation
- Diode clipper and clamper
- Diode half wave and full wave rectifier
- Logic gate using diode
- Voltage multiplier
- Zener diode regulator
- Power supply filter
- Effect of frequency on R, L, C
- RC integrator and differentiator
- RC filters
- Time constant of a series RC circuit
  Transient response of series RC
  Transient response of series RL
  RLC series and parallel resonance

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