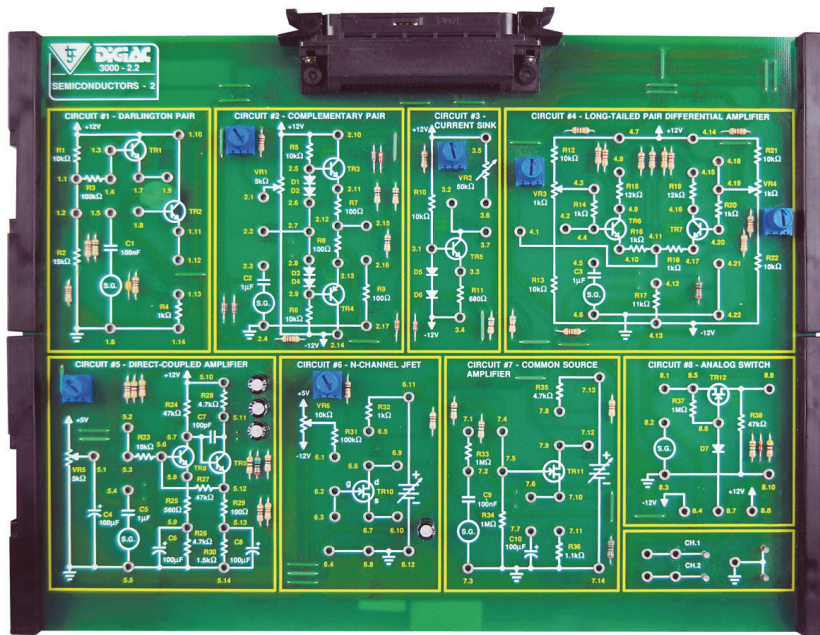


Product Information Sheet

Semiconductors 2 Study Module



This electronics study module is designed to connect to the Advanced Electronics Experiment Platform (300-01) as part of a modular electronics programme.

The study module is designed to extend the student's knowledge of semiconductors by introducing further circuits based on bipolar junction transistors, and field effect transistors.

Using the Advanced Electronics Experiment Platform, a range of faults to be selected and inserted into the study module circuits to develop electronic diagnostic and faultfinding techniques.

The study module is supplied with PDF manuals that provide theory materials, practical tasks, faultfinding activities, and technical information.

Topics Include the Following:

- Darlington Pair Emitter Follower
- Complementary PNP/NPN Pair
- Constant Current Sink
- Differential Amplifier
- Directly Coupled (DC) Amplifier
- JFET Characteristics
- JFET Common Source Amplifier
- Analog Switch

Typical Activities Include:

- Measure DC voltages and currents in a Darlington pair
- Measure voltages and determine the input impedance of a Darlington pair under AC conditions
- Identify cross-over distortion and methods of prevention
- Determine by calculation and measurement DC Currents and voltages in a constant current sink circuit
- Measure quiescent currents in a DC amplifier circuit and calculate current gain
- Measure DC amplifier performance under AC conditions
- Recognize significant features of a DC amplifier
- Obtain JFET parameters by measurement of voltages and currents in a JFET circuit

- Diagnose faults in a JFET amplifier circuit
- Determine the waveform type and maximum AC input voltage for a JFET analog switch
- Identify the purpose and method of control for an analog switch
- Faultfinding semiconductor circuits

Items Included:

- Circuit Card
- Storage Case
- Curriculum Manual in PDF Format

Other Items Required:

- 300-01 Advanced Electronics Experiment Platform
- Digital Multimeter
- Dual Trace Oscilloscope
- Signal Generator

General Information:

Dimensions: 81 x 323 x 256 mm (W, H, D)
Shipping Volume: Approx 0.008 m³
Shipping Weight: Approx 2 kg

Order Code: 302-22

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For more information www.ljcreate.com