

Intelligence Corporation

Model 43-222 2+ level
Full-time laboratory
for small-group experiments

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Power Transformer:
 The transformer is a key component in the power supply section, providing the necessary AC voltage for the subsequent stages. It is connected to the AC input and provides the primary power source for the circuit.

Rectifier and Filter:
 The AC voltage from the transformer is rectified by a bridge rectifier circuit, converting it into a pulsating DC voltage. This voltage is then smoothed by a filter capacitor, which stores energy during the peaks of the waveform and releases it during the troughs, resulting in a more stable DC output.

Regulation:
 The output voltage of the filter is regulated by a series of resistors and a feedback network, ensuring that the output remains constant despite variations in the input voltage or load conditions.

Output Stage:
 The regulated DC voltage is then fed into the output stage, which consists of a series of resistors and a feedback network, providing the final output voltage to the load.

Control and Protection:
 The circuit includes various control and protection features, such as thermal protection and overcurrent protection, to ensure safe and reliable operation under all conditions.

Component Values:
 The values of the resistors, capacitors, and other components are carefully selected to achieve the desired performance characteristics of the circuit.

Construction:
 The circuit is constructed on a printed circuit board (PCB) using standard electronic components and techniques.



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