

ABSTRACT

This research focuses on the design of a power module for GPS trackers using an IC Buck Converter. The background of this study is the need for efficient and reliable power modules in mining locations, where vehicle power sources with high voltage are used as the energy source. The main objective of this research is to adjust the voltage of each component according to its requirements. The IC Buck Converter was chosen for its ability to convert higher input voltage to lower output voltage with high efficiency, allowing precise voltage adjustment for each component. The research methodology involves testing current and voltage to ensure the optimal performance of the power module. Preliminary results indicate that the designed power module can operate efficiently and stably. The conclusion of this research is that the use of an IC Buck Converter can enhance the efficiency and reliability of the power module for GPS trackers in mining locations.

Keywords: Buck Converter, GPS Tracker, Mining, Power