

Annotation

The theme of current work is “Voltage Stabilizer with a Boost Quasi-Resonant Pulsed Converter”.

Work consists of 118 pages, contains 39 pictures, 3 tables, 8 appendixes and refers to 46 literature sources.

Key words: Quasi-Resonant Pulsed Converter ,bulb, galvanic isolation, MCU, free software, programming, AVR, MatLab, OrCad, UART.

The investigation is based on the quasi-resonant pulsed converter and flows through the relevant topics as smooth start of high-power load, integrity PC with MCU and visualization data in real time on the PC.

The elaboration was briefly performed at the conference NTSS 2018.

The influence of turning such kind of devices on directly into mains without any proper remedy is described in the introduction, formulated main purpose of a work, object and subject of investigation, generated the tasks.

According to the set goal in the project gradually examined alternative ways of realization some parts of device, observed particular elements of chosen structure scheme. Modeling has been implemented partly via MatLab and OrCad programmes. There is description of electric schematic diagram with detailed calculations of all elements in it. Briefly described structures for PC and MCU programs their program tree. Because of galvanic isolation absence the process of designing and planning the PCB required particular attention. Last section contains common recommendation for accident prevention and conditions in which better use the device.

The conclusion consists of characteristic about accomplished work and offerings for improvement the device.