

Design and Study of a DC/DC Converter for High Power, 14.4 V and 300 A for Automotive Applications

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Abstract : The shortage of the automotive market in relation to options for sources of high power car audio systems, led to development of this work. Thus, we developed a source with stabilized voltage with 4320 W effective power. Designed to the voltage of 14.4 V and a choice of two currents: 30 A load option in battery banks and 300 A at full load. This source can also be considered as a source of general use dedicated commercial with a simple control circuit in analog form based on discrete components. The assembly of power circuit uses a methodology for higher power than the initially stipulated.

Keywords : DC-DC power converters, converters, power conversion, pulse width modulation converters

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