CONTROL OF A DC-DC CONVERTER TO SUPPLY A CONSTANT CURRENT TO A PULSED LOAD

ABSTRACT

There are provided systems and methods comprising, for a power supply which has an output electrically coupled to at least one pulsed load, generating a signal V_{OV} informative of a voltage V_{OUT} at the output of the power supply, generating a signal $V_{I_{load}}$ informative of a current I_{load} required by the at least one pulsed load, wherein, for at least one given period of time, the current I_{load} comprises a series of pulses, generating a signal $V_{I_{in}}$ informative of a current I_{in} at an input of the power supply, feeding the signal V_{OV}, the signal $V_{I_{load}}$ and the signal $V_{I_{in}}$ to a controller of the power supply, and controlling, by the controller, the current I_{in} such that the signal $V_{I_{in}}$ which is informative thereof, meets a predefined relationship with the signals V_{OV} and $V_{I_{load}}$.

FIG. 1A