

Abstract

Power supply circuit with standby arrangement

A power supply circuit comprises: an input terminal (4), an output terminal (10) and a reference terminal (6), for connection of a direct voltage source (2) to the input terminal (4) and the reference terminal (6) and a load (8) to the output terminal (10) and the reference terminal (6), a series arrangement of an inductive element (14) and a diode (16) which are connected to one another in a first node (18), the inductive element (14) being connected between the input terminal (4) and the first node (18) and the diode (16) being connected between the first node (18) and the output terminal (10), a first electronic switch (20) having a main current path connected between the first node (18) and the reference terminal (6), and a drive circuit (22) for periodically making the main current path of the first electronic switch (20) conductive and non-conductive. The drive circuit (22) comprises a first switching device (40) for making the main current path of the first electronic switch (20) permanently non-conductive in response to a standby signal (SBS). The power supply circuit further comprises a second electronic switch (50) having a control electrode, and a first and a second main electrode which constitute a main current path connected in parallel with the diode (16), and a second switching device (52) for making the main current path of the second electronic switch (50) permanently conductive in response to the standby signal (SBS). In the standby mode the second electronic switch (50) short-circuits the diode (16), as a result of which more voltage is available on the output terminal (10).

(Figure 1)