

Title (en)
POWER SUPPLY WITH MULTIPLE MODES OF OPERATION

Title (de)
STROMVERSORGUNG MIT MEHREREN BETRIEBSARTEN

Title (fr)
ALIMENTATION AVEC MODES D'EXPLOITATION MULTIPLES

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Application
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Abstract (en)
[origin: WO2006012734A1] A high efficiency switching power supply including an analog front end, a battery control circuitry portion, a display and equalization circuitry portion, field effect transistor (FET) drivers, an isolated power supply transformer circuitry (and three associated sets of tap circuitry), microcontroller circuitry, oscillator circuitry, overcharge protection circuitry, programmable logic circuitry portion, and a zero current predictor. Overbiasing of the FET power supply switches, and/or other various circuitry features disclosed herein, helps achieve electrical power efficiencies of preferably greater than 95%, even more preferably greater than 98% and even more preferably greater than 99%. Preferably, the switching power supply has one or more of the following: (1) high electrical power efficiency (>95%, >98%, >99%); (2) overbiasing of a gate of a power supply switch; (3) a power supply switch with a low gate capacitance ratio; (4) multiple modes of operation; and (5) current prediction wherein an inductor voltage is used to control a constant current capacitor whose voltage indicates the level of current in the inductor.

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