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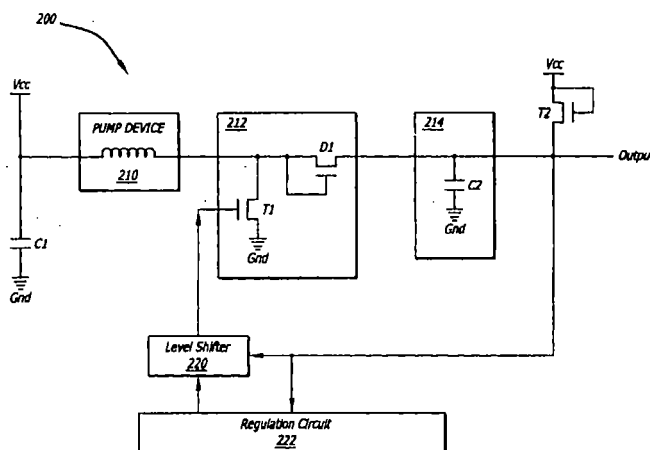
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(54) Title: **INDUCTIVE CHARGE PUMP CIRCUIT FOR PROVIDING VOLTAGES USEFUL FOR FLASH MEMORY AND OTHER APPLICATIONS**



(57) Abstract: A DC voltage boost circuit capable of improved efficiency. The DC voltage boost circuit includes an inductive element, a switching device, an output capacitive element, and a regulation circuit. The switching device periodically causes current to flow through the inductive element in response to a control signal. Each time the switching device causes current to flow through the inductive element, the inductive element stores the energy. When the switching device stops the current from flowing through the inductive element, the stored energy is then transferred to the output capacitive element. The capacitive element accumulates the packets of energy stored in the inductive element in the form of charges to form the output voltage and to generate the control signal for the switching device such that the output voltage is regulated. The control signal can be frequency modulated or pulse width modulated. An integrated circuit is also disclosed comprising a package, a die incorporating the switching device and regulation circuit, wherein the inductive and capacitive elements are situated within the package, but outside of the die.

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