

Title (en)

Fast switching, controlled current source

Title (de)

Gesteuerte Stromquelle mit beschleunigtem Umschalten

Title (fr)

Source de courant contrôlée à commutation accélérée

Publication

EP 0981203 B1 20040121 (FR)

Application

EP 99202607 A 19990810

Priority

FR 9810509 A 19980818

Abstract (en)

[origin: EP0981203A1] The source of controlled current (CSi) receives a control signal (Vi) and delivers a current (IOi) at its output; It comprises a power module (PAi) containing a set of transistors connected in parallel with collectors, connected to the output, and a control module (CNTi) with output connected to emitters for setting the transistors in conducting state in response to the control signal; it also contains a set of 3 diodes (D1i,D2i,D3i) connected in series with a resistor (Rdi), so that the voltage between emitter and base is 3 times the voltage drop on one diode minus the voltage generated by the control module. In a preferred embodiment, the control module (CNT1) comprises a first differential pair of transistors with bases connected to receive a control signal, a third transistor in series with a resistor in path of the main current, and a second differential pair of transistors with bases connected to receive a selection signal. Independent claims are included for a charge pump comprising two sources of controlled current (CS1,CS2) connected to a current mirror formed by a pair of power transistors, and for a radio receiver with frequency controlled by a PLL with such a charge pump.

IPC 1-7

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IPC 8 full level

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