

Title (en)
Switchable current source circuit

Title (de)
Schaltbare Stromquellenschaltung

Title (fr)
Circuit source de courant commutable

Publication
EP 0905598 A1 19990331 (DE)

Application
EP 98117578 A 19980916

Priority
• DE 19743204 A 19970930
• DE 19803471 A 19980129

Abstract (en)
The current source comprises an electronic switch (T2b, T2a) and a current mirror (T3b, T4b, T1b; T3a, T4a, T1a), formed from a control stage (T3b, T4b; T3a, T4a) which provides a control voltage at a voltage output point (x). This is dependent on a reference current at a current input (ipx, inx), and from an output stage (T1b, T1a) with a control input which is connected with the voltage output of the control stage. A control path comprises two connections, from which one forms the current output (pdx) of the current source, and the other is connected with one connection of the electronic switch, in which the other connection of the electronic switch is connected with a supply voltage (VDD; VSS). The current source is switched on and off, dependent on the control input of the electronic switch, in which the control input is connected via a capacitance (T6b; T6a) with the input of the reference current. A transistor (T5b; T5a) is connected between the node located between the electronic switch and the current mirror transistor, and the supply voltage connection, a separate current source, or the input of the reference current, for discharging a voltage at the node occurring when the electronic switch is turned on or off. A further capacitance (T7b; T7a) is connected in series with the capacitance between the control input of the electronic switch and the input of the reference current.

Abstract (de)
Es wird ein schaltbare Stromquellenschaltung, insbesondere zur Verwendung in integrierten PLL-Schaltungen beschrieben, die es unter Verwendung zweier Stromspiegelschaltungen ermöglicht, an ihrem Ausgang sowohl einen Strom mit positivem Vorzeichen als auch einen Strom mit negativem Vorzeichen bereitzustellen. Gegenüber bekannten schaltbaren Stromquellenschaltungen weist die hier beschriebene Schaltung eine geringere Abhängigkeit der Ausgangsstromimpulsform von der Schaltfrequenz und von Änderungen der Versorgungsspannung auf. <IMAGE>

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G05F 3/26; H03K 17/0412

IPC 8 full level
G05F 3/26 (2006.01)

CPC (source: EP)
G05F 3/262 (2013.01)

Citation (search report)
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• [A] DE 4201155 C1 19930128
• [A] US 4950976 A 19900821 - WAGONER ROBERT G [US]
• [A] EP 0762259 A1 19970312 - SUISSE ELECTRONIQUE MICROTECH [CH]

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US6549080B2; WO0106658A1

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