

Title (en)

Process and device for generating a temperature independent current

Title (de)

Verfahren und Vorrichtung zur Erzeugung eines temperaturunabhängigen Stroms

Title (fr)

Procédé et dispositif de génération d'un courant indépendant de la température

Publication

**EP 1164455 A1 20011219 (FR)**

Application

**EP 00202059 A 20000613**

Priority

EP 00202059 A 20000613

Abstract (en)

A generator produces a first current (11), proportional to first temperature stable input voltage ( $V_{in}$ ), through electrodes (12a,12b) of a first transistor (12). A weak inversion amplifier (11) produces a temperature dependent offset voltage ( $V_{os}(T)$ ) between its inputs (11a,11b). This offset voltage and the input voltage ( $V_{in}$ ) are adjusted to compensate resistance (13) temperature dependence so that the current generated (11) is temperature independent. Method of current (11) generation by means of a current generator circuit (10) connected to first and second supply voltages ( $V_{ss}$ ,  $V_{dd}$ ): (a) an amplifier (11) provides a first control voltage at its output (11c) in response to a difference between the first and second voltages applied to respective inputs (11a,11b); a first transistor (12) having a first current electrode (12a), a control electrode (12c), connected to the amplifier output (11c), and a second current electrode (12b) connected to the voltage ( $V_{dd}$ ), and; a resistive component (13) having a terminal connected to the amplifier input (11b) as well as to the transistor current electrode (12a) and a terminal the first voltage ( $V_{ss}$ ). The resistive component has a resistance value ( $R(T)$ ) which is temperature dependent

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**G05F 3/24**

IPC 8 full level

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CPC (source: EP)

**G05F 3/242** (2013.01)

Citation (search report)

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- [A] US 5805004 A 19980908 - TANTEN LEO [DE], et al
- [A] US 5982226 A 19991109 - RINCON-MORA GABRIEL A [US]
- [Y] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 01 29 January 1999 (1999-01-29)

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