Title (en)

Current copy circuit arrangement

Title (de)

Elektrische Kopiervorrichtung

Title (fr)

Dispositf de copie de courant

Publication

EP 1387234 A1 20040204 (EN)

Application

EP 02291922 A 20020729

Priority

EP 02291922 A 20020729

Abstract (en)

An accurate and fast copy current circuit arrangement (250) and method for high current ratio having a first branch for carrying a first current (Iload) ; a second branch for carrying a second current (2Ifb) ; and a twisted current mirror arrangement (282, 284, 286, 288) coupled between the first branch and the second branch, wherein the second current (2Ifb) is a copy representative of the first current (Iload). The twisted current mirror arrangement (282, 284, 286, 288) includes a first current mirror having a first bipolar transistor (282) and a second bipolar transistor (284) whose bases are coupled together; and a second current mirror having a first MOSFET transistor (286) connected in series with the first bipolar transistor (282) and a second MOSFET transistor (288) connected in series with the second bipolar transistor (284), the first and second MOSFET transistors having their gates coupled together. A start-up current source (299) applies a start-up current to the junction between the first bipolar transistor (282) and the first MOSFET transistor (286) and provides bias during circuit operation. <??>This avoids a conventional error amplifier, uses no closed voltage loop, and no capacitor to stabilize the voltage loop, and provides a faster response time. <??>This provides more accurate copy current for high current ratio, better linearity and zero input error voltage. <IMAGE>

IPC 1-7

G05F 3/26

IPC 8 full level

G05F 3/26 (2006.01)

CPC (source: EP)

G05F 3/267 (2013.01)

Citation (search report)

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