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 (2lfb); and a twisted current mirror arrangement (282, 284, 286, 288) coupled between the first branch and the second branch, wherein the second current (2lfb) 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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CN113075953A

Designated contracting state (EPC)

AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LI LU MC NL PT SE SK TR

DOCDB simple family (publication)

EP 1387234 A1 20040204

DOCDB simple family (application)

EP 02291922 A 20020729