

Title (en)  
Constant current source

Title (de)  
Konstantstromquelle

Title (fr)  
Source de courant constante

Publication  
**EP 0731403 A2 19960911 (EN)**

Application  
**EP 96301270 A 19960226**

Priority  
US 39907995 A 19950308

Abstract (en)  
A current source for generating a current that is relatively stable over variations in the power supply voltage and temperature, and over variations in process parameters is disclosed. The current source includes a bias circuit, for producing a compensating bias voltage, and a current mirror. The bias circuit utilizes a voltage divider to generate a divided voltage based on the power supply value. The divided voltage is applied to the gate of a modulating transistor (biased in saturation) in a first current mirror, which controls a current applied to a linear load device. The voltage across the load device determines the bias voltage, which is in turn applied to the gate of a transistor in the reference leg of a second current mirror. The bias voltage controls the current in the reference leg of the second current mirror, and an output leg mirrors the second reference current to produce a stable output current. <IMAGE>

IPC 1-7  
**G05F 3/26**

IPC 8 full level  
**G05F 3/26** (2006.01); **H03F 3/343** (2006.01); **H03F 3/347** (2006.01)

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

Cited by  
US8054111B2; US8179170B2; US8872572B2; US9368519B2; US9830878B2; US9934747B2; US10181304B2; US10446103B2; US10902814B2; US11545105B2; US11984093B2

Designated contracting state (EPC)  
DE FR GB IT

DOCDB simple family (publication)  
**EP 0731403 A2 19960911; EP 0731403 A3 19970723**; JP H08263158 A 19961011

DOCDB simple family (application)  
**EP 96301270 A 19960226**; JP 5191496 A 19960308