

Title (en)

Reference voltage and/or current generator in integrated circuit

Title (de)

Spannungs- und/oder Stromreferenzgenerator in integriertem Schaltkreis

Title (fr)

Générateur de référence de tension et/ou de courant en circuit intégré

Publication

EP 0756223 A1 19970129 (FR)

Application

EP 96401646 A 19960724

Priority

FR 9509023 A 19950725

Abstract (en)

The circuit has a diode-connected transistor (T1) and a resistive transistor (T2) in series in a first (current source) branch, and two similar transistors (T3,T4) in a current-mirror relationship to them in a second branch. A third branch, producing a stable voltage (VB) at the midpoint (B) of the second, tends to reduce the equivalent resistive load. The three p-channel MOSFETs (T1,T3,T5) have their gate electrodes connected together. The output voltage tends to fall with rising temperature, but this effect is substantially cancelled by the falling threshold voltage of the third n-channel MOSFET (T6) which is almost equivalent to a short-circuit.

Abstract (fr)

Un générateur de référence en circuit intégré en technologie MOS comprend un dispositif à miroir de courant à trois branches, pour obtenir une tension stable VB au point milieu B de la deuxième branche. Ce générateur peut être utilisé pour délivrer un courant stable. <IMAGE>

IPC 1-7

G05F 3/24

IPC 8 full level

G05F 3/24 (2006.01); **G05F 3/28** (2006.01)

CPC (source: EP US)

G05F 3/245 (2013.01 - EP US); **G05F 3/247** (2013.01 - EP US); **Y10S 323/907** (2013.01 - EP US)

Citation (search report)

- [A] US 4978905 A 19901218 - HOFF DAVID [US], et al
- [A] US 4994688 A 19910219 - Horiguchi Masashi [JP], et al
- [A] EP 0356020 A1 19900228 - IBM [US]
- [A] EP 0397408 A1 19901114 - ADVANCED MICRO DEVICES INC [US]
- [A] US 4970415 A 19901113 - FITZPATRICK MARK E [US], et al
- [A] EP 0310743 A2 19890412 - IBM [US]
- [A] US 5124632 A 19920623 - GREAVES CARLOS A [US]
- [A] EP 0564225 A2 19931006 - TEXAS INSTRUMENTS INC [US]

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

EP 0756223 A1 19970129; **EP 0756223 B1 19980610**; DE 69600348 D1 19980716; DE 69600348 T2 19981008; FR 2737319 A1 19970131; FR 2737319 B1 19970829; US 5841270 A 19981124

DOCDB simple family (application)

EP 96401646 A 19960724; DE 69600348 T 19960724; FR 9509023 A 19950725; US 68543496 A 19960723