

Title (en)

A voltage follower circuit and voltage regulator including said circuit

Title (de)

Spannungsfolgerschaltung und Spannungsregler mit einer solchen Schaltung

Title (fr)

Circuit suiveur de tension et régulateur de tension incluant un circuit de ce type

Publication

EP 1318443 A1 20030611 (EN)

Application

EP 02027390 A 20021209

Priority

IT TO20011147 A 20011210

Abstract (en)

A voltage follower circuit (10) is described which is able to receive at an input terminal (REF) a reference voltage signal (Vref) and to present at an output terminal (OUT) a voltage signal (Vout) the value of which substantially follows the value of the reference voltage signal (Vref). The circuit (10) comprises a first current amplifier power transistor (Q1) interposed between the power supply terminal (IN) and the output terminal (OUT) to provide a power supply current to a load operatively connected to the circuit (10), and a second current amplifier control transistor (Q2) coupled to a control terminal of the first transistor (Q1) to enable it to conduct current to the output terminal (OUT). The reference voltage signal (Vref) is transferred to the output terminal (OUT) through a first semiconductor junction belonging to the control transistor (Q2) and through an additional semiconductor device (D) having a second semiconductor junction substantially similar to the first and disposed in such a way that, in operative conditions, both the junctions are forward biased and the reference voltage signal (Vref) is transferred to the output terminal (OUT) via a first voltage drop across the first junction and a second voltage drop of equal value and opposite sign across the second junction. <IMAGE>

IPC 1-7

G05F 3/22

IPC 8 full level

G05F 3/22 (2006.01)

CPC (source: EP)

G05F 3/222 (2013.01)

Citation (search report)

- [A] US 4511857 A 19850416 - GUNDERSON STEVEN J [US]
- [A] US 5721480 A 19980224 - MORIOKA SHIZUO [JP]
- [A] US 6051966 A 20000418 - PONTAROLLO SERGE [FR]
- [A] EP 0242304 A1 19871021 - THOMSON CSF [FR]
- [A] EP 0609053 A2 19940803 - SGS THOMSON MICROELECTRONICS [US]

Cited by

CN116404891A

Designated contracting state (EPC)

DE ES FR GB SE

DOCDB simple family (publication)

EP 1318443 A1 20030611; IT TO20011147 A0 20011210; IT TO20011147 A1 20030610

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EP 02027390 A 20021209; IT TO20011147 A 20011210