

Title (en)

Voltage regulator having a precision thermal current source.

Title (de)

Spannungsregler mit Präzisionsthermostromquelle.

Title (fr)

Régulateur de tension avec source de courant thermique de précision.

Publication

EP 0264563 B1 19931103 (EN)

Application

EP 87111725 A 19870813

Priority

- US 91548186 A 19861006
- US 91548386 A 19861006

Abstract (en)

[origin: EP0264563A1] A voltage supply circuit for supplying a regulated output voltage the magnitude and temperature coefficient of which can be independently controlled. A pair of transistors and associated circuitry develop a voltage proportional to the V_{BE} of the two transistors which are operated at different current densities and sets a first current through the collector of a third transistor which is proportional to V_{BE} having a positive temperature coefficient (TC). A second current proportional to the negative temperature coefficient base-to-emitter voltage of the third transistor is generated and combined with the first current to produce a third current having a net negative, zero or positive TC. The third current is used to develop a voltage which is combined with the base-to-emitter voltage of the third transistor to produce the output voltage.

IPC 1-7

G05F 3/30

IPC 8 full level

H10N 10/00 (2023.01); **G05F 3/30** (2006.01); **H10N 10/10** (2023.01)

CPC (source: EP KR)

G05F 1/56 (2013.01 - KR); **G05F 3/30** (2013.01 - EP)

Cited by

AT403532B; CN103116380A; GB2332760A; EP0465094A3; FR2670915A1; CN114815950A; GB2263794A; US5440224A; GB2263794B; US9367077B2; US9891647B2; US10209731B2

Designated contracting state (EPC)

DE FR GB IT

DOCDB simple family (publication)

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