

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 A1 19880427 (EN)**

Application

**EP 87111725 A 19870813**

Priority

- US 91548186 A 19861006
- US 91548386 A 19861006

Abstract (en)

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

**H01L 35/00** (2006.01); **G05F 3/30** (2006.01); **H01L 35/28** (2006.01)

CPC (source: EP KR)

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

Citation (search report)

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Designated contracting state (EPC)

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