

Title (en)

VOLTAGE REFERENCE ELECTRONIC CIRCUIT

Title (de)

SPANNUNGSREFERENZ-ELEKTRONIKSCHALTUNG

Title (fr)

CIRCUIT ELECTRONIQUE DE REFERENCE DE TENSION

Publication

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Application

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Priority

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- FR 0608789 A 20061006

Abstract (en)

[origin: US2010007324A1] The invention relates to a temperature-independent voltage reference circuit. The circuit comprises a first circuit of bandgap type providing a first-order temperature-stable voltage, on the basis of a bipolar transistor base-emitter voltage having a negative slope of variation as a function of temperature, and of a voltage or a current having a positive slope of variation as a function of temperature provided by a generator of current proportional to absolute temperature. The base currents of the PMOS transistors thereof are compensated in such a manner that the output current is proportional to a collector current and not an emitter current. A summator establishes a linear combination, with respective weighting coefficients, of three voltages which are respectively the output voltage of the first circuit, the output voltage of a second circuit providing a voltage proportional to the difference between the absolute temperature T and a reference temperature Tr, and the output voltage of a third circuit providing a voltage proportional to the square of this difference.

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