

Title (en)
TEMPERATURE SENSITIVE CIRCUIT

Title (de)
TEMPERATUREMPFINDLICHE SCHALTUNG

Title (fr)
CIRCUIT SENSIBLE À LA TEMPÉRATURE

Publication
EP 2329230 A1 20110608 (EN)

Application
EP 08788717 A 20080828

Priority
GB 2008050746 W 20080828

Abstract (en)
[origin: WO2010023421A1] A circuit for use in a current source or a proportional to absolute temperature sensor or in a bandgap regulator conducting a current, the circuit comprising a PTAT cell having two parallel current branches each including at least one transistor and atleast one resistor, and a control circuit for determining the relationship between the driving currents through the two branches. A first transistor in the first branch has a higher effective current density flowing in use through its conductive area thanthe effective current density flowing in use through the conductive area of a second transistor in the second branch so as to develop control voltages (VBE) across the control terminals of the first and second transistors which differ from one another, thedifference (VBE) between the two control voltages (VBE) being regulated by the voltage across at least a regulating resistor in the second branch. In the invention, at least a further regulating resistor is provided in the first branch, the voltage dropacross which resistor regulates the effective difference in current densities between a third transistor and a reference transistor, and substantially the whole of at least one VBEvoltage is developed across a regulating resistor or resistors in each ofthe two branches for each full VBE of potential that is needed to bias the circuit into its operating condition.

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Citation (search report)
See references of WO 2010023421A1

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