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Brokaw

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(54) **CURVATURE CORRECTED BANDGAP REFERENCE CIRCUIT AND METHOD**

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(58) **Field of Classification Search** 323/313, 323/314, 315, 316, 317, 907
See application file for complete search history.

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(57) **ABSTRACT**

A curvature corrected bandgap reference circuit comprises a first bipolar transistor having a base-emitter voltage V_{be1} and operated such that it has a constant operating current, and a second bipolar transistor having a base-emitter voltage V_{be2} and operated such that it has an operating current consisting of an approximately temperature proportional component and a non-linear component. The circuit is arranged such that the ratio of the current densities in the two transistors varies with temperature, such that the difference voltage ($\Delta V_{be}=V_{be1}-V_{be2}$) includes a residual component which approximately compensates bandgap curvature error.

32 Claims, 5 Drawing Sheets