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[54] **OSCILLATOR WITH CLOCK OUTPUT INHIBITION CONTROL**

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[52] **U.S. Cl.** **331/74**; 331/111; 331/143; 331/179

[58] **Field of Search** 331/111, 143, 331/176, 179, 74, 75

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[57] **ABSTRACT**

An oscillator with temperature compensation produces a stable clock frequency over wide variations of ambient temperature, and it includes an oscillation generator, two independent current generators, a transition detector and a clock inhibitor. The outputs of the two programmable, independent current generators are combined to provide a capacitor charging current that is independent of temperature. The oscillator is capable of three modes of operation: fast mode, slow/low power mode and sleep mode, which are controlled by the transition detector in response to external control signals. When the transition detector transitions from one mode to another, it controls the clock inhibitor to block a clock output of the oscillator generator for a predetermined number of clock cycles to allow the clock output to stabilize. The oscillator is implemented on a single, monolithic integrated circuit.

9 Claims, 6 Drawing Sheets

