

- [54] SWITCHING VOLTAGE REGULATOR CIRCUIT
- [75] Inventor: Carl T. Nelson, San Jose, Calif.
- [73] Assignee: Linear Technology Corporation, Milpitas, Calif.
- [21] Appl. No.: 82,989
- [22] Filed: Aug. 3, 1987

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 Assistant Examiner—Kristine Peckman
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Related U.S. Application Data

[63] Continuation of Ser. No. 932,158, Nov. 18, 1986, abandoned.

- [51] Int. Cl.⁴ G05F 1/563
- [52] U.S. Cl. 323/285; 323/299; 363/21
- [58] Field of Search 363/20, 21, 97, 131; 323/282, 284, 285, 299, 267

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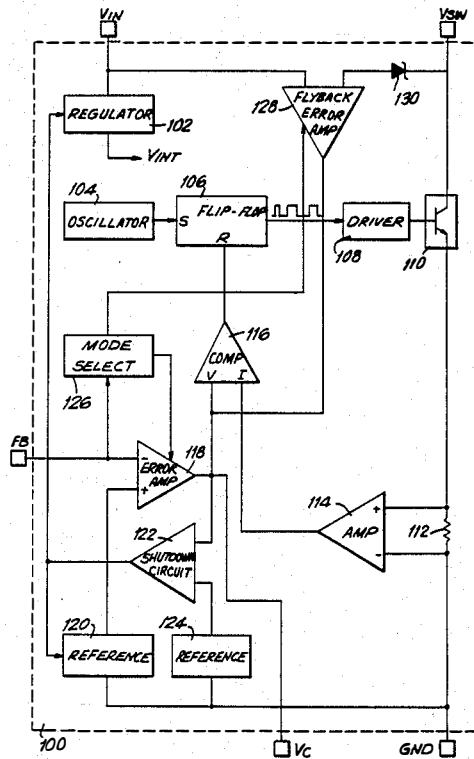
U.S. PATENT DOCUMENTS

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[57] ABSTRACT

An integrated circuit for use in implementing a switching voltage regulator, the integrated circuit including a power switching transistor, driver circuitry and control circuitry, which is operable in a normal feedback mode or an isolated flyback mode. The integrated circuit includes shutdown circuitry for placing the regulator in a micro-power sleep mode, and can be packaged in a five-pin conventional power transistor package. The terminals of the integrated circuit regulator perform multiple functions. A compensation terminal is used for frequency compensation, current limiting, soft-start operation and shutdown. A feedback terminal is used as a feedback input when the integrated circuit is in feedback mode, and as a logic pin to program the regulator for isolated flyback operation. The feedback terminal is also used to trim the flyback reference voltage.

81 Claims, 8 Drawing Sheets



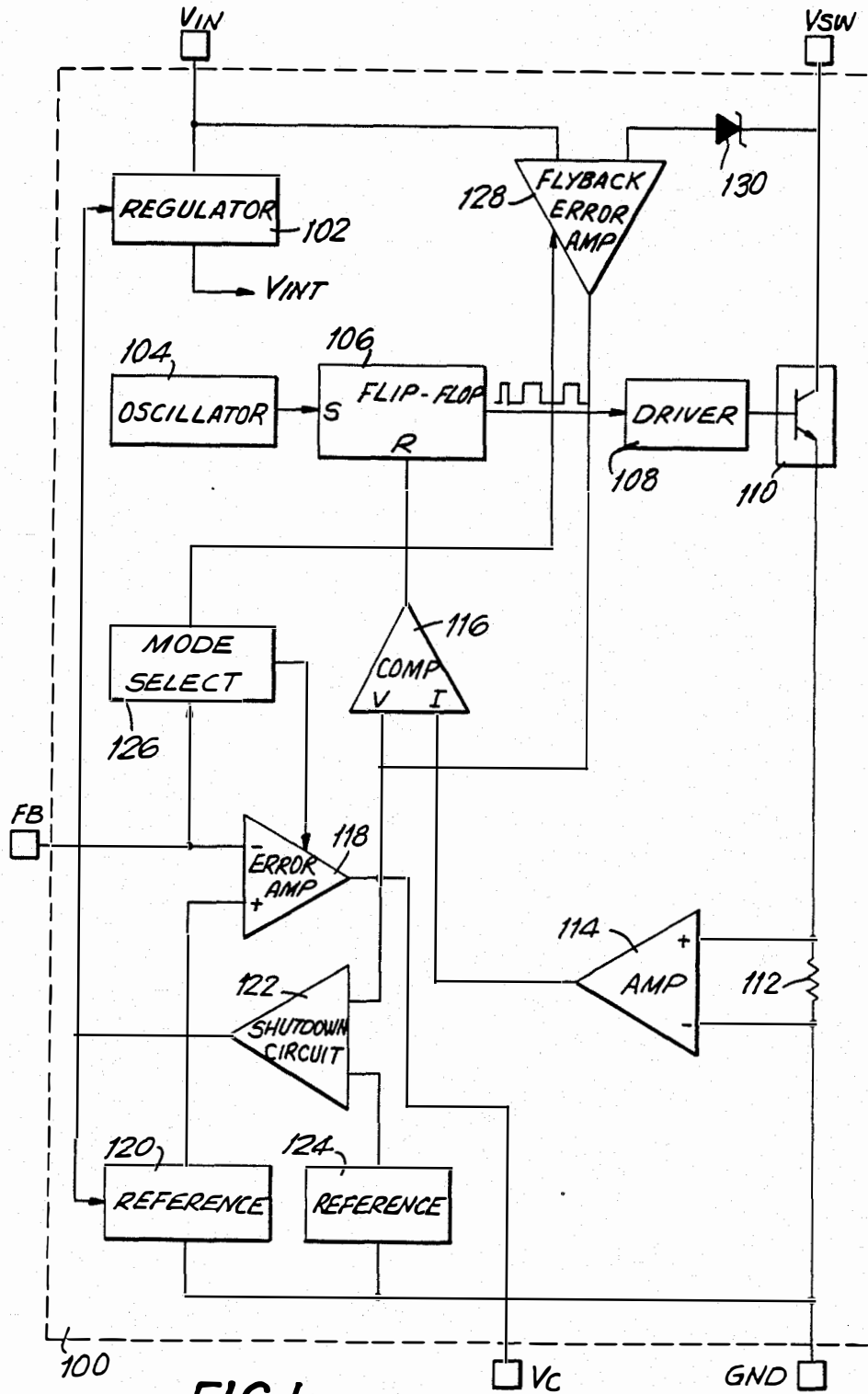
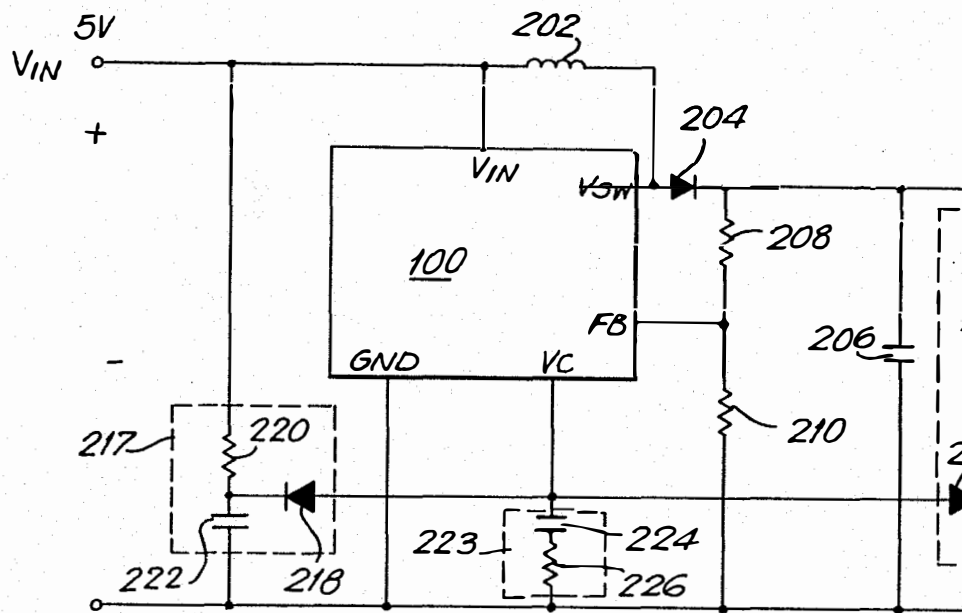
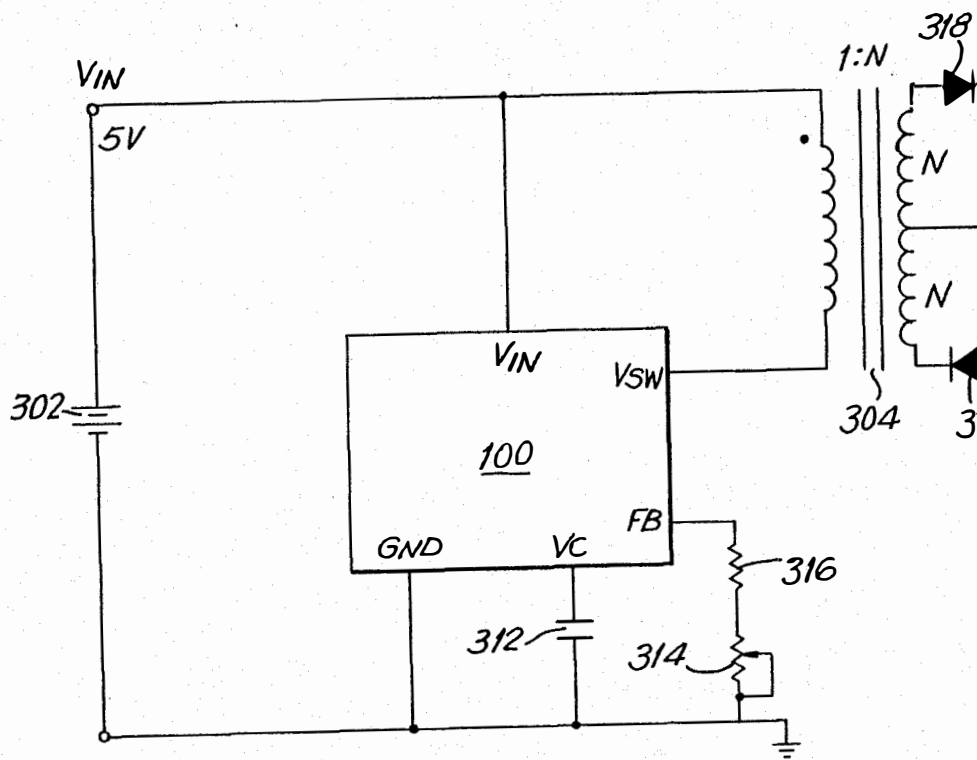
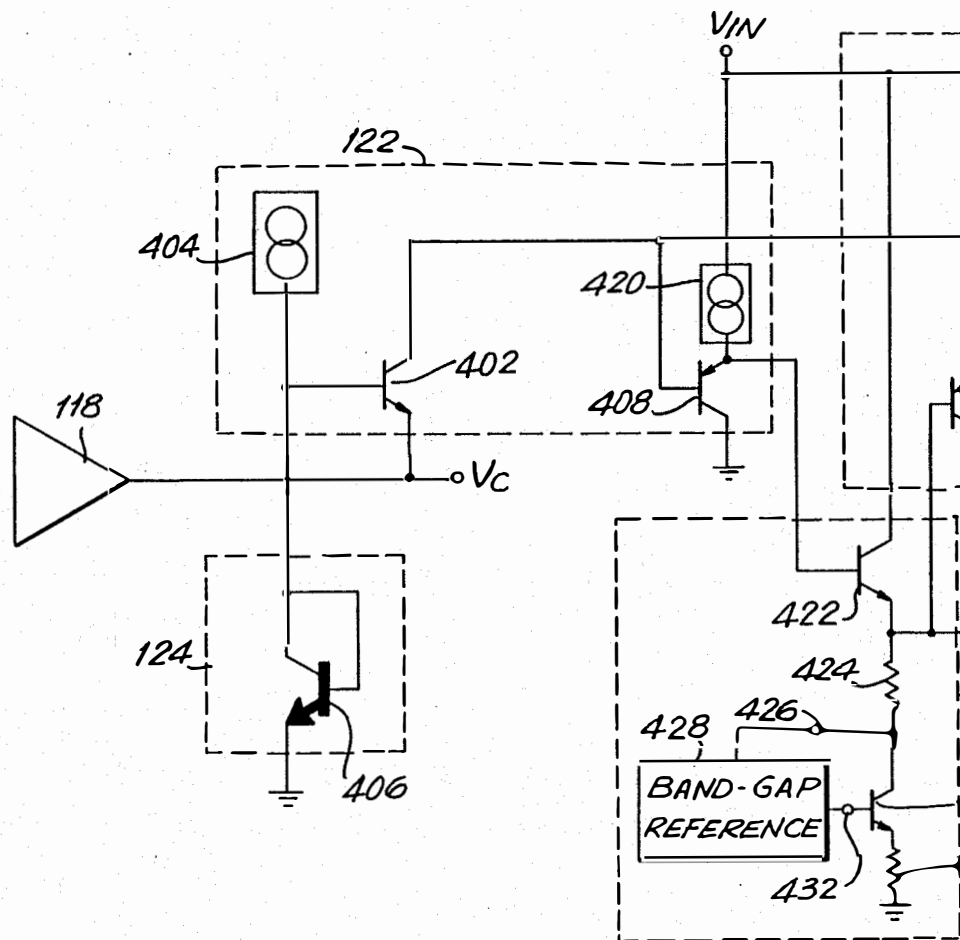


FIG. 1







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