

[54] SMALL FORM FACTOR POWER SUPPLY

[75] Inventor: Thomas W. Lanni, Laguna Niguel, Calif.

[73] Assignee: Comarco Wireless Technologies, Inc., Irvine, Calif.

[21] Appl. No.: 567,369

[22] Filed: Dec. 4, 1995

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 233,121, Apr. 26, 1994, Pat. No. 5,479,331.

[60] Provisional application No. 60/002,488, Aug. 17, 1995.

[51] Int. Cl. ⁶ H02M 3/335

[52] U.S. Cl. 363/21; 363/144; 363/147; 363/97

[58] Field of Search 363/17, 20, 24, 363/21, 25, 78, 79, 80, 97, 98, 132, 144, 147; 323/212

[56] **References Cited**

U.S. PATENT DOCUMENTS

4,257,089 3/1981 Ravis 363/25

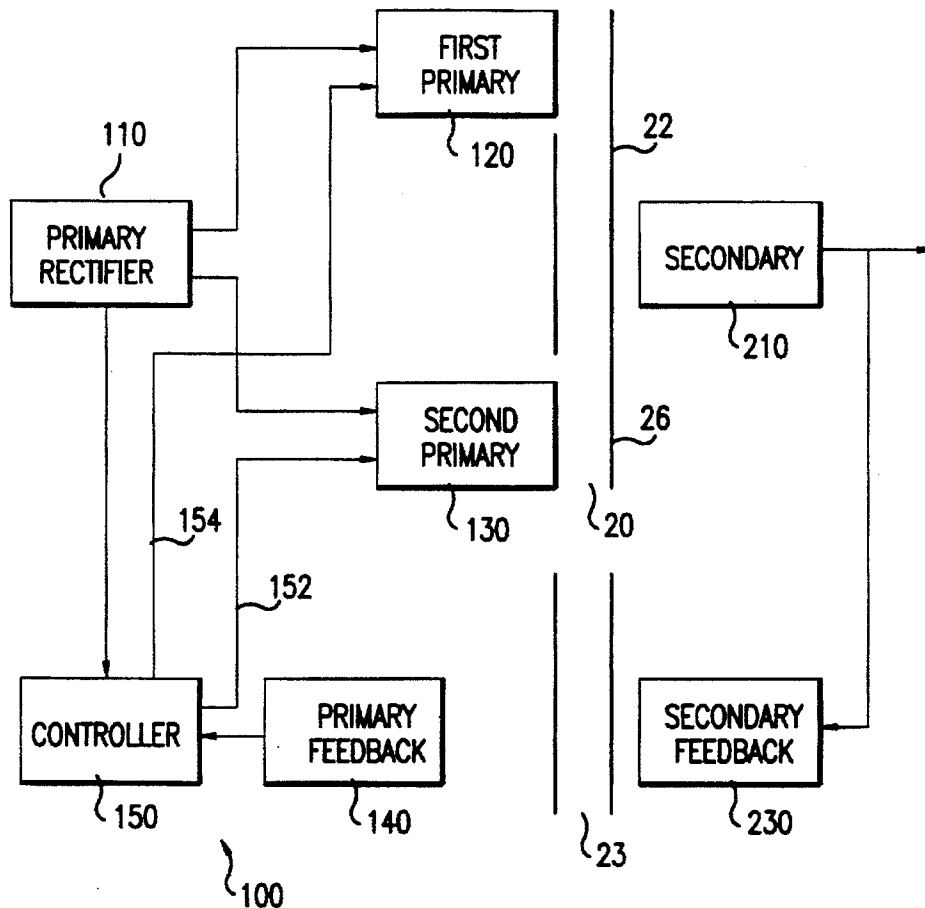
4,307,441	12/1981	Bello	363/25
4,622,627	11/1986	Rodriguez et al.	363/37
4,734,839	3/1988	Barthold	363/16
4,885,674	12/1989	Varga et al.	363/21
4,890,214	12/1989	Yamamoto	363/49
5,019,954	5/1991	Bourgeault et al.	363/21
5,146,394	9/1992	Ishii et al.	363/16
5,177,675	1/1993	Archer	363/25
5,184,291	2/1993	Crowe et al.	363/37
5,309,348	5/1994	Leu	363/71
5,479,331	12/1995	Lanni	363/21

Primary Examiner—Peter S. Wong
 Assistant Examiner—Adolf Berhane
 Attorney, Agent, or Firm—Loeb & Loeb LLP

[57] **ABSTRACT**

A new, small form factor power supply is disclosed that provides a regulated DC power supply in a package that radiates relatively little heat and that occupies 2.85×5.0×0.436 inches. The secondary coil of the transformer is positioned at the summing node of the flux of the primary coils and the phase of the drive signals provided to the secondary coils is regulated to control the current and voltage provided by the secondary circuit. Preferably, all circuit components are surface mount devices and the transformer cores are E block planar cores mounted on the printed circuit board.

55 Claims, 21 Drawing Sheets



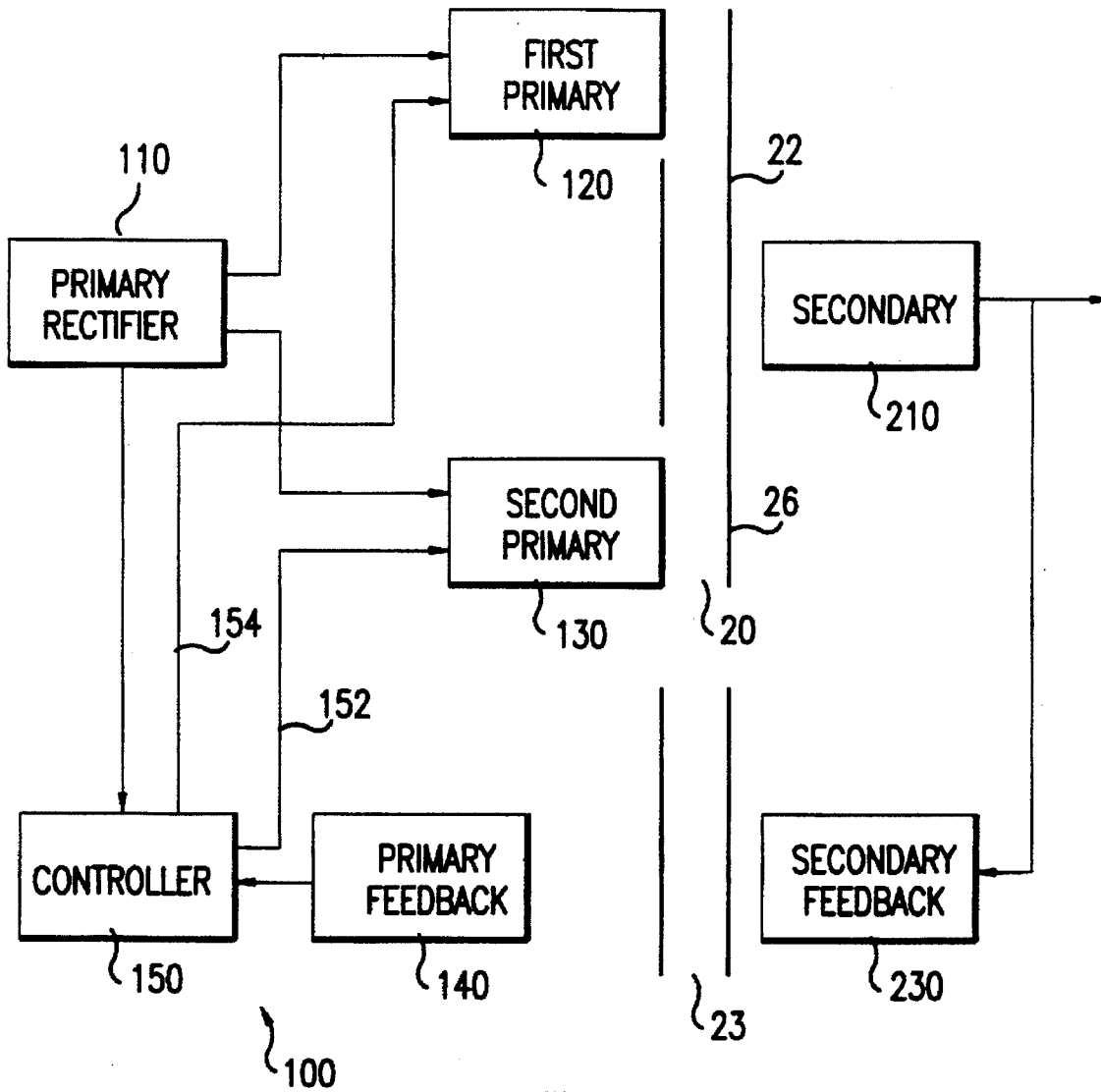


FIG. 1

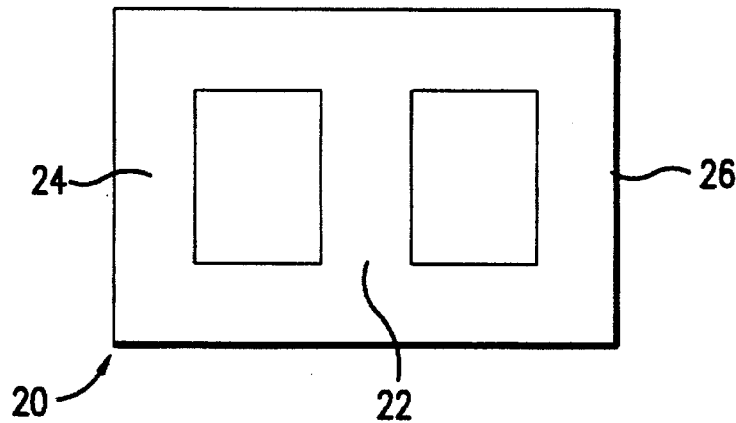


FIG. 2

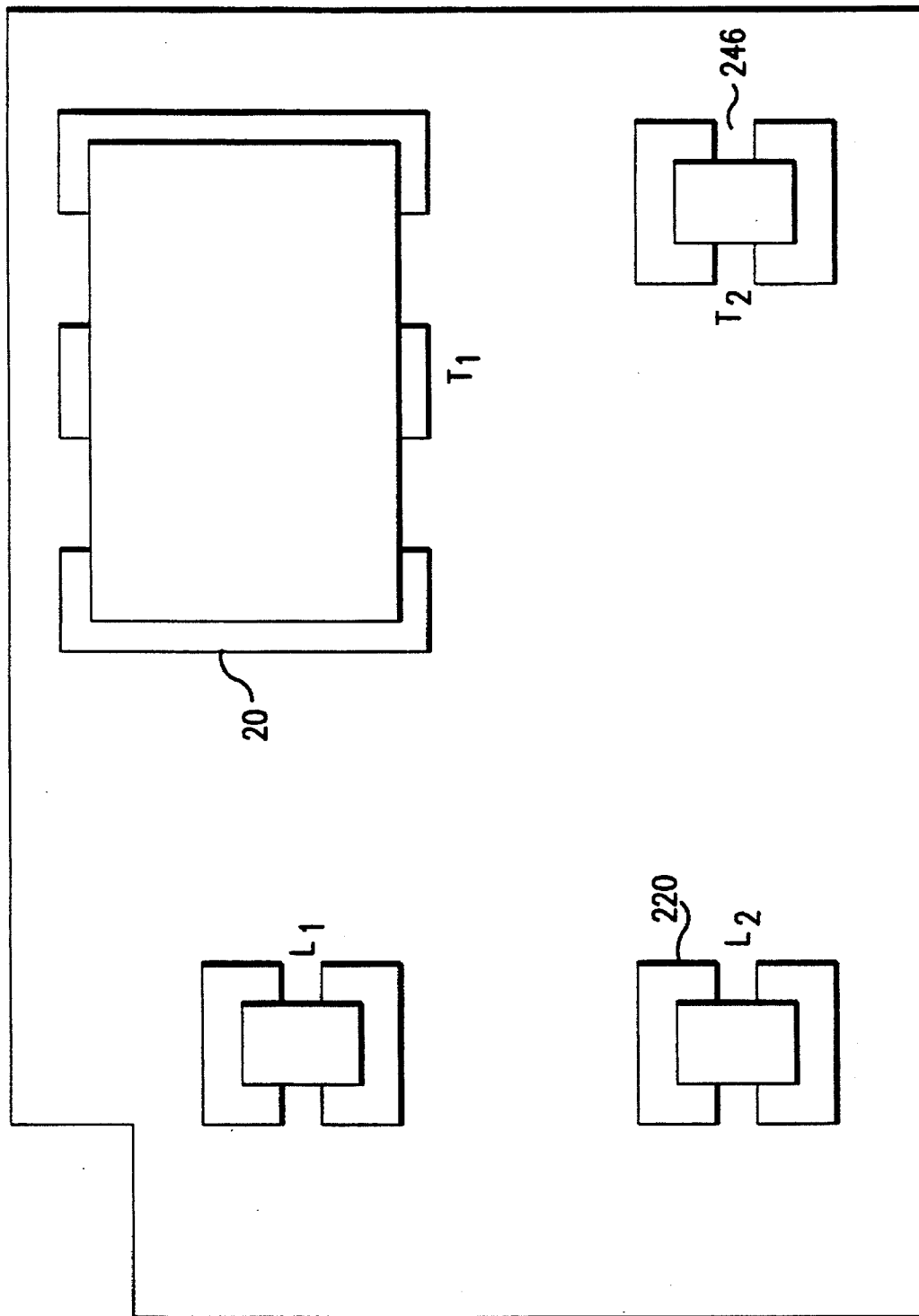


FIG. 4

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.