

[54] POWER SUPPLY AND OSCILLATOR FOR A COMPUTER SYSTEM PROVIDING AUTOMATIC SELECTION OF SUPPLY VOLTAGE AND FREQUENCY

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[57] ABSTRACT

[21] Appl. No.: 374,514

Disclosed is a power system for use with a computer, the power system having incorporated in it circuitry for automatically varying the supply voltage output to the computer system based upon the magnitude of the current being supplied to the computer by the power system. Also included in the computer system is a variable frequency clock circuit, the frequency of which changes based upon the supply voltage produced by the power system. This permits, during computer system operation where low voltage and low clock speeds will be sufficient to provide the performance needed, achievement of a power saving since both the voltage and frequency at which the system operates is reduced, thereby markedly reducing the power consumption.

[22] Filed: Jun. 30, 1989

[51] Int. Cl.⁵ G05F 1/613; H02J 9/06

[52] U.S. Cl. 307/66; 323/222; 323/272; 323/318; 323/350; 323/351; 364/707

[58] Field of Search 307/66, 296.1, 296.3, 307/296.4, 28, 43-48, 72-76; 364/700, 706, 707, 708; 323/318, 349, 350, 351, 222, 223, 225, 268, 272, 282, 283, 284; 455/343; 331/177 V

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15 Claims, 7 Drawing Sheets

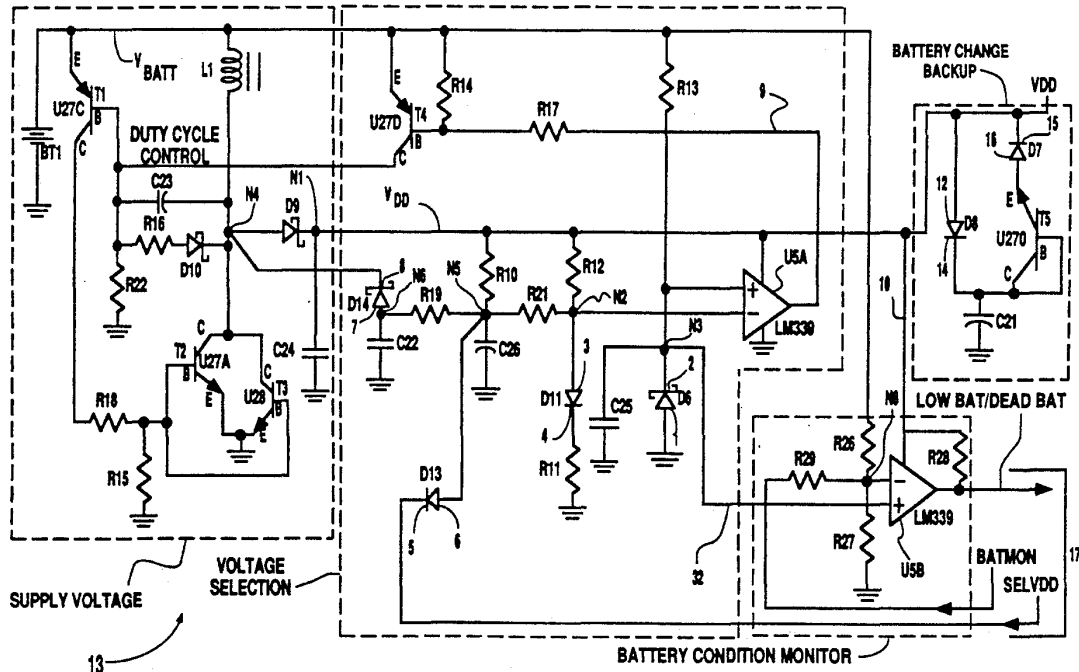
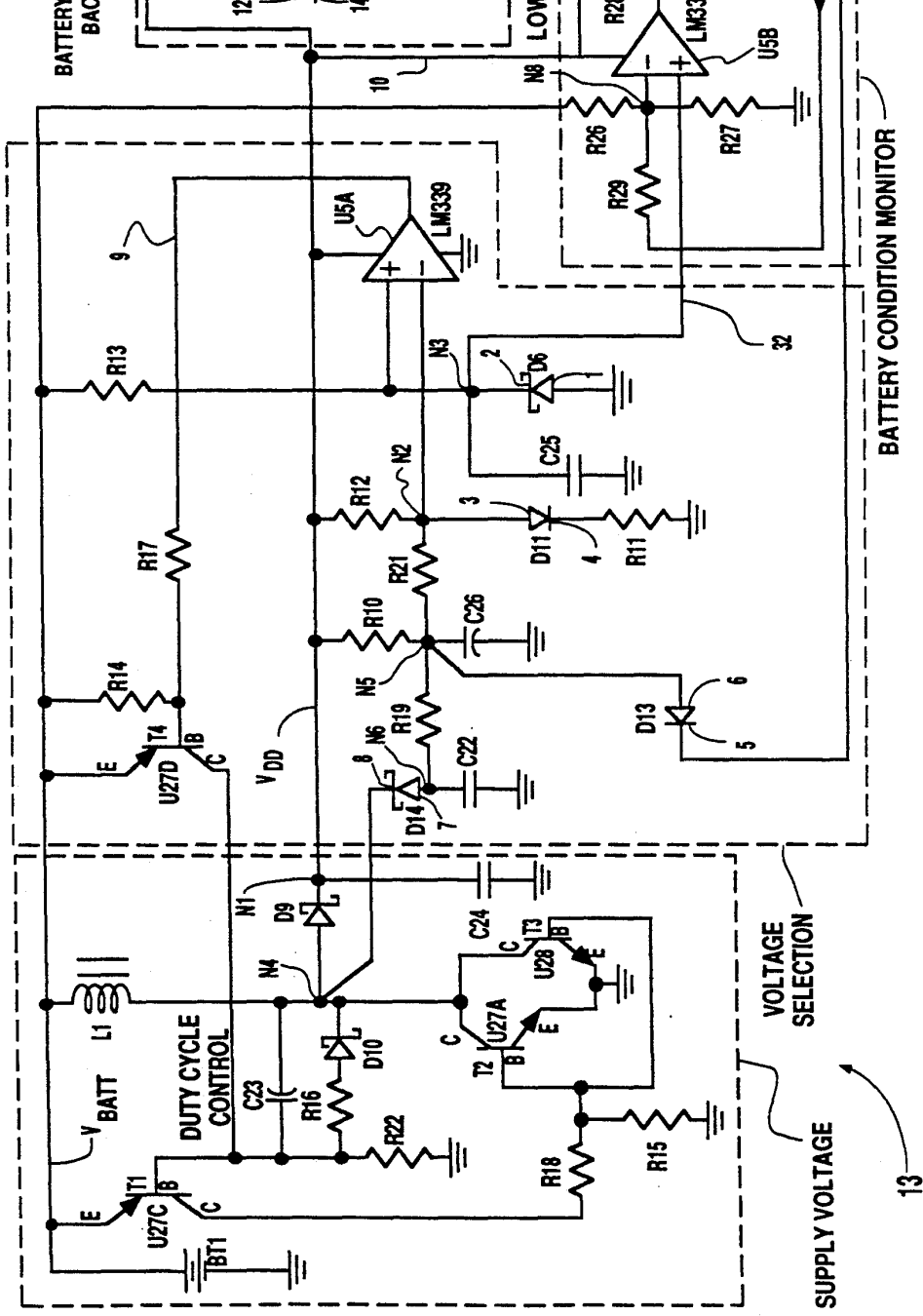


FIG. 1



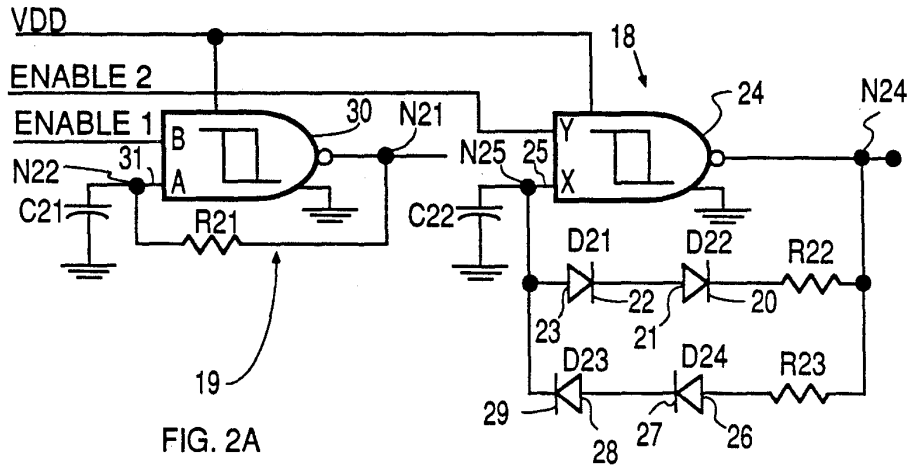


FIG. 2A

SYMMETRICAL OSCILLATOR

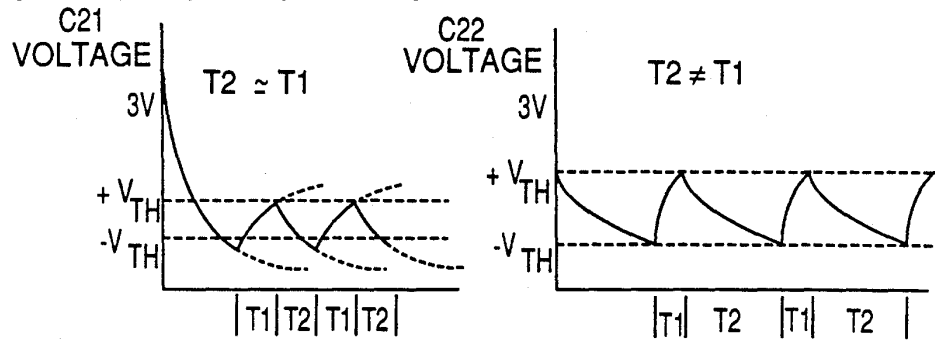


FIG. 2B

FIG. 2C

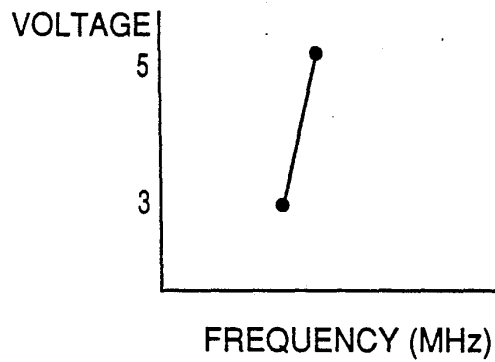


FIG. 2D

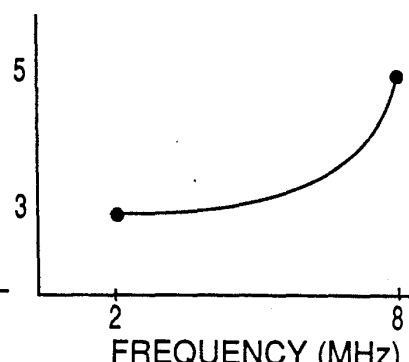


FIG. 2E

FIG. 3A
(PRIOR ART)

PULSE WIDTH MODULATION

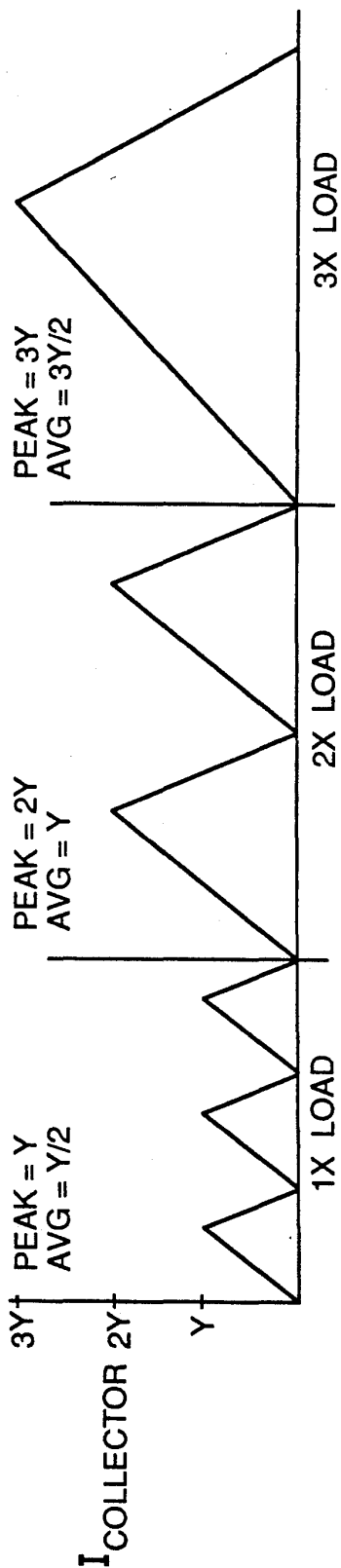
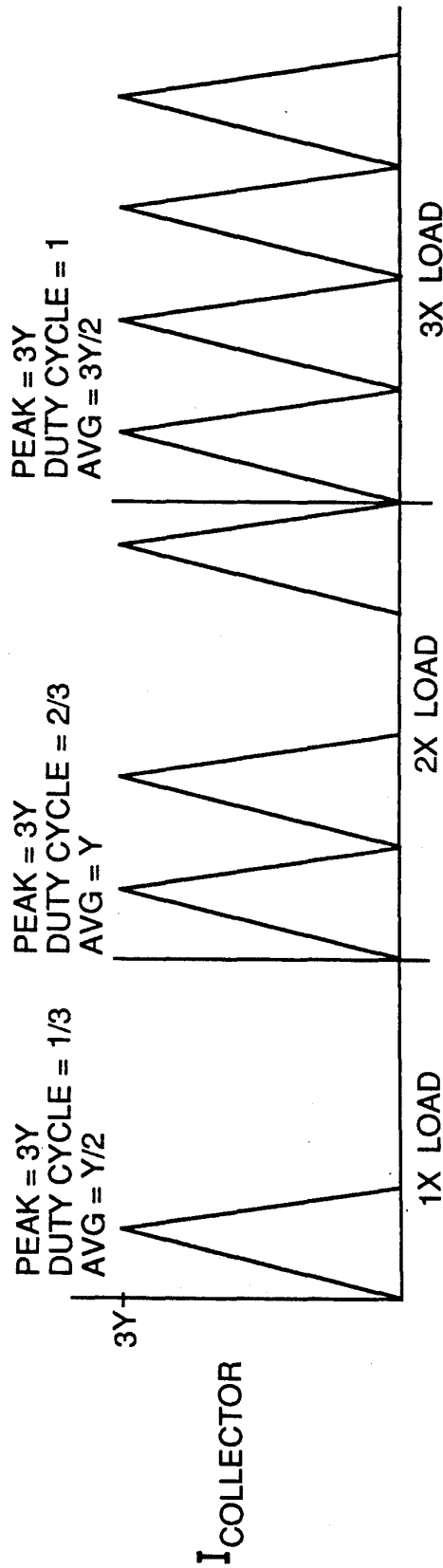


FIG. 3B

ON/OFF REGULATION



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