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**Rincon-Mora et al.**

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(54) **BUFFER/DRIVER FOR LOW DROPOUT REGULATORS**

(58) **Field of Search** ..... 327/100, 108-112, 327/434, 436, 437; 330/252, 253

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(\*) **Notice:** Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(57) **ABSTRACT**

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The buffer/driver for low dropout regulators (LDO) uses a feedback amplifier with low output impedance to drive the gate of the pass device MP6 of the regulator. This effectively pushes the gate pole out to a higher frequency. The feedback amplifier is designed for very high slew rate and high bandwidth while running at very low quiescent current. The circuit enhances the LDO performance, stability, and slew rate.

(65) **Prior Publication Data**

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**Related U.S. Application Data**

(60) Provisional application No. 60/257,689, filed on Dec. 22, 2000.

(51) **Int. Cl.<sup>7</sup>** ..... **H03K 3/00**

**10 Claims, 4 Drawing Sheets**

(52) **U.S. Cl.** ..... **327/108; 327/434**













