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(54) **CLOSED LOOP COMMUTATION CONTROL FOR A SWITCHING POWER CONVERTER**

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(57) **ABSTRACT**

A system includes a switching power converter, including a first transistor having a first gate, a first drain, and a first source, the first drain adapted to be coupled to a power supply. The switching power converter also includes a second transistor having a second gate, a second drain, and a second source, the second gate coupled to a second gate driver, the second source adapted to be coupled to ground, and the second drain coupled to the first source. The switching power converter also includes a third transistor having a third gate, a third drain, and a third source, the third gate adapted to be coupled to a current source, the third source coupled to a resistor, and the third drain coupled to the first gate. The switching power converter includes a capacitor coupled to the first drain and adapted to be coupled to the current source.