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**Yang**(10) **Pub. No.: US 2022/0376688 A1**(43) **Pub. Date: Nov. 24, 2022**(54) **POWER GATING CIRCUIT**(71) Applicant: **IPGoal Microelectronics (Sichuan)**  
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**ABSTRACT**

A power gating circuit includes inverters and a voltage divider sub-circuit, a latch comparator, and a gated switch sub-circuit connected to an external power supply circuit of 5V, respectively. The voltage divider sub-circuit is configured to divide a voltage of 5V and output a first voltage and a second voltage to the latch comparator and the gated switch sub-circuit, both voltage values of the first voltage and the second voltage are smaller than a withstand voltage value of a field effect transistor, and the voltage value of the first voltage is greater than that of the second voltage; the latch comparator is configured to compare two signals output by the inverters and latch a comparison result; and the gated switch sub-circuit is further connected with the latch comparator to control an output voltage, thereby improving the stability of the circuit, and extending the using life of the entire circuit.

