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(19) **United States**(12) **Patent Application Publication**  
**WEN et al.**(10) **Pub. No.: US 2022/0416739 A1**(43) **Pub. Date: Dec. 29, 2022**(54) **PUSH-PULL RADIO FREQUENCY POWER  
AMPLIFIER AND METHOD FOR  
CONTROLLING CIRCUIT**(71) Applicant: **SMARTER MICROELECTRONICS  
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(2013.01); **H03F 2200/117** (2013.01)(57) **ABSTRACT**

A push-pull radio frequency power amplifier includes a coupling feedback circuit, a drive stage circuit and a power output stage circuit, in which the coupling feedback circuit is connected with the drive stage circuit and/or the power output stage circuit; the coupling feedback circuit is configured to generate an alternating voltage at an input end of a first transistor and/or an input end of a push-pull transistor; when the alternating voltage and a voltage at the input end are in a same direction, a positive feedback of an input signal at the input end is achieved; and the first transistor represents a transistor in the drive stage circuit and the push-pull transistor represents a second transistor and a third transistor that form a push-pull structure in the power output stage circuit.

