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(54) **FULLY INTEGRATED CMOS MULTIPLE MOSFET-STACKED DOUBLE PUSH-PULL RF POWER AMPLIFIER**

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(57) **ABSTRACT**

An amplification circuit for RF power amplifiers is provided. The circuit includes two PMOS amplification modules and two NMOS amplification modules; each module includes a CSCG structure composed of a stack of K transistors. The first PMOS module and the first NMOS module are connected in series between a supply voltage and ground; gates of main amplification transistors of the first PMOS module and the first NMOS module are connected to a non-inverting input, and outputs of the first PMOS module and the first NMOS module are connected together to form an inverting output. The second PMOS module and the second NMOS module are similarly connected. Both the first and the second modules will be connected side-by-side as a pseudo differential structure to provide double push-pull function to the load. The present disclosure simultaneously achieves high power efficiency, and high linearity.

