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(54) **RF AMPLIFIER WITH A CASCODE DEVICE**

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(57) **ABSTRACT**

An RF amplifier comprises a first 'transconductance' transistor (N_{CS}) arranged to receive an RF input voltage (RFIN) at its gate terminal. A second 'cascode' transistor (N_{CG}) has its source terminal connected to the drain terminal of the first transistor (N_{CS}) at a node (MID). A feedback circuit portion is configured to measure a node voltage at the node (MID), to determine an average of the node voltage, to compare said average node voltage to a predetermined reference voltage (V_{BCG}), and to generate a control voltage (CGGATE) dependent on the difference between the average node voltage and the predetermined reference voltage (V_{BCG}). The feedback circuit portion applies the control voltage (CGGATE) to the gate terminal of the second transistor (N_{CG}).