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(54) LOOKUP TABLE CALIBRATION APPARATUS AND METHOD

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(57)ABSTRACT

A lookup table calibration apparatus and method are disclosed. The lookup table calibration apparatus includes a power amplifier circuit configured to amplify a radio frequency (RF) signal having time-variant power levels based on a modulated voltage. To ensure proper alignment between the modulated voltage and the time-variant power levels, the power amplifier circuit is further configured to phase-shift the RF signal based on a modulated phase correction voltage. Specifically, the modulated voltage is generated based on a modulated voltage lookup table and the modulated phase correction voltage is generated based on a phase correction voltage lookup table. Herein, the lookup table calibration apparatus can be configured to concurrently populate and/or calibrate the modulated voltage lookup table and the phase correction voltage lookup table based on a measured gain and a measured phase of the RF signal, respectively.

