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(54) **TIME-ADVANCED PHASE CORRECTION IN A POWER AMPLIFIER CIRCUIT**

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(57) **ABSTRACT**

Time-advanced phase correction in a power amplifier circuit is disclosed. The power amplifier circuit includes a power amplifier that amplifies an analog signal, which is associated with a time-variant power envelope, based on a modulated voltage. To correct phase misalignment between the modulated voltage and the time-variant power envelope, the power amplifier circuit also includes a phase correction circuit that generates a modulated phase correction voltage based on the modulated voltage to thereby cause a phase change in the analog signal. However, the modulated phase correction voltage can lag behind the modulated voltage in time due, in part, to inherent group delay of the phase correction circuit. As such, the power amplifier circuit further includes a time advance circuit to time advance the modulated phase correction voltage to thereby realign the modulated phase correction voltage and the modulated voltage in time for an optimal phase correction in the analog signal.