US 20240214026A1

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0214026 A1

SHEN et al. (43) Pub. Date: Jun. 27, 2024

(54) MAGNITUDE AND PHASE ADJUSTMENT METHOD FOR HIGH OUTPUT POWER RF POWER AMPLIFIER COMBINING

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(21) Appl. No.: **18/557,094**

(22) PCT Filed: **Apr. 30, 2021**

(86) PCT No.: **PCT/IB2021/053630**

§ 371 (c)(1),
(2) Date: **Oct. 25, 2023**

**Publication Classification**

(51) **Int. Cl.**

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|---|---|
| ***H04B 1/712*** | (2006.01) |
| ***H03F 3/24*** | (2006.01) |
| ***H03G 3/30*** | (2006.01) |
| ***H04B 1/04*** | (2006.01) |

(52) **U.S. Cl.**

CPC ..... ***H04B 1/712*** (2013.01); ***H03F 3/245*** (2013.01); ***H03G 3/3042*** (2013.01); ***H04B 1/0458*** (2013.01); ***H04B 1/0483*** (2013.01); *H03F 2200/451* (2013.01)

(57) **ABSTRACT**

A method and a transmitter providing magnitude and phase adjustment for high output power radio frequency (RF) power amplifier (PA) combining are provided. According to one aspect, a method includes making adjustments to the magnitude and phase of a received signal to produce first and second amplifier input signals. The method also includes amplifying a respective one of the first and second amplifier input signals via respective first and second power amplifiers. The method further includes combining outputs from each of the first and second power amplifiers to produce a first transmit signal, and to produce an isolation signal indicative of an amount by which the outputs from the first and second power amplifiers differ in magnitude and phase. The isolation signal is used to adjust the received signal to drive the isolation signal toward zero.