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Brunel et al.(10) **Pub. No.: US 2022/0385249 A1**(43) **Pub. Date: Dec. 1, 2022**(54) **POWER AMPLIFIER SYSTEMS WITH DC
CURRENT REUSE ACROSS STAGES**(52) **U.S. Cl.**CPC **H03F 3/245** (2013.01); **H04B 1/40**
(2013.01); **H04B 2001/045** (2013.01)(71) Applicant: **Skyworks Solutions, Inc.**, Irvine, CA
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ABSTRACT

Power amplifier systems with DC current reuse across stages are disclosed. In certain embodiments, a mobile device includes a transceiver configured to generate a first radio frequency input signal, and a front end system. The front end system includes a first power amplifier stage configured to amplify the first radio frequency input signal to generate a first radio frequency output signal, and a second power amplifier stage configured to amplify a second radio frequency input signal to generate a second radio frequency output signal. The first power amplifier stage and the second power amplifier stage are electrically connected in a first stack between a first power high supply voltage and a power low supply voltage and configured to operate with a shared DC bias current.

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