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**Khlat**(10) **Pub. No.: US 2022/0399861 A1**(43) **Pub. Date: Dec. 15, 2022**(54) **ENVELOPE TRACKING INTEGRATED  
CIRCUIT OPERABLE WITH MULTIPLE  
TYPES OF POWER AMPLIFIERS**(71) Applicant: **Qorvo US, Inc.**, Greensboro, NC (US)(72) Inventor: **Nadim Khlat**, Cugnaux (FR)(21) Appl. No.: **17/343,912**(22) Filed: **Jun. 10, 2021****Publication Classification**(51) **Int. Cl.****H03F 3/24** (2006.01)**H03F 3/195** (2006.01)**H03F 1/02** (2006.01)(52) **U.S. Cl.**CPC ..... **H03F 3/245** (2013.01); **H03F 3/195**  
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(57)

**ABSTRACT**

An envelope tracking (ET) integrated circuit (ETIC) operable with multiple types of power amplifiers is provided. The ETIC is configured to provide one or more ET voltages to a power amplifier(s) for amplifying a radio frequency (RF) signal. In embodiments disclosed herein, the ETIC can be configured to generate the ET voltages at same or different voltage levels based on specific types of the power amplifier(s), such as multi-stage power amplifier and Doherty power amplifier, and for a wider modulation bandwidth of the RF signal. As such, the ETIC can be flexibly adapted to enable a variety of power management scenarios and/or topologies.

