

US 20240235499A9

(19) United States

(12) Patent Application Publication Linghu

(54) DRIVING CIRCUIT FOR AUDIO POWER AMPLIFIER AND ELECTRONIC DEVICE

(71) Applicant: **AAC Microtech (Changzhou) Co.,** Ltd., Changzhou (CN)

(72) Inventor: Ronglin Linghu, Changzhou (CN)

(21) Appl. No.: 18/335,988

(22) Filed: Jun. 15, 2023

Prior Publication Data

(15) Correction of US 2024/0136986 A1 Apr. 25, 2024See (22) Filed.See (30) Foreign Application Priority Data.

(65) US 2024/0136986 A1 Apr. 25, 2024

Related U.S. Application Data

(63) Continuation of application No. PCT/CN2022/136216, filed on Dec. 2, 2022.

(30) Foreign Application Priority Data

Oct. 20, 2022 (CN) 202211288048.8

(10) Pub. No.: US 2024/0235499 A9

(48) **Pub. Date: Jul. 11, 2024 CORRECTED PUBLICATION**

Publication Classification

(51) **Int. Cl.** *H03F 3/213* (2006.01) *H04R 5/04* (2006.01)

52) **U.S. CI.** CPC *H03F 3/213* (2013.01); *H04R 5/04*

(2013.01); H03F 2200/03 (2013.01)

(57) ABSTRACT

A driving circuit for an audio power amplifier and an electronic device are provided. The driving circuit includes an audio codec, an audio power amplifier (PA), a power management integrated circuit (PMIC), a transistor, a speaker, and a motor. The transistor is connected in series with the motor to form a combined body, the speaker is connected in parallel with the combined body to form a two-in-one device, the audio PA is connected in series with the two-in-one device, and the audio codec is connected in series with the two-in-one device, and the audio codec is connected in series with the audio PA. In the technical solutions provided in embodiments of the disclosure, a power amplifier can drive both the motor and the speaker, so that a power amplifier may be omitted and the power consumption and cost of the electronic equipment may be reduced.

