



US 20240235496A1

(19) **United States**

(12) **Patent Application Publication**

LI et al.

(10) **Pub. No.: US 2024/0235496 A1**

(43) **Pub. Date:**

Jul. 11, 2024

(54) **RADIO FREQUENCY FRONT-END MODULE HAVING CURRENT PROTECTION FUNCTION, AND ELECTRONIC DEVICE**

(71) Applicant: **VANCHIP (TIANJIN) TECHNOLOGY CO., LTD.**, Tianjin (CN)

(72) Inventors: **Hao LI**, Tianjin (CN); **Yunfang BAI**, Tianjin (CN)

(73) Assignee: **VANCHIP (TIANJIN) TECHNOLOGY CO., LTD.**, Tianjin (CN)

(21) Appl. No.: **18/416,841**

(22) Filed: **Jan. 18, 2024**

Related U.S. Application Data

(63) Continuation of application No. PCT/CN2023/072885, filed on Jan. 18, 2023.

Foreign Application Priority Data

Jan. 18, 2022 (CN) 202210051858.5

Publication Classification

(51) **Int. Cl.**
H03F 1/52 (2006.01)
H03F 1/56 (2006.01)
H03F 3/24 (2006.01)
(52) **U.S. Cl.**
CPC **H03F 1/52** (2013.01); **H03F 1/565** (2013.01); **H03F 3/245** (2013.01); **H03F 2200/222** (2013.01); **H03F 2200/426** (2013.01); **H03F 2200/451** (2013.01)

(57) **ABSTRACT**

Disclosed are a radio frequency front-end module having a current protection function, and an electronic device. The radio frequency front-end module comprises an input matching module, a power amplifier, an output matching module, a power supply module, and a protection unit. An input end of the input matching module is connected to an external radio frequency signal input end, an output end of the input matching module is connected to an input end of the power amplifier, an output end of the power amplifier is connected to an input end of the output matching module, and an output end of the output matching module is connected to a radio frequency signal output end; output ends of the power supply module and the protection unit are respectively connected to the power amplifier.

