

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0235486 A1 KOGURE et al.

Jul. 11, 2024 (43) **Pub. Date:**

(54) TRACKER MODULE AND COMMUNICATION DEVICE

(71) Applicant: Murata Manufacturing Co., Ltd.,

Nagaokakyo-shi (JP)

(72) Inventors: Takeshi KOGURE, Nagaokakyo-shi

(JP); Tomohide ARAMATA, Nagaokakyo-shi (JP); Toshiki

MATSUI, Nagaokakyo-shi (JP); Yuuki

FUKUDA, Nagaokakyo-shi (JP)

(21) Appl. No.: 18/616,760

(22) Filed: Mar. 26, 2024

Related U.S. Application Data

Continuation of application No. PCT/JP22/35973, filed on Sep. 27, 2022.

(30)Foreign Application Priority Data

Sep. 29, 2021 (JP) 2021-159812

Publication Classification

(51) Int. Cl. H03F 1/02 (2006.01)H03F 3/24 (2006.01)

U.S. Cl. CPC H03F 1/0233 (2013.01); H03F 3/245 (2013.01); H03F 2200/105 (2013.01); H03F 2200/451 (2013.01)

(57)**ABSTRACT**

A tracker module is provided that includes a module laminate and an integrated circuit on the module laminate. The integrated circuit includes a switch unit included in an output switch circuit that selectively outputs at least one of multiple discrete voltages based on a first digital control signal. The first digital control signal includes a digital control line/logic signal indicating one of the multiple discrete voltages. The module laminate includes multiple lines and a ground electrode. The lines are connected to the integrated circuit and the first digital control signal flows through the lines. The ground electrode is connected to a ground terminal. In a sectional view of the module laminate, at least part of the lines is disposed between the integrated circuit and a ground electrode. In a plan view of the module laminate, at least part of the lines matches the ground electrode.

