

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0235529 A1 MARUYAMA et al.

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

(54) FILTER CIRCUIT

(71) Applicant: Mitsubishi Electric Corporation,

Tokyo (JP)

(72) Inventors: Takaya MARUYAMA, Tokyo (JP);

Sho IKEDA, Tokyo (JP); Koji TSUTSUMI, Tokyo (JP)

Assignee: Mitsubishi Electric Corporation,

Tokyo (JP)

Appl. No.: 18/614,831

(22)Filed: Mar. 25, 2024

Related U.S. Application Data

Continuation of application No. PCT/JP2021/ 044061, filed on Dec. 1, 2021.

Publication Classification

(51) Int. Cl. H03H 11/04 (2006.01)

U.S. Cl. (52)CPC *H03H 11/04* (2013.01)

(57)ABSTRACT

A filter circuit includes: a filter unit which is connected to a signal line and which has transistors and capacitors which constitute paths for N phases, and in which the transistors to which clock signals of N phases are applied electrically connect the capacitors to the signal line; and a dummy unit which has transistors and impedance parts which constitute dummy paths corresponding, respectively, to the paths for the N phases, and in which the transistors to which inverted signals of N phases are applied electrically connect the impedance parts to the signal line.

