

US 20240237192A9

(19) United States

(12) Patent Application Publication IGARASHI et al.

(10) Pub. No.: US 2024/0237192 A9

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

(54) HIGH FREQUENCY CIRCUIT

(71) Applicant: SUMITOMO ELECTRIC INDUSTRIES, LTD., Osaka (JP)

(72) Inventors: Shun IGARASHI, Osaka (JP); Hiroshi

UEDA, Osaka (JP); Suguru YAMAGISHI, Osaka (JP); Ichiro KUWAYAMA, Osaka (JP)

(73) Assignee: SUMITOMO ELECTRIC INDUSTRIES, LTD., Osaka (JP)

(21) Appl. No.: 18/278,928

(22) PCT Filed: Dec. 27, 2021

(86) PCT No.: **PCT/JP2021/048525**

§ 371 (c)(1),

(2) Date: Aug. 25, 2023

Prior Publication Data

- (15) Correction of US 2024/0138055 A1 Apr. 25, 2024 See (86) PCT No.
- (65) US 2024/0138055 A1 Apr. 25, 2024

(30) Foreign Application Priority Data

Publication Classification

(51) Int. Cl. H05K 1/02 (2006.01) H01P 3/08 (2006.01) H05K 1/11 (2006.01)

(52) U.S. Cl.

(57) ABSTRACT

A high frequency circuit includes a first insulating layer; a second insulating layer stacked on the first insulating layer directly or with one or more intermediate layers interposed therebetween; a first ground disposed on a first surface that does not face the second insulating layer among the first surface and a second surface forming two surfaces of the first insulating layer; a first line having a first end portion to which a first alternating-current signal is to be supplied and a second line having a second end portion to which a second alternating-current signal is to be supplied that are disposed between the first insulating layer and the second insulating layer; a second ground disposed on a third surface that does not face the first insulating layer among the third surface and a fourth surface forming two surfaces of the second insulating layer; and a first shield via.

