

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0224422 A1 HIGASHI et al.

Jul. 4, 2024 (43) **Pub. Date:**

(54) WIRING BOARD

(71) Applicant: KYOCERA Corporation, Kyoto (JP)

(72) Inventors: Toshifumi HIGASHI, Kirishima-shi

(JP); Hiroaki SANO, Kagoshima-shi (JP); Akira IMOTO, Kirishima-shi (JP); Sentarou YAMAMOTO,

Kagoshima-shi (JP)

(73) Assignee: KYOCERA Corporation, Kyoto-shi,

Kyoto (JP)

(21) Appl. No.: 18/271,871

(22) PCT Filed: Jan. 24, 2022

(86) PCT No.: PCT/JP2022/002423

§ 371 (c)(1),

(2) Date: Jul. 12, 2023

(30)Foreign Application Priority Data

Jan. 28, 2021 (JP) 2021-012421

Publication Classification

(51) Int. Cl. (2006.01) H05K 1/09 B22F 7/04 (2006.01)

(52) U.S. Cl.

CPC H05K 1/09 (2013.01); B22F 7/04 (2013.01); B22F 2301/10 (2013.01)

(57)ABSTRACT

A wiring board includes an insulation layer and an electrical conductor layer that are layered. The insulation layer is a glass ceramic. The electrical conductor layer is a sintered body of a plurality of crystallites containing copper as a main component. The plurality of crystallites include polygonal crystallites having linear sides. The plurality of crystallites are in contact with each other via the linear sides as grain boundaries.

