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TAKENAKA(10) **Pub. No.: US 2022/0386461 A1**(43) **Pub. Date: Dec. 1, 2022**(54) **WIRING SUBSTRATE AND METHOD FOR
MANUFACTURING WIRING SUBSTRATE**(71) Applicant: **IBIDEN CO., LTD.**, Ogaki (JP)(72) Inventor: **Yoshinori TAKENAKA**, Ogaki (JP)(73) Assignee: **IBIDEN CO., LTD.**, Ogaki (JP)(21) Appl. No.: **17/752,916**(22) Filed: **May 25, 2022**(30) **Foreign Application Priority Data**

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ABSTRACT

A wiring substrate includes an insulating layer including resin and filler particles, conductor layers including an upper-layer conductor layer and a lower-layer conductor layer such that the insulating layer is sandwiched between the upper-layer and lower-layer conductor layers, and a penetrating conductor formed in the insulating layer such that the penetrating conductor is penetrating through the insulating layer and connecting the upper-layer and lower-layer conductor layers. The penetrating conductor is formed such that the penetrating conductor has a first length which is the maximum width of the penetrating conductor in the direction orthogonal to the thickness direction of the wiring substrate and the first length is 25 μm or less, and the insulating layer is formed such that the maximum particle size of the filler particles in a region within the distance of 40% of the first length from the penetrating conductor is 20% or less of the first length.

