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**SHIMIZU et al.**(10) **Pub. No.: US 2024/0237204 A1**(43) **Pub. Date: Jul. 11, 2024**(54) **WIRING SUBSTRATE**(71) Applicant: **IBIDEN CO., LTD.**, Ogaki (JP)(72) Inventors: **Keisuke SHIMIZU**, Ogaki (JP); **Fumio NISHIWAKI**, Ogaki (JP); **Ryoya KIMURA**, Ogaki (JP)(73) Assignee: **IBIDEN CO., LTD.**, Ogaki (JP)(21) Appl. No.: **18/408,629**(22) Filed: **Jan. 10, 2024**(30) **Foreign Application Priority Data**

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(2013.01); **H05K 2201/0242** (2013.01)(57) **ABSTRACT**

A wiring substrate includes a first wiring part including a first insulating layer and a first conductor layer laminated on the first insulating layer, and a second wiring part including a second insulating layer and a second conductor layer laminated on the second insulating layer. The thickness of the second insulating layer is smaller than that of the first insulating layer. The thickness of the second conductor layer is smaller than that of the first conductor layer. The first conductor layer includes first wirings including differential wirings having the minimum wiring width of larger than 5  $\mu\text{m}$  and minimum inter-wiring distance of larger than 7  $\mu\text{m}$ . The second conductor layer includes second wirings having the maximum wiring width of 5  $\mu\text{m}$  or less and the maximum inter-wiring distance of 7  $\mu\text{m}$  or less. The second part is positioned closer to the outermost surface of the substrate than the first part.

