



US 20220386449A1

(19) **United States**

(12) **Patent Application Publication**  
**GONG**

(10) **Pub. No.: US 2022/0386449 A1**

(43) **Pub. Date: Dec. 1, 2022**

(54) **CIRCUIT BOARD AND DISPLAY DEVICE**

**Publication Classification**

(71) Applicants: **CHENGDU BOE OPTOELECTRONICS TECHNOLOGY CO., LTD.**, Sichuan (CN); **BOE TECHNOLOGY GROUP CO., LTD.**, Beijing (CN)

(51) **Int. Cl.**  
**H05K 1/02** (2006.01)  
**H05K 1/14** (2006.01)

(52) **U.S. Cl.**  
**CPC** ..... **H05K 1/0216** (2013.01); **H05K 1/0224** (2013.01); **H05K 1/144** (2013.01); **H05K 2201/041** (2013.01); **H05K 2201/10128** (2013.01)

(72) Inventor: **Qing GONG**, Beijing (CN)

(73) Assignees: **CHENGDU BOE OPTOELECTRONICS TECHNOLOGY CO., LTD.**, Sichuan (CN); **BOE TECHNOLOGY GROUP CO., LTD.**, Beijing (CN)

(57) **ABSTRACT**

A circuit board includes at least one circuit board unit sequentially stacked in a thickness direction of the circuit board, an insulating layer, an electromagnetic shielding layer, and a barrier layer. The circuit board unit includes a substrate layer, and two conductive layers respectively disposed on two opposite sides of the substrate layer in a thickness direction of the substrate layer, and each of the conductive layers includes a plurality of signal lines. The insulating layer is located on a side of an outermost conductive layer away from the substrate layer. The electromagnetic shielding layer is located on a side of the insulating layer away from the substrate layer. The barrier layer is located between the electromagnetic shielding layer and the outermost conductive layer. The barrier layer at least covers a plurality of signal lines in the outermost conductive layer.

(21) Appl. No.: **17/761,557**

(22) PCT Filed: **Apr. 16, 2021**

(86) PCT No.: **PCT/CN2021/087879**

§ 371 (c)(1),

(2) Date: **Mar. 17, 2022**

(30) **Foreign Application Priority Data**

Apr. 23, 2020 (CN) ..... 202010327142.4

10

