

# (19) United States

# (12) Patent Application Publication (10) Pub. No.: US 2022/0377902 A1 SHIN et al.

### Nov. 24, 2022 (43) **Pub. Date:**

### (54) PRINTED CIRCUIT BOARD

Applicant: LG INNOTEK CO., LTD., Seoul (KR)

Inventors: Jong Bae SHIN, Seoul (KR); Soo Min LEE, Seoul (KR); Jae Hun JEONG,

Seoul (KR)

(21) Appl. No.: 17/770,757

(22)PCT Filed: Oct. 21, 2020

(86) PCT No.: PCT/KR2020/014386

§ 371 (c)(1),

Apr. 21, 2022 (2) Date:

(30)Foreign Application Priority Data

Oct. 21, 2019 (KR) ...... 10-2019-0130455

## **Publication Classification**

(51) Int. Cl.

H05K 1/18 (2006.01)H05K 1/11 (2006.01)

U.S. Cl.

CPC ..... H05K 1/185 (2013.01); H05K 1/111

(2013.01)

#### (57)**ABSTRACT**

A printed circuit board according to an embodiment includes a first insulating layer, a second insulating layer disposed on the first insulating layer and including a cavity; and a pad disposed on the first insulating layer and having an upper surface exposed through the cavity; wherein the cavity includes a first part including a first inner wall; and a second part including a second inner wall under the first part; and wherein an inclination angle of the first inner wall is different from an inclination angle of the second inner wall.

100

