

(19) United States

(12) Patent Application Publication (10) Pub. No.: US 2024/0224414 A1 LENG et al.

(43) **Pub. Date:**

Jul. 4, 2024

(54) CIRCUIT BOARD

(71) Applicant: NIKO SEMICONDUCTOR CO.,

LTD., New Taipei City (TW)

(72) Inventors: CHUNG-MING LENG, New Taipei

City (TW); CHIH-CHENG HSIEH, Taoyuan City (TW); Wei-Lun Wang, NEW TAIPEI CITY (TW); PIN-RUI HUANG, New Taipei City (TW)

(21) Appl. No.: 18/207,230

(22)Filed: Jun. 8, 2023

(30)Foreign Application Priority Data

Dec. 30, 2022 (TW) 111150809

Publication Classification

(51) Int. Cl. H05K 1/02 (2006.01)H05K 1/18 (2006.01)

(52) U.S. Cl. CPC H05K 1/0271 (2013.01); H05K 1/18 (2013.01); H05K 2201/09972 (2013.01); H05K

2201/10439 (2013.01)

(57)**ABSTRACT**

A circuit board includes a substrate and a first metal circuit layer. The substrate has an upper surface and a lower surface opposite to the upper surface. The first metal circuit layer is located on the upper surface, and the first metal circuit layer includes a first line area and a second line area. The first line area and the second line area are separated by a groove area, and the groove area includes a bent section. Accordingly, the risk of detachment between the first metal circuit layer and the substrate due to stress concentration on the circuit board can be reduced.

