



US 20220377878A1

(19) **United States**(12) **Patent Application Publication**
Blanc(10) **Pub. No.: US 2022/0377878 A1**(43) **Pub. Date: Nov. 24, 2022**(54) **FLEXIBLE PRINTED CIRCUIT BOARD****Publication Classification**(71) Applicant: **Nortech Systems, Inc.**, Maple Grove, MN (US)(72) Inventor: **Scott G. Blanc**, Bemidji, MN (US)(73) Assignee: **Nortech Systems, Inc.**, Maple Grove, MN (US)(51) **Int. Cl.****H05K 1/02** (2006.01)**H05K 1/11** (2006.01)**H05K 3/46** (2006.01)(52) **U.S. Cl.**CPC **H05K 1/0219** (2013.01); **H05K 1/028** (2013.01); **H05K 1/115** (2013.01); **H05K 3/4644** (2013.01)(21) Appl. No.: **17/817,964**(22) Filed: **Aug. 5, 2022****Related U.S. Application Data**

(63) Continuation of application No. 16/961,406, filed on Jul. 10, 2020, now Pat. No. 11,412,608, filed as application No. PCT/US2019/013337 on Jan. 11, 2019.

(60) Provisional application No. 62/616,821, filed on Jan. 12, 2018.

(57)

ABSTRACT

A flexible printed circuit board comprises a conducting layer that includes a first signal line, a first ground plane and a second ground plane. A first shielding via extends from a third ground plane to a fourth ground plane and extends through the first ground plane to electrically connect the first ground plane, the third ground plane and the fourth ground plane. A second shielding via extends from the third ground plane to the fourth ground plane. The first ground plane, the second ground plane, the third ground plane, the fourth ground plane, the first shielding via and the second shielding via, together, circumferentially surround the first signal line to minimize electromagnetic interference with the first signal line.

