US 20220376676A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2022/0376676 A1**

DONG et al. (43) **Pub. Date: Nov. 24, 2022**

(54) **HIGH-ISOLATION AND ANTI-GLUE-INVASION SAW DUPLEXER**

(71) Applicant: **CHENGDU PINNACLE MICROWAVE CO., LTD.**, Chengdu (CN)

(72) Inventors: **Yuandan DONG**, Chengdu (CN); **Hao XUE**, Chengdu (CN); **Mengjuan ZHAO**, Chengdu (CN); **Tao YANG**, Chengdu (CN); **Zenghong MA**, Chengdu (CN)

(21) Appl. No.: **17/852,653**

(22) Filed: **Jun. 29, 2022**

Related U.S. Application Data

(63) Continuation of application No. PCT/CN2021/133445, filed on Nov. 26, 2021.

(30) **Foreign Application Priority Data**

May 18, 2021 (CN) 202110538672.8

Publication Classification

(51) **Int. Cl.**

H03H 9/72	(2006.01)
H03H 9/25	(2006.01)
H03H 9/64	(2006.01)

(52) **U.S. Cl.**

CPC ***H03H 9/725*** (2013.01); ***H03H 9/25*** (2013.01); ***H03H 9/6483*** (2013.01)

(57) **ABSTRACT**

A high-isolation and anti-glue-invasion Surface Acoustic Wave (SAW) duplexer includes a transmitting filter and a receiving filter. The isolation of the duplexer is improved by adjusting the positions of parallel resonance arms of the receiving filter and optimizing the distances between a grounding metal wiring of a Double Mode Structure (DMS) filter in the receiving filter and other grounding metal wirings and a distance between the grounding metal wiring of the DMS filter in the receiving filter and a signal metal wiring, and the grounding metal wiring is further arranged to surround the series resonance arms and the parallel resonance arms, so as to fill blank positions between the resonance arms and the edge of a package.