US 20220393651A1

(19) **United States**

(12) **Patent Application Publication** (10) **Pub. No.: US 2022/0393651 A1**

Lee et al. (43) **Pub. Date: Dec. 8, 2022**

(54) **HIGH-GAIN AMPLIFIER BASED ON DUAL-GAIN BOOSTING**

(71) Applicant: **KOREA ADVANCED INSTITUTE OF SCIENCE AND TECHNOLOGY**, Daejeon (KR)

(72) Inventors: **Sang Gug Lee**, Daejeon (KR); **Dae Woong Park**, Daejeon (KR); **Dzuhri Radityo Utomo**, Daejeon (KR); **Byeong Hun Yun**, Daejeon (KR)

(21) Appl. No.: **17/336,832**

(22) Filed: **Jun. 2, 2021**

Publication Classification

(51) **Int. Cl.**
H03F 3/04 (2006.01)
H03F 1/56 (2006.01)

(52) **U.S. Cl.**
CPC ***H03F 3/04*** (2013.01); ***H03F 1/56*** (2013.01); *H03F 2200/222* (2013.01); *H03F 2200/387* (2013.01)

(57) **ABSTRACT**

Provided is a high-gain amplifier based on double-gain boosting including a first gain amplification unit including a first amplifier, a second amplifier, and a an interstage matching network connected between the first amplifier and the second amplifier and performing primary amplification; and a second gain amplification unit connected in parallel with the first gain amplification unit and performing secondary boosting.