



US 20240179978A1

(19) **United States**(12) **Patent Application Publication**
AN et al.(10) **Pub. No.: US 2024/0179978 A1**(43) **Pub. Date: May 30, 2024**(54) **DISPLAY DEVICE**(71) Applicant: **Samsung Display Co., Ltd.**, Yongin-Si (KR)(72) Inventors: **Jin Sung AN**, Yongin-si (KR); **Sung Ho KIM**, Yongin-si (KR); **Yong Jae KIM**, Yongin-si (KR); **Yun Hwan PARK**, Yongin-si (KR); **Yoon Jee SHIN**, Yongin-si (KR); **Sug Woo JUNG**, Yongin-si (KR); **Hyun Wook CHOI**, Yongin-si (KR)(52) **U.S. Cl.**CPC **H10K 59/131** (2023.02); **G09G 3/3233** (2013.01); **H10K 59/88** (2023.02); **G09G 2300/0413** (2013.01); **G09G 2300/0426** (2013.01); **G09G 2300/0819** (2013.01); **G09G 2300/0861** (2013.01); **G09G 2310/02** (2013.01)

(57)

ABSTRACT(21) Appl. No.: **18/437,088**(22) Filed: **Feb. 8, 2024****Related U.S. Application Data**

(63) Continuation of application No. 18/143,402, filed on May 4, 2023, now Pat. No. 11,937,476.

(30) **Foreign Application Priority Data**

Aug. 11, 2022 (KR) 10-2022-0100627

Publication Classification(51) **Int. Cl.****H10K 59/131** (2006.01)**G09G 3/3233** (2006.01)**H10K 59/88** (2006.01)

A display device comprises a substrate; a circuit array layer comprising pixel drivers, data lines, first dummy lines, and second dummy lines; and a light emitting array layer. The display area comprises middle, first side, and second side regions. The data lines comprise first, second, and third data lines disposed in the middle, first side, and second side regions, respectively. The first dummy lines comprise a first data detour line disposed in the first side region and adjacent to a part of the second data line, and auxiliary lines. The second dummy lines comprise a second data detour line configured to connect the first data detour line to the third data line, and additional lines. The auxiliary lines comprise a bias auxiliary line to which a bias power is applied; and a second power auxiliary line to which a second power is applied.

