



US 20240213160A1

(19) **United States**(12) **Patent Application Publication**
PARK et al.(10) **Pub. No.: US 2024/0213160 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **SEMICONDUCTOR DEVICE HAVING A
REINFORCING INSULATING LAYER
CORRESPONDING TO A VIA****Publication Classification**(51) **Int. Cl.****H01L 23/532** (2006.01)**H01L 23/522** (2006.01)(52) **U.S. Cl.****CPC H01L 23/5329** (2013.01); **H01L 23/5226**(2013.01); **H01L 23/49816** (2013.01)(71) Applicant: **Samsung Electronics Co., Ltd.**,
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Dec. 12, 2022 (KR) 10-2022-0173047

(57)

ABSTRACT

A semiconductor device includes a first wiring level layer including a lower wiring layer, a second wiring level layer on the first wiring level layer and including an upper wiring layer, a via level layer positioned between the first wiring level layer and the second wiring level layer and including a via connecting the lower wiring layer to the upper wiring layer, and a reinforcing insulating layer positioned between the lower wiring layer and the upper wiring layer in the via level layer.

