



US 20230231556A1

(19) **United States**(12) **Patent Application Publication**
Jung(10) **Pub. No.: US 2023/0231556 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **SEMICONDUCTOR APPARATUS,
SEMICONDUCTOR SYSTEM, AND
OPERATING METHOD OF
SEMICONDUCTOR APPARATUS**(52) **U.S. Cl.**
CPC **H03K 19/0005** (2013.01); **G11C 7/1048**
(2013.01)(71) Applicant: **SK hynix Inc.**, Gyeonggi-do (KR)(57) **ABSTRACT**(72) Inventor: **Jae Hoon Jung**, Gyeonggi-do (KR)(21) Appl. No.: **17/744,835**(22) Filed: **May 16, 2022**(30) **Foreign Application Priority Data**

Jan. 20, 2022 (KR) 10-2022-0008465

Publication Classification(51) **Int. Cl.**
H03K 19/00 (2006.01)
G11C 7/10 (2006.01)

A semiconductor apparatus may include: a command generation circuit configured to generate a first internal command signal and a second internal command signal, which are sequentially activated on the basis of a data command signal for a data driving operation; an impedance setting circuit enabled on the basis of the first internal command signal, and configured to set impedance into which a reference resistance is reflected; and a data driving circuit enabled on the basis of the second internal command signal, and configured to perform the data driving operation on the basis of the set impedance.

