09-16-2003 U.S. DEPARTMENT OF COMMERCE FORM PTO-1595 (Modified) (Rev. 03-01) Patent and Trademark Office OMB No. 0651-0027 (exp.5/31/2002) P08A/RFV03 102552958 Tab settings → → To the Honorable Director of the United States Patent and Trademark Office: Please record the attached original documents or copy thereof. 2. Name and address of receiving party(ies): Name of conveying party(ies): 5. LEE, Jong-Myeong 1. PARK, Hong-Mi Name: SAMSUNG ELECTRONICS CO., LTD. 2. CHUN, Jong-Sik 6. SHIN, Ju-Cheol 3. LEE, Hyeon-Deok Address: 416, Maetan-dong, Paldal-gu, 4. PARK, In-Sun ☐ Yes ☒ No Additional names(s) of conveying party(ies) Nature of conveyance: Merger ☐ Change of Name City: Suwon-si, Gyeonggi-do, State/Prov.: ☐ Security Agreement Country: Republic of Korea ZIP: Other Execution Date: 8/11,11,11,11,18,18/2003 ☐ Yes ⊠ No Additional name(s) & address(es) Application number(s) or patent numbers(s): If this document is being filed together with a new application, the execution date of the application is: 8/11,11,11,11,18,18/03 Filing date B. Patent No.(s) Patent Application No. **NEW SEPTEMBER 9, 2003** 00000095 10657140 b9/10/2003 HLE333 40.00 DP D2 FC:8021 ☐ Yes ☒ No Additional numbers 5. Name and address of party to whom correspondence 6. Total number of applications and patents involved: concerning document should be mailed: Name: ADAM C. VOLENTINE 7. Total fee (37 CFR 3.41):....\$ 40.00 Registration No. 33289 Enclosed - Any excess or insufficiency should be credited or debited to deposit account Address: VOLENTINE FRANCOS, PLLC Authorized to be charged to deposit account 12200 SUNRISE VALLEY DRIVE, SUITE 150 8. Deposit account number: __ State/Prov.: VA City: RESTON 50-0238 Country: USA ZIP: 20191 (Attach duplicate copy of this page if paying by deposit account) DO NOT USE THIS SPACE 9. Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. **SEPT. 9, 2003** ADAM C. VOLENTINE Name of Person Signing Signature Date Total number of pages including cover sheet, attachments, and Mail documents to be recorded with required cover sheet information to:

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Docket No.: SEC.1042

REEL: 014482 FRAME: 0966

ASSIGNMENT

| . | In consideration of the sum of One Dollar (\$1 consideration paid to each of the undersigned | .00) and other good and valuable | | | | | | |
|--------------------------------------|---|---|--|--|--|--|--|--|
| Insert Name(s) of | 1. PARK, Hong-Mi | 5 LEE, Jong-Myeong | | | | | | |
| Inventor(s) | 2. CHUN, Jong-Sik | _6_SHIN, Ju-Cheol | | | | | | |
| | 3. LEE, Hyeon-Deok | | | | | | | |
| | 4. PARK, In-Sun | | | | | | | |
| Insert Name(s) of | the undersigned hereby sell(s) and assign(s) to | | | | | | | |
| Assignee(s) & | SAMSUNG ELECTRONICS CO., LTD. | | | | | | | |
| Address(es) | of 416, Maetan-dong, Paldal-gu, Suwon-si, C | Syeonggi-do, Korea | | | | | | |
| Title of Invention | (hereinafter designated as the Assignee) the entity States as defined in 35 USC 100, in the invention | | | | | | | |
| | METHOD OF FORMING A CONTACT IN A | SEMICONDUCTOR DEVICE | | | | | | |
| Date of Signing of Application | for which an application for patent in the United the undersigned on August 11 and 18 | · | | | | | | |
| | The undersigned agree(s) to execute all papers n application and any continuing, divisional or reis execute separate assignments in connection with deem necessary or expedient. | ssue applications thereof and also to | | | | | | |
| | The undersigned agree(s) to execute all papers necessary in connection with any interference which may be declared concerning this application or continuing. division or reissue thereof and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such interference. | | | | | | | |
| | The undersigned agree(s) to execute all papers a may be necessary in connection with claims or p for Protection of Industrial Property or similar agreements. | provisions of the International Convention | | | | | | |
| | The undersigned agree(s) to perform all affirmative acts which may be necessary to obtain a grant of a valid United States patent to the Assignee. | | | | | | | |
| | The undersigned hereby authorize(s) and reques any and all Letters Patents of the United States redivision or divisions or continuing or reissue approximately Assignee of the entire interest, and hereby cover convey the entire interest herein assigned, and the will not execute, any agreement in conflict herest | resulting from said application or any plications thereof to the said Assignee, as mants that he has (they have) full right to nat he has (they have) not executed, and | | | | | | |

Page 1 of 2

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RECORDED: 09/09/2003

The undersigned hereby grant(s) to Adam C. Volentine, Reg. No. 33,289 and William S. Francos, Reg. No. 38,456, and the firm of VOLENTINE FRANCOS, P.L.L.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent Office for recordation of this document.

| | name(s) | • | executed by the undersig | | | uci signeu |
|---------|---------------|--------------|--------------------------|---------------------------------|----------------|------------|
| Date | 2003. | 8.11 | , Signature of Invent | or Hong - K | ti Park | |
| | | | , Signature of Invent | | | |
| Pate | 2003. | ₽. II | , Signature of Invent | or Heon De Hyeon-Deok LEI | oh Lee | |
|)ate/ | 2003. | 8.11 | , Signature of Invent | or <u>In-Sun</u> In-Sun PARK | Park | |
|)ate | ४ ००३. | P. /P | , Signature of Invent | or Jones My Jong-Mycong Li | eng Le | |
| Date | 2003, | 8118 | , Signature of Invent | or Ju-Che | 1 Shin | |
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| Applica | ınt Refer | ence No | AW8025US/MJ | | Atty Docket No | SEC.1042 |
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