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BOX PATENT APPLICATION Assistant Commissioner for Patents Washington, D.C. 20231

01/21/03

Please record the attached original document or copy thereof and return the recorded instrument to the undersigned.

- 1. Name of party(ies) conveying an interest: Hoe-Seong HA and Jun-Eui SONG
- 2. Name and address of party(ies) receiving an interest: Samsung Electronics Co., Ltd.

San 16, Banwoi, ri, Taean-eub, Hwasung-city

Gyeonggi-do KOREA

3. Description of the interest conveyed:

Date of execution of attached document: January 14, 2003

4. Application number(s) or patent number(s). Additional sheet attached? Yes ____ No ____

If this document is being filed together with a new application, the execution date of the application is: January 13, 2003

A. Patent Application No.

B. Patent No.

5. Name and address of party to whom correspondence concerning document should be mailed:

MARGER JOHNSON & McCOLLOM, P.C.

1030 S.W. Morrison Street Portland, Oregon 97205 Telephone: (503) 222-3613

- 6. Number of applications and patents involved: 1
- 7. PTO Form 2038 authorizing credit card payment (\$40) is enclosed.
- 8. Any deficiency or overpayment should be charged or credited to deposit account number 13-1703.
- 9. 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.

Dated: January 21, 2003

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MARGER JOHNSON & McCOLLOM, P.C.

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Respectfully submitted,

MARGER JOHNSON & MCCOLLOM, P.C.

Scott A. Schaffer Reg. No. 38,610

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Total number of pages comprising cover sheet and attached assignment: 3

A. PARELLE ELECTRON

PATENT

REEL: 013695 FRAME: 0019

PATENT APPLICATION Atty's Do. No. 8750-028 Sungwoo Ref. No.:SPX2002010011US

ASSIGNMENT

U.S.A. Patent Application
Sole or Joint
For Inventions Made Outside U.S.A.
Executed With Application

In consideration of the sum of Ten Dollars (10.00) and other good and valuable considerations paid to each of the undersigned, to wit:

X if continued on separate page

the receipt and sufficiency of which are hereby acknowledged by the undersigned who hereby sell(s), assign(s) and transfer(s) unto:

SAMSUNG ELECTRONICS CO., LTD. 416 MAETAN-DONG, PALDAL-GU, SUWON-CITY, GYEONGGI-DO, REPUBLIC OF KOREA

(hereinafter designated "ASSIGNEE") the entire right, title and interest in and to the invention as defined in 35 USC §100, for the United States of America, the invention entitled:

HALF POWER SUPPLY VOLTAGE GENERATOR AND SEMICONDUCTOR MEMORY DEVICE USING THE SAME

for which an application for Letters Patent of the United States of America has been executed even date herewith by the undersigned, and in and to any and all divisionals, continuations, substitutes, and reissues thereof; and all resulting patents and the undersigned hereby authorizes and requests the United States Assistant Commissioner of Patents to issue said Letters Patent to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

And the undersigned hereby agrees to testify and execute any papers for ASSIGNEE, its successors, assigns and legal representatives, deemed essential by ASSIGNEE to ASSIGNEE'S full protection and title in and to the invention hereby transferred.

PATENT REEL: 013695 FRAME: 0020 Please sign concurrently with Oath or Declaration and Power of Attorney

SIGNED ON THE DATES INDICATED BESIDE OUR SIGNATURES:

INVENTOR(S)

DATE SIGNED

WITNESSED

(1) Ki-Chul Chun 0//14/2003

PLEASE RETURN RECORDED ASSIGNMENT TO:

Alan T. McCollom Marger Johnson & McCollom 1030 S.W. Morrison Street Portland, OR 97205

RECORDED: 01/21/2003

2

PATENT REEL: 013695 FRAME: 0021