11-28-2000 FORM PTO-1595 RE(U.S. DEPARTMENT OF COMMERCE SHEET (Rev. 6-93) Patent and Trademark Office OMB No. 0651-0011 (exp. 4/94) 101529144 To the Honorable Commissioner of 1 ttached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies): Won-Suk Yang Name: Samsung Electronics, Co., Ltd. 10.30.00 Yoo-Sang Hwang Hong-Sik Jeong Internal Address: Ki-Nam Kim Additional name(s) of conveying party(ies) attached? 3. Nature of conveyance: Street Address: 416, Maetan-dong, Paldal-gu, Suwon-city, Kyungki-do, Republic of Korea ■ Assignment ☐ Merger ☐ Security Agreement ☐ Change of Name City: State ZIP □ Other Execution Date: October 26, 2000 and October 27, 2000 Additional name(s) & address attached? Yes ☑ No. 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: October 26 and 2', 2000 A. Patent Application No.(s) B. Patent No.(s) Additional numbers attached? ☐ Yes ☑ No 6. Total number of applications and registrations 5. Name and address of party to whom correspondence concerning 1 involved document should be mailed: Name: Anthony P. Onello, Jr. 7. Total fee (37 CFR 3.41)...... \$40.00 Internal Address: Samuels, Gauthier & Stevens LLP ☐ Authorized to be charged to deposit account Street Address: 8. Deposit Account Number: 225 Franklin Street, Suite 3300 (Attach duplicate copy of this page if paying by deposit account) City: State MA ZIP 02110 Boston 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. Anthony P. Onello, Jr. Name of Person Signing Total number of pages including cover sheet, attachments, and document

ASSIGNMENT

We, Won-Sok Vanced Poonglim APT 201-507, Dongchun-Ri, Sooji-Eup, Yougin-City, Kynngki-Do, Republic of Kolea Yoo-Sang Hwang of Hankook APT 214-806, Youngtong-Dong, Paldal-Ku Sunyon-City, Kyungky Do Republic of Korea, Hong-Sik Jeong of LG-Samick APT 112-204, HomsesileDong, Kwonsun Ro. Sawon-City, Kyungki-Dol Republic of Korea, and Ki-Nam Kim of Kummaent Life AF (108.50) Pyungchon-Dong, Dongan-Ku, Anyang-City, Kyungki-Do, Republic of Korea, baving invented improvements in BIT LINE LANDING PAD AND BORDERLESS CONTACT ON BUILDING STUD WITH LOCALIZED ETCH STOP LAYER AND MANUFACTURING METHOD THEREOF described in an application for Letters Patent of the United States, executed by us on even date herewith, for good and valuable consideration, receipt of which is hereby acknowledged from Samsung Plectronics Co. 1.1d. a Korean cornoration having a place of business at 416, Mactan-dong, Paldal gu. Suwon-city. Kyungki do, Republic of Kurea (and hereinafter called the Assignee, which term shall include its successors and assigns), do hereby sell, assign and transfer unto the Assignee our entire right rate, and interest in and throughout the United States of America (including its territories and dependencies) and all countries foreign thereto, in and to and under said application (which term shall include hereinafter where the context so admits all divisional, continuing, reissue and other patent applications based thereon) and the inventions (which term shall include each and every such invention. or part thereof) therein described, and any and all patents and like rights of exclusion (including extensions thereof) of any country which may be granted on or for said inventions or on said application;

And for the same consideration We do also hereby sell, assign, and transfer unto the Assigner, all our rights under the international Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, and all other treaties of like purpose in respect of said inventions and said application, and We do hereby authorize the Assignee to apply in our name or its own name or its designee for patents and like rights of exclusion on or for said inventions in all countries, claiming (if the Assignce so desires) the priority of the filing date of said application under the provisions of said Convention. Treaty or any such other Convention or Treaty;

And for the same consideration. We do hereby agree for ourselves and for our heirs, executors, and administrators, promptly upon request of the Assigned to execute and deliver without further compensation any power of attorney, assignment, original divisional, continuing, reissue or other application or applications for patent or patents or like rights of exclusion of any country, or other lawful documents and any further assurances that may be deemed necessary or destrable by the Assigned, fully to secure to it said fught, title, and interest as aforesaid in and to said inventions, applications, and said several patents and like rights of exclusion (including extensions thereof) or any of them, all, however, at the expense of the Assignee its successors, or assigns;

And We do hereby authorize and request the Commissioner of Patents and Trademarks of the United States of America and the corresponding Official of each country foreign thereto to issue to the Assignee, any and all patents and like rights of exclusion which may be granted in any country upon said United States application on or for said inventions;

And We do hereby covenant for ourselves and our legal representatives and agree with the Assignee, that We have granted no right or license to make, use, or sell said inventions to anyone except the Assignee, that prior to the execution of this deed our right, title, and interest in and to said inventions has not been otherwise encombered by us, and that We have not executed and will not execute any instruments in confluct herewith

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First or Sole Inventor:

Signature

Won-Suk Yang

Date: October . M. 2000

Second Joint Inventor

Signature

Yon-Sang Hwang

Date: October 16, woo

Third Joint Inventor

Signature

Hong-Sik Jeong

Date: October 26,2000

Fourth Joint Inventor:

Signature

Ki-Nam Kim

Date: October 26, 2000

DOCKET NO. : SAM: (50 H) SAM:

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