

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5449321

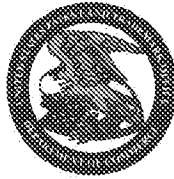
|   |   |
|---|---|
| <b>SUBMISSION TYPE:</b>   | CORRECTIVE ASSIGNMENT   |
| <b>NATURE OF CONVEYANCE:</b>  | Corrective Assignment to correct the FIRST INVENTOR'S NAME previously recorded on Reel 048496 Frame 0188. Assignor(s) hereby confirms the ASSIGNMENT. |
| <b>CONVEYING PARTY DATA</b>   |   |
| <b>Name</b>   | <b>Execution Date</b>   |
| WON WOOK SO   | 02/11/2019  |
| JIN SEON PARK   | 02/11/2019  |
| YOUNG SIK HUR   | 02/11/2019  |
| JUNG CHUL GONG  | 02/11/2019  |
| YONG HO BAEK  | 02/11/2019  |
| <b>RECEIVING PARTY DATA</b>   |   |
| <b>Name:</b>  | SAMSUNG ELECTRO-MECHANICS CO., LTD.   |
| <b>Street Address:</b>  | MAEYOUNG-RO 150 (MAETAN-DONG), YOUNGTONG-GU   |
| <b>City:</b>  | SUWON-SI, GYEONGGI-DO   |
| <b>State/Country:</b>   | KOREA, REPUBLIC OF  |
| <b>PROPERTY NUMBERS Total: 1</b>  |   |
| <b>Property Type</b>  | <b>Number</b>   |
| <b>Application Number:</b>  | 16291594  |
| <b>CORRESPONDENCE DATA</b>  |   |
| <b>Fax Number:</b>  |   |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |   |
| <b>Phone:</b>   | 2027393000  |
| <b>Email:</b>   | patents@morganlewis.com   |
| <b>Correspondent Name:</b>  | MORGAN LEWIS & BOCKIUS LLP  |
| <b>Address Line 1:</b>  | 1111 PENNSYLVANIA AVENUE, N.W.  |
| <b>Address Line 4:</b>  | WASHINGTON, D.C. 20004  |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 123193-7647   |
| <b>NAME OF SUBMITTER:</b>   | HOSANG LEE  |
| <b>SIGNATURE:</b>   | /Hosang Lee/  |
| <b>DATE SIGNED:</b>   | 03/29/2019  |
| <b>Total Attachments: 5</b>   |   |
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HL  
JXK  
SMT

# UNITED STATES PATENT AND TRADEMARK OFFICE

UNDER SECRETARY OF COMMERCE FOR INTELLECTUAL PROPERTY AND  
DIRECTOR OF THE UNITED STATES PATENT AND TRADEMARK OFFICE

MARCH 5, 2019

PTAS

MORGAN LEWIS & BOCKIUS LLP  
1111 PENNSYLVANIA AVENUE N.W.  
WASHINGTON, DC 20004

**505356765**

## UNITED STATES PATENT AND TRADEMARK OFFICE NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE ASSIGNMENT RECORDATION BRANCH AT 571-272-3350. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, MAIL STOP: ASSIGNMENT RECORDATION BRANCH, P.O. BOX 1450, ALEXANDRIA, VA 22313.

RECORDATION DATE: 03/04/2019

REEL/FRAME: 048496/0188  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS).

DOCKET NUMBER: 123193-7647

ASSIGNOR:  
SO, WON SOOK

DOC DATE: 02/11/2019

ASSIGNOR:  
PARK, JIN SEON

DOC DATE: 02/11/2019

ASSIGNOR:  
HUR, YOUNG SIK

DOC DATE: 02/11/2019

ASSIGNOR:  
GONG, JUNG CHUL

DOC DATE: 02/11/2019

ASSIGNOR:  
BAEK, YONG HO

DOC DATE: 02/11/2019

ASSIGNEE:  
SAMSUNG ELECTRO-MECHANICS CO., LTD.  
MAEYOUNG-RO 150 (MAETAN-DONG),  
YOUNGTONG-GU  
SUWON-SI, GYEONGGI-DO, KOREA,  
REPUBLIC OF

123193-7647-US

RECORDED  
By HMD Date 03-23-19

**PATENT**

**REEL: 048747 FRAME: 0242**

APPLICATION NUMBER: 16291594  
PATENT NUMBER:  
TITLE: ANTENNA MODULE

FILING DATE:  
ISSUE DATE:

ASSIGNMENT RECORDATION BRANCH  
PUBLIC RECORDS DIVISION

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5403553

|   |   |
|---|---|
| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT                              |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT                                  |
| <b>CONVEYING PARTY DATA</b>   |   |
| <b>Name</b>   | <b>Execution Date</b>                       |
| WON SOOK SO   | 02/11/2019                                  |
| JIN SEON PARK   | 02/11/2019                                  |
| YOUNG SIK HUR   | 02/11/2019                                  |
| JUNG CHUL GONG  | 02/11/2019                                  |
| YONG HO BAEK  | 02/11/2019                                  |
| <b>RECEIVING PARTY DATA</b>   |   |
| <b>Name:</b>  | SAMSUNG ELECTRO-MECHANICS CO., LTD.         |
| <b>Street Address:</b>  | MAEYOUNG-RO 150 (MAETAN-DONG), YOUNGTONG-GU |
| <b>City:</b>  | SUWON-SI, GYEONGGI-DO                       |
| <b>State/Country:</b>   | KOREA, REPUBLIC OF                          |
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| <b>Property Type</b>  | <b>Number</b>                               |
| <b>Application Number:</b>  | 16291594                                    |
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| <b>Fax Number:</b>  |   |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |   |
| <b>Phone:</b>   | 2027393000                                  |
| <b>Email:</b>   | patents@morganlewis.com                     |
| <b>Correspondent Name:</b>  | MORGAN LEWIS & BOCKIUS LLP                  |
| <b>Address Line 1:</b>  | 1111 PENNSYLVANIA AVENUE N.W.               |
| <b>Address Line 4:</b>  | WASHINGTON, D.C. 20004                      |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 123193-7647                                 |
| <b>NAME OF SUBMITTER:</b>   | HOSANG LEE                                  |
| <b>SIGNATURE:</b>   | /Hosang Lee/                                |
| <b>DATE SIGNED:</b>   | 03/04/2019                                  |
| <b>Total Attachments: 2</b>   |   |
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| source=123193-7647_dec#page2.tif  |   |

**COMBINED DECLARATION (37 CFR 1.63) FOR U.S. PATENT APPLICATION USING AN  
APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT OF INVENTION**

|   |   |
|---|---|
| <b>Title of<br/>Invention</b>   | <b>ANTENNA MODULE</b>   |
| <b><u>DECLARATION</u></b>   |   |
| As the below named and undersigned inventor, I hereby declare that:   |   |
| This declaration<br>is directed to:   | <input checked="checked" type="checkbox"/> The attached application, or<br><input type="checkbox"/> United States application or PCT international application number<br>_____ filed on _____ |
| The above-identified application was made or authorized to be made by me.<br>I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.<br>I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or imprisonment of not more than five (5) years, or both.<br>Note to Inventor: 37 C.F.R. § 1.63(c) states: <i>A person may not execute an oath or declaration for an application unless that person has reviewed and understands the contents of the application, including the claims, and is aware of the duty to disclose to the Office all information known to the person to be material to patentability as defined in § 1.56.</i>           |   |
| <b><u>ASSIGNMENT</u></b>  |   |
| WHEREAS, I have made an invention described and/or claimed in the above-identified application; and<br>WHEREAS, <b>SAMSUNG ELECTRO-MECHANICS CO., LTD</b> , a corporation of the Republic of Korea, having a place of business at <b>Maeyoung-Ro 150 (Maetan-Dong), Youngtong-Gu, Suwon-Si, Gyeonggi-Do, Republic of Korea</b> , (hereinafter referred to as "ASSIGNEE") desires to acquire the entire right, title, and interest in and to said invention in all countries throughout the world and the above-identified United States patent application;   |   |
| NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I have assigned and do hereby assign to the ASSIGNEE, and its lawful successors and assigns, the entire right, title, and interest in and to said invention, the above-identified United States patent application and all divisions, continuations, and continuations-in-part of said application, and reissues, extensions, and renewals of Letters Patent granted thereon, and all corresponding patent applications filed in countries foreign to the United States ("foreign countries") and corresponding international patent applications, and all Letters Patents issuing on any such patent applications in the United States and foreign countries; |   |
| I hereby assign to the ASSIGNEE, and its lawful successors and assigns, the right to file patent applications in foreign countries on said invention in its own name and the right to claim priority to the above-identified United States patent application under the terms of the International Convention and any   |   |

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other relevant treaties;

I hereby authorize and request the United States Patent and Trademark Office and officials in patent offices in foreign countries to issue any and all of said Letters Patent to the ASSIGNEE as the assignee of my entire right, title, and interest in and to the same, for the sole use and benefit of the ASSIGNEE, and its lawful successors and assigns, to the full end of the term for which said Letters Patent may be granted;

I hereby grant the attorney of record the power to insert on this Assignment any further identification that may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office or other authority for recordation of this document;

I hereby covenant that I have the full right to convey the interest assigned by this Assignment, and I have not executed and will not execute any agreement in conflict with this Assignment; and

Further, I hereby further covenant and agree that I will, without further consideration, communicate with the ASSIGNEE, and its lawful successors and assigns, any facts known to me respecting this invention, and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver any and all papers that may be necessary or desirable to perfect the title to this invention in said ASSIGNEE, and its lawful successors or assigns, execute all divisional, continuation, continuation-in-part, and reissue applications, make all rightful oaths and generally do everything possible to aid the ASSIGNEE, and its lawful successors and assigns, to obtain and enforce proper patent protection for this invention in the United States and any foreign country, it being understood that any expense incident to the execution of such papers shall be borne by the ASSIGNEE, and its lawful successors and assigns.

IN TESTIMONY WHEREOF, I have hereunto set my hands.

NAME OF INVENTOR (Full Legal Name) Won Wook SO

Signature: So Won Wook Date: 11. Feb. 2019

NAME OF INVENTOR (Full Legal Name) : Jin Seon PARK

Signature: Jin Seon Park Date: 11. Feb. 2019

NAME OF INVENTOR (Full Legal Name) : Young Sik HUR

Signature: Young Sik Hur Date: 11. Feb. 2019

NAME OF INVENTOR (Full Legal Name) : Jung Chul GONG

Signature: Jung Chul Gong Date: 11. Feb. 2019

NAME OF INVENTOR (Full Legal Name) : Yong Ho BAEK

Signature: Yong Ho Baek Date: 11. Feb. 2019

C:\Users\WMP076678W\Desktop\WPOA-DEC-ASSIGN TO  
BE SENT TO CLIENT\WCombined Declaration and

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