

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT																
NATURE OF CONVEYANCE:	ASSIGNMENT																
CONVEYING PARTY DATA																	
<table border="1"><thead><tr><th>Name</th><th>Execution Date</th></tr></thead><tbody><tr><td>Yoo Hwan KIM</td><td>07/21/2006</td></tr><tr><td>Ki Sung KWON</td><td>07/21/2006</td></tr><tr><td>Soo Woong LEE</td><td>07/21/2006</td></tr><tr><td>Jin Taek LEE</td><td>07/20/2006</td></tr><tr><td>Yo Sub MOON</td><td>07/21/2006</td></tr><tr><td>Sung Cheol SHIN</td><td>07/21/2006</td></tr><tr><td>Gyu Suck KIM</td><td>07/21/2006</td></tr></tbody></table>	Name	Execution Date	Yoo Hwan KIM	07/21/2006	Ki Sung KWON	07/21/2006	Soo Woong LEE	07/21/2006	Jin Taek LEE	07/20/2006	Yo Sub MOON	07/21/2006	Sung Cheol SHIN	07/21/2006	Gyu Suck KIM	07/21/2006	
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RECEIVING PARTY DATA																	
Name:	SAMSUNG ELECTRO-MECHANICS CO., LTD.																
Street Address:	314 MAETAN-3-DONG, YOUNGTONG-KU, SUWON																
City:	KYUNGKI-DO																
State/Country:	KOREA, REPUBLIC OF																
PROPERTY NUMBERS Total: 1																	
<table border="1"><thead><tr><th>Property Type</th><th>Number</th></tr></thead><tbody><tr><td>Application Number:</td><td>11549046</td></tr></tbody></table>	Property Type	Number	Application Number:	11549046													
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Application Number:	11549046																
CORRESPONDENCE DATA																	
Fax Number:	(703)518-5499																
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OP \$40.00 11549046

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PATENT
REEL: 018383 FRAME: 0589

NAME OF SUBMITTER:

Ayesha Wilson

Total Attachments: 3

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Docket No.

ASSIGNMENT

In consideration of the premises and other good and valuable consideration in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned,

- | | |
|---------------------------|-----------------------------|
| (1) <u>KIM, Yoo Hwan</u> | (5) <u>MOON, Yo Sub</u> |
| (2) <u>KWON, Ki Sung</u> | (6) <u>SHIN, Sung Cheol</u> |
| (3) <u>LEE, Soo Woong</u> | (7) <u>KIM, Gyu Suck</u> |
| (4) <u>LEE, Jin Taek</u> | |

who have made a certain new and useful invention, hereby sell, assign and transfer unto

SAMSUNG ELECTRO-MECHANICS CO., LTD.
314 Maetan-3-dong, Youngtong-ku,
Suwon, Kyungki-do, Republic of Korea

its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C.

100 in the invention entitled PHASE FREQUENCY DETECTOR CAPABLE OF
IMPROVING NOISE CHARACTERISTICS

(a) for which an application for United States Letters Patent was filed on _____, and identified by United States Serial No. _____;
or

(b) for which an application for United States Letters Patent was executed on _____,

and the undersigned hereby authorize and request the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefor and any and all extensions, divisions, reissues, substitutes, renewals, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as

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ASSIGNEE, its successors, assigns and legal representatives; the undersigned agree that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE;

AND the undersigned hereby agree to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

SIGNED on the dates indicated aside our signatures:

INVENTOR(S)	DATE SIGNED
1) <u>KIM, Yoo Hwan</u> Name: KIM, Yoo Hwan	<u>06. 7. 21.</u>
2) <u>KWON KI SUNG.</u> Name: KWON, Ki Sung	<u>06. 07. 21.</u>
3) <u>LEE, Soo Woong</u> Name: LEE, Soo Woong	<u>2006. 7. 21</u>
4) <u>LEE, Jin Taek.</u> Name: LEE, Jin Taek	<u>2006. 07. 20.</u>

5) Moon. Yo Sub

Name: MOON, Yo Sub

06.07.21

6) Sung C. Sh

Name: SHIN, Sung Cheol

06.07.21

7) Kim . Gyu Suck

Name: KIM, Gyu Suck

06.07.21