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						Name: Samsung Electronics Co., Ltd.								
Additional name(s) of conveying parties attached? ☐ Yes ☒ No							Internal Address:							
3. Nature of conveyance:						Street Address: 416, Maetan-dong, Yeongtong-gu								
×	Assignm	ignment		☐ Me		rger	City:		Şu	won-si	on-si			
	Security	Agreement [			Cha	ange of Name	State: Gyonggi-do		o Country: Korea	South	Zip Code:			
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A.	Patent	Application	on Num	ber: 12/8	379,93	30	B. Patent Number(s):							
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PATENT REEL: 025005 FRAME: 0444

SAM-301 ID-200904-034-1-US0

## **ASSIGNMENT**

I, Jun Bae Kim ("Assignor"), have an interest in the invention entitled:

## DELAY LOCKED LOOP CIRCUIT AND SEMICONDUCTOR DEVICE HAVING THE DELAY LOCKED LOOP CIRCUIT

which is the subject of a United States or International application for patent entitled above and naming the undersigned inventor

[ ] in a Provisional Patent Application No
I in a Non-Provisional Application along with a Declaration stoped today with this assignment.
L THE STRUCT PROVISIONAL ADDICATION Where the Declaration was signed as
2/819   12/819   20   12/819
[ ] in U.S. Patent No, Issued
Samsung Electronics Co. LTD., 416, Maetan-dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, Republic of Korea, ("Assignee"), is desirous of acquiring Assignor's interest in the invention.

Assignor acknowledges receipt and adequacy of good and valuable consideration in exchange for this Assignment, and assigns to Assignee and its successors in interest, the full and exclusive right, title and interest to any and all inventions, developments and improvements disclosed or described in the patent application listed above ("the invention"), in the United States of America and all foreign countries, including the right to claim priority under the laws of the United States, the Paris Convention, and any foreign countries, for the full term of the patent, including extensions of time, the same as if held by Assignor had this Assignment not been made. This Assignment includes the assignment of the right to recover for past infringements of, or liabilities for, any of the rights related to the invention.

Assignor covenants and agrees to cooperate with Assignee and execute all Instruments or documents requested for the making and prosecution of any applications of any type for patent in the United States and in all foreign countries including, but not limited to the following: provisional, continuation, continuation-in-part, divisional, renewal or substitute, reissue, re-examination, or extension. Assignor covenants and agrees to cooperate with Assignee in any litigation regarding the invention, patents or applications regarding the invention, and render all necessary assistance deemed essential to Assignee's full protection and title in and to the invention hereby transferred without further or other compensation than that provided in this Assignment; the undersigned agrees that the attorneys of record in said application shall hereafter act on behalf of said Assignee.

Assignor covenants that no assignment, sale or agreement or encumbrance has been or will be entered into which would conflict with this Assignment.

Assignor requests the Commissioner of Patents and Trademarks to issue said Letters Patent of the United States of America to Assignee, and requests that any official of any country or countries foreign to the United States, whose duty it is to issue or grant patents and applications, issue said Letters Patent, Utility Model Registration or Inventor's Certificate to Assignee.

Assignor hereby grants the firm of MUIR PATENT CONSULTING, PLLC the power to insert on this assignment any further identification that may be necessary or desirable in order to comply with the rules of any issuing authority, including the United States Patent and Trademark Office, for recordation of this document.

8/26/20/0 (signature)

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