

PATENT ASSIGNMENT

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Yen-Jen CHEN	11/29/2011
I-Ting LEE	11/29/2011
Feng Wei KUO	11/29/2011
Huan-Neng CHEN	11/29/2011
Chewn-Pu JOU	11/29/2011
RECEIVING PARTY DATA	
Name:	TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.
Street Address:	No. 8, Li-Hsin Rd. VI, Hsinchu Science Park
City:	Hsinchu
State/Country:	TAIWAN
Postal Code:	300
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	13308274
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Total Attachments: 1 source=efiledassgn#page1.tif	

OP \$40.00 13308274

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) Yen-Jen CHEN
- 2) I-Ting LEE
- 3) Feng Wei KUO
- 4) Huan-Neng CHEN
- 5) Chewn-Pu JOU

who has made a certain new and useful invention, hereby sells, assigns and transfers unto -

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD. having a place of business at **No. 8, Li-Hsin Rd. VI, Hsinchu Science Park, Hsinchu 300, Taiwan R.O.C.**

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 CIRCUIT

- (a) for which an application for United States Letters Patent was filed on 11/30/2011, and identified by United States Patent Application No. 13/308,274; or
- (b) for which an application for United States Letters Patent was executed on _____,

and the undersigned hereby authorizes and requests the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefore and any and all extensions, divisions, reissues, 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 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 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 date indicated aside my signature:

1) Yen Jen Chen
Name: Yen-Jen CHEN

2011. 11. 29
Date:

2) I Ting Lee
Name: I-Ting LEE

2011. 11. 29
Date:

3) Feng wei kuo
Name: Feng Wei KUO

2011. 11. 29
Date:

4) Huan-Neng CHEN
Name: Huan-Neng CHEN

2011. 11. 29
Date:

5) Chewn-Pu JOU
Name: Chewn-Pu JOU

2011. 11. 29
Date: