

## 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>David H. Shen</td><td>06/12/2007</td></tr><tr><td>Ann P. Shen</td><td>06/15/2007</td></tr></tbody></table>	Name	Execution Date	David H. Shen	06/12/2007	Ann P. Shen	06/15/2007	
Name	Execution Date						
David H. Shen	06/12/2007						
Ann P. Shen	06/15/2007						
RECEIVING PARTY DATA							
Name:	NanoAmp Solutions, Inc.						
Street Address:	670 N. McCarthy Blvd. Suite 220						
City:	Milpitas						
State/Country:	CALIFORNIA						
Postal Code:	95035						
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>11764095</td></tr></tbody></table>	Property Type	Number	Application Number:	11764095			
Property Type	Number						
Application Number:	11764095						
CORRESPONDENCE DATA							
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ATTORNEY DOCKET NUMBER:	18085-003002						
NAME OF SUBMITTER:	Tawana N. Lefeged						
Total Attachments: 6 source=18085003002Assignment#page1.tif source=18085003002Assignment#page2.tif							

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ASSIGNMENT

For valuable consideration, I, DAVID H. SHEN, of; hereby assign to NANOAMP SOLUTIONS, INC., a corporation of Cayman Islands, having a place of business at 440 N. Wolfe Road, Sunnyvale, California 94086, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by me, entitled TECHNIQUES FOR PASSIVE SUBHARMONIC MIXING, filed \_\_\_\_\_, and assigned U.S. Serial Number \_\_\_\_\_, and I authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and serial number of said application when known; this assignment including said application, any and all United States and foreign patents (including continuation, divisional, and other applications claiming priority to said application), utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and I authorize the Assignee to apply in all countries in my name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and I agree for myself and my heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

IN WITNESS WHEREOF, I hereto set my hand and seal at Sunnyvale, California  
this 12th day of June, 2007  
David H. Shen L.S.  
DAVID H. SHEN

Signature witnessed by:

June 12, 2007

Date

WITNESS:

Printed Name:

Address:

David H. Shen  
David H. Shen  
21037 Dorsey Way  
Saratoga, CA 95070

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ASSIGNMENT

For valuable consideration, I, ANN P. SHEN, of; hereby assign to NANOAMP SOLUTIONS, INC., a corporation of Cayman Islands, having a place of business at 440 N. Wolfe Road, Sunnyvale, California 94086, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for United States Patent signed by me, entitled TECHNIQUES FOR PASSIVE SUBHARMONIC MIXING, filed \_\_\_\_\_, and assigned U.S. Serial Number \_\_\_\_\_, and I authorize and request the attorneys appointed in said application to hereafter complete this assignment by inserting above the filing date and serial number of said application when known; this assignment including said application, any and all United States and foreign patents (including continuation, divisional, and other applications claiming priority to said application), utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and I authorize the Assignee to apply in all countries in my name or in its own name for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and I agree for myself and my heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment.

IN WITNESS WHEREOF, I hereto set my hand and seal at Sunnyvale, California  
this 15th day of JUNE, 2007  
Ann P. Shen L.S.  
ANN P. SHEN

Signature witnessed by:

JUNE 15, 2007  
Date

WITNESS:

Printed Name:

Address:

David A. Shen  
DAVID A. SHEN  
21037 Dorsey Way  
Saratoga, CA 95070

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May 15, 2007

**To whom it may concern,**

This is to certify that NanoAmp Solutions Inc. (Cayman), which is a Cayman registered company and a subsidiary of NanoAmp Solutions Inc., a Delaware registered company, has completed the purchase of certain assets and liabilities of IRF Semiconductor Inc., a Cayman registered company on February 28, 2007. Per the terms of the Asset Purchase Agreement between the two companies, IRF Semiconductor, Inc. assigned all its intellectual property including any patents issued or in process to NanoAmp Solutions Inc. (Cayman).

The following patents:

US 7,015,736 B1, titled "Symmetric Charge Pump," issued on March 21, 2006; and  
US 7,015,768 B1, titled "Low-Noise Voltage-Controlled Oscillator," issued on March 21, 2006.

The following U.S. pending patent applications:

Methods for Auto-Calibration and Fast Tuning of Voltage Controlled Oscillators in Phase-Lock Loops, application no.: 11/347,114, and filed on February 3, 2006;

A Tunable Multi-Band Receiver by On-Chip Selectable Filtering, application no. 10/729,674, and filed on December 5, 2003;

A Symmetric Charge Pump Replica Bias Detector, application no. 11/351,696, and filed on February 10, 2006;

A Low Power High Speed Latch for a Prescaler Divider, application no 11/296,549, and filed on December 7, 2005;

A Passive Sub-harmonic Mixer Design, application no. 10/729,638, and filed on December 5, 2003 (already allowed);

The following U.S. pending patent applications that may have been abandoned:

A High Dynamic Range Radio Frequency, application no. 10/729,341, and filed on December 5, 2003;

A Radio Frequency Receiver Architecture with Tracking Image-Reject Polyphase Filtering, application no.: 10/729,343, and filed on December 5, 2003;

A Radio Frequency Receiver Architecture with On-Chip Tracking Intermediate Frequency Filtering, application no. 10/729,662, and filed on December 5, 2003;

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NanoAmp Solutions, Inc. • 1371 McCarthy Blvd. • Milpitas, CA 95035  
Phone: 408-240-8721 • Fax: 408-716-2805 • [www.nanoamp.com](http://www.nanoamp.com)



An Integrated Self-Tuning L-C Filter, application no. 10/729,661, and filed on December 5, 2003;

A High Quality Resonant Circuit based on Bonding Wire Inductances, application no. 10/729,643, and filed on December 5, 2003; and

An Integrated and tunable High Quality Resonant Circuit based on Transmission Lines, application no. 10/729,344, and filed on December 5, 2003.

The following patent applications are being considered:

Method for Digitally Modulated Frequency Control for Crystal Oscillators;

Improved Noise Figure for LNA Gain Control Circuit;

High-Q Oscillator Fast Power-on Start-up Circuit;

Method and Circuit for Digitally Modulated High Resolution Frequency Tuning of Crystal Oscillators; and,

Crystal Oscillator Frequency Tuning Circuit with Precise Digital Tune and Analog Tune Ranges.

Both NanoAmp Solutions Inc. (Cayman) and IRF Semiconductor, Inc. are located at 440 N. Wolfe Rd, Sunnyvale, Ca 94085.

Yours truly,

A handwritten signature in black ink, appearing to read 'Robert Shen'.

Robert Shen  
CEO  
NanoAmp Solutions Inc.

and

David D. Tsang  
Acting President  
IRF Semiconductor, Inc.

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