PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
DIRK ROBERT WALTER LEIPOLD	06/24/2014
GEORGE MAXIM	06/25/2014
BAKER SCOTT	06/25/2014

RECEIVING PARTY DATA

Name:	RF MICRO DEVICES, INC.	
Street Address:	7628 THORNDIKE ROAD	
City:	GREENSBORO	
State/Country:	NORTH CAROLINA	
Postal Code:	27409	

PROPERTY NUMBERS Total: 1

Property Type	Number	
Application Number:	14298829	

CORRESPONDENCE DATA

Fax Number: (919)238-2301

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.

Phone: 919-238-2300
Email: patents@wt-ip.com

Correspondent Name: WITHROW & TERRANOVA, P.L.L.C. Address Line 1: 100 REGENCY FOREST DRIVE

Address Line 2: SUITE 160

Address Line 4: CARY, NORTH CAROLINA 27518

ATTORNEY DOCKET NUMBER:	2867-1260
NAME OF SUBMITTER:	SARAH BREEZE
SIGNATURE:	/Sarah Breeze/
DATE SIGNED:	06/26/2014

Total Attachments: 6

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PATENT REEL: 033183 FRAME: 0785

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

Title of TUNABLE RF FILTER STRUCTURE FORMED BY A MATRIX OF					
Invention	WEAKLY COUPLED RESONATORS				
As the below name	d inventor, I hereby declare that:				
This declaration is o	directed to: The attached application; or United States application or PCT international application number 14/298,829, filed on June 6, 2014.				
The above-identifie	d application is made or authorized to be made by me.				
I believe that I am t application.	he original inventor or an original joint inventor of a claimed invention in the				
	lge that any willful false statement made in this declaration is punishable under 18 e or imprisonment of not more than five (5) years, or both.				
WHEDEAG DEAG	' De less Inc. and a substantial and a victing under the legge of the				

WHEREAS, <u>RF Micro Devices</u>, <u>Inc.</u>, a corporation duly organized and existing under the laws of the state of North Carolina and having a principal place of business at 7628 Thorndike Road, Greensboro, North Carolina, 27409 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the entire right, title, and interest in and to said invention as described in the specification executed by me concurrently herewith, and any and all Letters Patent which shall be granted therefor.

NOW, THEREFORE, To All Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the said assignor, have sold, assigned, transferred and set over unto the said ASSIGNEE, its successors and assigns, the entire right, title and interest in and to the above-mentioned application and invention and in and to any and all Letters Patent of the United States which may hereafter be granted therefor, and in any and to any and all continuations, continuations-in-part, substitutions, divisions or reissues of said Letters Patent, the same to be held and enjoyed by the said ASSIGNEE, for its interest, and for its own use and behalf, and the use and behalf of its successors and assigns, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

I, the said assignor, transfer and set over unto the said ASSIGNEE the rights to the priority applications, namely U.S. Provisional Patent Application No. 61/831,666, filed June 6, 2013; U.S. Provisional Patent Application No. 61/860,932, filed August 1, 2013; U.S. Provisional Patent Application No. 61/909,028, filed November 26, 2013; U.S. Provisional Patent Application No. 61/938,884, filed February 12, 2014; U.S. Provisional Patent Application No. 61/949,581, filed March 7, 2014; U.S. Provisional Patent Application No. 61/951,844, filed March 12, 2014; U.S. Provisional Patent Application No. 61/982,946, filed April 23, 2014; U.S. Provisional Patent Application No. 61/982,952, filed April 23, 2014; U.S. Provisional Patent Application No. 61/982,971, filed April 23, 2014; and U.S. Provisional Patent Application No. 62/008,192, filed June 5, 2014.

And for the consideration aforesaid, I hereby covenant and agree to and with the said ASSIGNEE, its successors and assigns, that at the time of the execution and delivery of these presents I am a joint and

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lawful owner of the entire right, title and interest in and to the invention, application and Letters Patent above-mentioned and that the same are unencumbered, and that I have good right and lawful authority to sell and convey the same in the manner herein set forth.

And for the consideration aforesaid, I hereby covenant and agree to and with the said ASSIGNEE, its successors and assigns, that I will, whenever its counsel or the counsel of its successors and assigns, learned in the law, shall advise that an amendment, division, continuation, continuation-in-part, or substitution of, or any other proceeding in connection with said application, including interference proceedings, is lawful and desirable, sign all papers and drawings, take all rightful oaths, and do all acts necessary or required to be done for the procurement of valid Letters Patent for said invention, or for the reissue of the same without charge to the said ASSIGNEE, its successors or assigns, but at its or their expense.

I hereby request the Commissioner for Patents to issue the Letters Patent in accordance with this instrument.

For the consideration aforesaid, I have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, assigns or nominee, the entire right, title and interest in and to any and all Letters Patent for said invention which may be granted in countries foreign to the United States and in and to any applications for Letters Patent which may be filed for said invention in countries foreign to the United States and in and to the invention described in said application; and I hereby authorize and empower the said ASSIGNEE, its successors, assigns or nominees to apply for Letters Patent or other form of protection on said invention in its own name or in the name of its successor, assignee, or nominee, in any and all countries where it may desire to file such application and where said application may be filed by another than the inventor; and I hereby covenant and agree to sign all papers and drawings, take all rightful oaths, and do all acts necessary or required to be done for procurement of Letters Patent, or other form of protection, for said invention or inventions in countries foreign to the United States, and for further investing or confirming the right and title therein to the ASSIGNEE, its successors, assignee, or nominee, without charge to the said ASSIGNEE, its successor, assignee or nominee, but at its or their expense.

IN WITNESS WHEREOF, I hereunto set my hand and seal.

LEGAL NAME OF INVENTOR

Inventor: <u>Dirk Robert V</u>	Date:	06/24/14	
Signature:		7	

DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

Title of

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Title of	TOTABLE IN THE LEAST NOCTORE FOR MED BY A MATRIX OF			
Invention	WEAKLY COUPLED RESONATORS			
As the below named inventor, I hereby declare that:				
This declaration is c	lirected to: The attached application; or United States application or PCT international application number 14/298,829, filed on June 6, 2014.			
The above-identifie	d application is made or authorized to be made by me.			
I believe that I am that application.	he original inventor or an original joint inventor of a claimed invention in the			
•	ge that any willful false statement made in this declaration is punishable under 18 or imprisonment of not more than five (5) years, or both.			
state of North Carol	cro Devices, Inc., a corporation duly organized and existing under the laws of the ina and having a principal place of business at 7628 Thorndike Road, Greensboro, 09 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the entire			

NOW, THEREFORE, To All Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the said assignor, have sold, assigned, transferred and set over unto the said ASSIGNEE, its successors and assigns, the entire right, title and interest in and to the above-mentioned application and invention and in and to any and all Letters Patent of the United States which may hereafter be granted therefor, and in any and to any and all continuations, continuations-in-part, substitutions, divisions or reissues of said Letters Patent, the same to be held and enjoyed by the said ASSIGNEE, for its interest, and for its own use and behalf, and the use and behalf of its successors and assigns, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

right, title, and interest in and to said invention as described in the specification executed by me

concurrently herewith, and any and all Letters Patent which shall be granted therefor.

I, the said assignor, transfer and set over unto the said ASSIGNEE the rights to the priority applications, namely U.S. Provisional Patent Application No. 61/831,666, filed June 6, 2013; U.S. Provisional Patent Application No. 61/860,932, filed August 1, 2013; U.S. Provisional Patent Application No. 61/909,028, filed November 26, 2013; U.S. Provisional Patent Application No. 61/949,581, filed March 7, 2014; U.S. Provisional Patent Application No. 61/949,581, filed March 7, 2014; U.S. Provisional Patent Application No. 61/951,844, filed March 12, 2014; U.S. Provisional Patent Application No. 61/982,946, filed April 23, 2014; U.S. Provisional Patent Application No. 61/982,952, filed April 23, 2014; U.S. Provisional Patent Application No. 61/982,971, filed April 23, 2014; and U.S. Provisional Patent Application No. 62/008,192, filed June 5, 2014.

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lawful owner of the entire right, title and interest in and to the invention, application and Letters Patent above-mentioned and that the same are unencumbered, and that I have good right and lawful authority to sell and convey the same in the manner herein set forth.

And for the consideration aforesaid, I hereby covenant and agree to and with the said ASSIGNEE, its successors and assigns, that I will, whenever its counsel or the counsel of its successors and assigns, learned in the law, shall advise that an amendment, division, continuation, continuation-in-part, or substitution of, or any other proceeding in connection with said application, including interference proceedings, is lawful and desirable, sign all papers and drawings, take all rightful oaths, and do all acts necessary or required to be done for the procurement of valid Letters Patent for said invention, or for the reissue of the same without charge to the said ASSIGNEE, its successors or assigns, but at its or their expense.

I hereby request the Commissioner for Patents to issue the Letters Patent in accordance with this instrument.

For the consideration aforesaid, I have sold, assigned, transferred and set over, and by these presents do sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, assigns or nominee, the entire right, title and interest in and to any and all Letters Patent for said invention which may be granted in countries foreign to the United States and in and to any applications for Letters Patent which may be filed for said invention in countries foreign to the United States and in and to the invention described in said application; and I hereby authorize and empower the said ASSIGNEE, its successors, assigns or nominees to apply for Letters Patent or other form of protection on said invention in its own name or in the name of its successor, assignee, or nominee, in any and all countries where it may desire to file such application and where said application may be filed by another than the inventor; and I hereby covenant and agree to sign all papers and drawings, take all rightful oaths, and do all acts necessary or required to be done for procurement of Letters Patent, or other form of protection, for said invention or inventions in countries foreign to the United States, and for further investing or confirming the right and title therein to the ASSIGNEE, its successors, assignee, or nominee, without charge to the said ASSIGNEE, its successor, assignee or nominee, but at its or their expense.

IN WITNESS WHEREOF, I hereunto set my hand and seal.

T	FC	AΤ	NAN	ATT.	OF.	INI	/ICN	TAD

Inventor: George Maxim Date: 06/25/2014

Signature:

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DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR SINGLE ASSIGNEE

TUNABLE RF FILTER STRUCTURE FORMED BY A MATRIX OF

Title of

Invention	WEAKLY COUPLED RESONATORS
As the below named	l inventor, I hereby declare that:
This declaration is o	lirected to: ☐ The attached application; or ☐ United States application or PCT international application number 14/298,829, filed on June 6, 2014.
The above-identifie	d application is made or authorized to be made by me.
I believe that I am tapplication.	he original inventor or an original joint inventor of a claimed invention in the
•	ge that any willful false statement made in this declaration is punishable under 18 or imprisonment of not more than five (5) years, or both.
state of North Carolina, 274	icro Devices, Inc., a corporation duly organized and existing under the laws of the lina and having a principal place of business at 7628 Thorndike Road, Greensboro, 109 (hereinafter referred to as "ASSIGNEE"), is desirous of acquiring the entire rest in and to said invention as described in the specification executed by me

NOW, THEREFORE, To All Whom It May Concern, be it known that for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, I, the said assignor, have sold, assigned, transferred and set over unto the said ASSIGNEE, its successors and assigns, the entire right, title and interest in and to the above-mentioned application and invention and in and to any and all Letters Patent of the United States which may hereafter be granted therefor, and in any and to any and all continuations, continuations-in-part, substitutions, divisions or reissues of said Letters Patent, the same to be held and enjoyed by the said ASSIGNEE, for its interest, and for its own use and behalf, and the use and behalf of its successors and assigns, to the full end of the term for which said Letters Patent may be granted as fully and entirely as the same would have been held and enjoyed by me had this assignment and sale not been made.

concurrently herewith, and any and all Letters Patent which shall be granted therefor.

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And for the consideration aforesaid, I hereby covenant and agree to and with the said ASSIGNEE, its successors and assigns, that at the time of the execution and delivery of these presents I am a joint and

PATENT REEL: 033183 FRAME: 0790 lawful owner of the entire right, title and interest in and to the invention, application and Letters Patent above-mentioned and that the same are unencumbered, and that I have good right and lawful authority to sell and convey the same in the manner herein set forth.

And for the consideration aforesaid, I hereby covenant and agree to and with the said ASSIGNEE, its successors and assigns, that I will, whenever its counsel or the counsel of its successors and assigns, learned in the law, shall advise that an amendment, division, continuation, continuation-in-part, or substitution of, or any other proceeding in connection with said application, including interference proceedings, is lawful and desirable, sign all papers and drawings, take all rightful oaths, and do all acts necessary or required to be done for the procurement of valid Letters Patent for said invention, or for the reissue of the same without charge to the said ASSIGNEE, its successors or assigns, but at its or their expense.

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IN WITNESS WHEREOF, I hereunto set my hand and seal.

LEGAL NAME OF INVENTOR

Inventor: Baker Scott

Cinnature

Date: 6/25//9

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