

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT3953995

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
BAKER SCOTT	07/16/2012
GEORGE MAXIM	07/16/2012
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	QORVO INTERNATIONAL PTE. LTD.
<b>Street Address:</b>	1 CHANGI BUSINESS PARK
<b>City:</b>	AVENUE 1, #04-01
<b>State/Country:</b>	SINGAPORE
<b>Postal Code:</b>	486058
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	15130328
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(877)812-1249
<i>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.</i>	
<b>Phone:</b>	9192382300
<b>Email:</b>	jalkove@wt-ip.com
<b>Correspondent Name:</b>	WITHROW & TERRANOVA, P.L.L.C.
<b>Address Line 1:</b>	106 PINEDALE SPRINGS WAY
<b>Address Line 4:</b>	CARY, NORTH CAROLINA 27511
<b>ATTORNEY DOCKET NUMBER:</b>	2867-1129D
<b>NAME OF SUBMITTER:</b>	JENNIFER ALKOVE
<b>SIGNATURE:</b>	/Jennifer Alkove/
<b>DATE SIGNED:</b>	07/08/2016
<b>Total Attachments: 14</b>	
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## **ASSIGNMENT**

In consideration of good and valuable consideration, the receipt of which is hereby acknowledged, we, the undersigned:

**Baker Scott; George Maxim**

hereby sell, assign, and transfer to

**Amalfi Semiconductor, Inc.**

a Corporation of Delaware, having a principal place of business at 475 Alberto Way, Suite 200, Los Gatos, California 95032 United States ("Assignee"), and its successors, assigns, and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all inventions or improvements that are disclosed in the application (provisional or non-provisional) for the United States patent which for the non-provisional application may have a declaration executed by the undersigned prior hereto or concurrently herewith and which application (provisional or non-provisional) is entitled

### **Multi-Band/Multi-Mode Power Amplifier with Signal Path Hardware Sharing**

said patent application also identified as follows (when known):

[I/we hereby authorize an attorney or agent for said Assignee to insert below the application number and filing date of said patent application when known.]

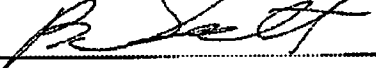

United States Patent Application Number 13/551,473 filed 7/17/2012,

and in and to said application (provisional or non-provisional) and all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said inventions or improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said inventions or improvements; and in and to all rights of priority resulting from the filing of said United States application;

agree that said Assignee may apply for and receive a patent or patents for said inventions or improvements in its own name; and that, when requested, without charge to, but at the expense of, said Assignee, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all provisional applications, non-provisional applications, utility applications, design applications, divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications on any and all said inventions or improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said Assignee, its successors, assigns, and legal representatives all facts known to the undersigned relating to said inventions or improvements and the history thereof; and generally assist said Assignee, its successors, assigns, or legal representatives in securing and maintaining proper patent protection for said inventions or improvements and for vesting title to said inventions or improvements, and all applications for patents and all patents on said inventions or improvements, in said Assignee, its successors, assigns, and legal representatives; and

covenant with said Assignee, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

**Each Inventor: Please Sign and Date Below:**

<u>7/16/12</u>	<u></u>
Date	Name: Baker Scott
<u>07/16/2012</u>	<u></u>
Date	Name: George Maxim
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Date	Name:
_____	_____
Date	Name:

Assignment Document Return Address:  
BLAKELY, SOKOLOFF, TAYLOR & ZAFMAN LLP  
1279 Oakmead Parkway  
Sunnyvale, CA 94085-4040  
Telephone: (714) 557-3800

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RECORDED: 07/17/2012

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**PATENT**

**REEL: 028570 FRAME: 0453**

**PATENT**

**REEL: 039110 FRAME: 0935**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ASSIGNMENT

**WHEREAS**, Amalfi Semiconductor, Inc., a Delaware corporation ("**ASSIGNOR**"), owns certain patents, and applications and/or registrations for such patents, as listed in Exhibit A attached hereto and incorporated herein by this reference ("**PATENTS**"); and

**WHEREAS**, RF Micro Devices (Cayman Islands), Ltd., a Cayman Islands corporation ("**ASSIGNEE**"), desires to acquire all of the right, title and interest of ASSIGNOR in, to and under the PATENTS, together with the goodwill of the business symbolized by the PATENTS; and

**WHEREAS**, ASSIGNEE is acquiring the business of the ASSIGNOR to which the PATENTS pertain; and

**WHEREAS**, ASSIGNOR and ASSIGNEE have entered into a certain Intangible Property Purchase Agreement dated November 4, 2012 (the "**Purchase Agreement**"), assigning, among other things, all right, title and interest in and to the PATENTS and in and to the registrations and/or applications for same from ASSIGNOR to ASSIGNEE.

**NOW, THEREFORE**, in consideration of the sum of One dollar (\$1.00) and other good and valuable consideration paid by ASSIGNEE to ASSIGNOR as set forth in the Purchase Agreement, the receipt and sufficiency of which hereby is acknowledged, ASSIGNOR does hereby sell, assign, transfer and convey unto ASSIGNEE its entire right, title and interest in and to the PATENTS, and to the applications and/or registrations for the PATENTS (and the right to apply for any of the foregoing), together with the goodwill of the business symbolized by the PATENTS and the portion of the business of the ASSIGNOR to which the PATENTS pertain; all rights to causes of action and remedies related thereto (including, without limitation, the right to sue for past, present or future infringement, misappropriation or violation of rights related to the foregoing); and any and all other rights and interests arising out of, in connection with or in relation to the PATENTS.

[Signature Page Follows]

IN WITNESS WHEREOF, ASSIGNOR has caused this Assignment to be duly executed by an authorized officer on this 8th day of November, 2012.

AMALFI SEMICONDUCTOR, INC.

By: Mark H. Wiley  
Its: CEO & PRESIDENT

Sworn to and subscribed before me this 8th day of November, 2012.

My Commission expires: May 27, 2016

Notary Public

\_\_\_\_\_  
[NOTARIAL SEAL]



**Exhibit A**

**PATENTS**

<b>Patent/ Application/ Disclosure No.</b>	<b>Title</b>
<b><u>Patents:</u></b>	
US 7,068,104	Power amplifier utilizing high breakdown voltage circuit topology
US 7,095,353	Frequency to digital conversion
US 7,242,245	Method and apparatus for an improved power amplifier
US 7,248,109	Method and apparatus for an improved power amplifier
US 7,268,616	Method and apparatus for an improved power amplifier
US 7,332,960	Method and apparatus for an improved power amplifier
US 7,358,806	Method and apparatus for an improved power amplifier
US 7,999,613	Method and apparatus for an improved power amplifier
US 8,258,875	DC-DC conversion for a power amplifier using the RF input
US 8,274,336	Saturated power amplifier system

<b><u>Patent/ Application/ Disclosure No.</u></b>	<b><u>Title</u></b>
<b><u>Applications:</u></b>	
60/600,316	Method and apparatus for an improved power amplifier
60/683,976	METHOD FOR REDUCING SUBSTRATE NOISE FROM PENETRATING NOISE SENSITIVE CIRCUITS
PCT/US06/01962	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER
PCT/US06/01960	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER
11/440,231	METHOD FOR REDUCING SUBSTRATE NOISE FROM PENETRATING NOISE SENSITIVE CIRCUITS
PCT/US06/19989	METHOD FOR REDUCING SUBSTRATE NOISE FROM PENETRATING NOISE SENSITIVE CIRCUITS
06718960.5	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER
06718958.9	METHOD AND APPARATUS FOR AN IMPROVED POWER AMP
12/893,643	POWER AMPLIFIER WITH POWER FEEDBACK
61/246,680	DC-DC CONVERSION FOR A POWER AMPLIFIER USING THE RF INPUT
12/893,198	METHOD FOR OPTIMIZING SYSTEM LINEARITY OF RF POWER AMPLIFIERS
61/246,740	METHOD FOR OPTIMIZING SYSTEM LINEARITY OF RF POWER AMPLIFIERS



<u>Patent/ Application/ Disclosure No.</u>	<u>Title</u>
61/246,744	SATURATED POWER AMPLIFIER SYSTEM
12/893,653	POWER AMPLIFIER WITH BACK-OFF EFFICIENCY
61/246,762	POWER AMPLIFIER WITH BACK-OFF EFFICIENCY
13/310,577	Power amplifier system with a current bias signal path
13/310,568	Power Amplifier having a nonlinear output capacitance equalization
13/310,623	Output Stage of a Power Amplifier Having a Switched-Bulk Biasing and Adaptive biasing
13/310,611	Ground Partitioned Power Amplifier for Stable Operation
13/310,544	Gate-Based Output Power Level Control Power Amplifier
13/310,593	Apparatus and Method for Sensing and Converting Radio Frequency to Direct Current
13/633,374	Methods and Circuits for Detuning a Filter and Matching Network at the Output of a Power Amplifier
13/544,541	CMOS Switching Circuitry of a Transmitter Module
61/671,598	Multi-Band/Multi-Mode Power Amplifier with Signal Path Hardware Sharing
13/551,473	Multi-Band/Multi-Mode Power Amplifier with Signal Path Hardware Sharing

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

MEMORANDUM OF ASSIGNMENT

**WHEREAS**, RF Micro Devices (Cayman Islands), Ltd., a Cayman Islands corporation (“**ASSIGNOR**”), owns certain patents, and applications and/or registrations for such patents, as listed in Exhibit A attached hereto and incorporated herein by this reference (“**PATENTS**”); and

**WHEREAS**, TriQuint International Pte. Ltd., a Singapore corporation (“**ASSIGNEE**”), desires to acquire all of the right, title and interest of **ASSIGNOR** in, to and under the **PATENTS**, together with the goodwill of the business symbolized by the **PATENTS**; and

**WHEREAS**, **ASSIGNEE** is acquiring the business of the **ASSIGNOR** to which the **PATENTS** pertain; and

**WHEREAS**, **ASSIGNOR** and **ASSIGNEE** have entered into a certain Intangible Property Purchase Agreement dated May 2, 2016 (the “**Purchase Agreement**”), to assign, among other things, all right, title and interest in and to the **PATENTS** and in and to the registrations and/or applications for same from **ASSIGNOR** to **ASSIGNEE**, effective as of 12:00:30 a.m., local time in the State of North Carolina, U.S.A., on May 2, 2016; and

**WHEREAS this Memorandum of Assignment is a recordable portion of the Purchase Agreement.**

**NOW, THEREFORE**, for the consideration paid by **ASSIGNEE** to **ASSIGNOR** as set forth in the Purchase Agreement, the receipt and sufficiency of which hereby is acknowledged, **ASSIGNOR** has sold, assigned, transferred and conveyed unto **ASSIGNEE** its entire right, title and interest in and to the **PATENTS**, and to the applications and/or registrations for the **PATENTS** (and the right to apply for any of the foregoing), together with the goodwill of the business symbolized by the **PATENTS** and the portion of the business of the **ASSIGNOR** to which the **PATENTS** pertain; all rights to causes of action and remedies related thereto (including, without limitation, the right to sue for past, present or future infringement, misappropriation or violation of rights related to the foregoing); and any and all other rights and interests arising out of, in connection with or in relation to the **PATENTS**, effective as of 12:00:30 a.m., local time in the State of North Carolina, U.S.A., on May 2, 2016.

[Signature Page Follows]

IN WITNESS WHEREOF, ASSIGNOR has caused this Assignment to be duly executed by an authorized officer effective as of May 2, 2016.

RF MICRO DEVICES (CAYMAN ISLANDS), LTD.

By: [Signature]

Its: Director

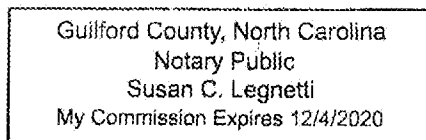
Sworn to and subscribed before me this 2<sup>nd</sup> day of May, 2016.

My Commission expires: December 4, 2020

Notary Public

[Signature: Susan C. Legnetti]

[NOTARIAL SEAL]



[Signature Page to Patent Assignment]

**Exhibit A**

**PATENTS**

**Exhibit A**

**PATENTS**

<b>Patent/Application No.</b>	<b>Title</b>	<b>Current Status</b>	<b>Publication No.</b>
US7068104	POWER AMPLIFIER UTILIZING HIGH BREAKDOWN VOLTAGE CIRCUIT	Issued	
US7095353	FREQUENCY TO DIGITAL CONVERSION	Issued	
US7242245	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER	Issued	
US7248109	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER	Issued	
US7268616	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER	Issued	
US7332960	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER	Issued	
US7358806	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER	Issued	
US7999613	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER	Issued	
US8258875	DC-DC CONVERSION FOR A POWER AMPLIFIER USING THE RF INPUT	Issued	
US8274336	SATURATED POWER AMPLIFIER SYSTEM	Issued	
US8344806	POWER AMPLIFIER WITH POWER FEEDBACK	Issued	
US8432224	POWER AMPLIFIER WITH BACK-OFF EFFICIENCY	Issued	
US8604873	GROUND PARTITIONED POWER AMPLIFIER FOR STABLE OPERATION	Issued	US 2012/0139639 A1
US8624678	OUTPUT STAGE OF A POWER AMPLIFIER HAVING A SWITCHED-BULK BIASING AND ADAPTIVE BIASING	Issued	US 2012/0139643 A1
US8629725	POWER AMPLIFIER HAVING A NONLINEAR OUTPUT CAPACITANCE EQUALIZATION	Issued	US 2012/0146722 A1
US8731490	METHODS AND CIRCUITS FOR DETUNING A FILTER AND MATCHING NETWORK AT THE OUTPUT OF A POWER AMPLIFIER	Issued	20140030990A1
US8749309	GATE-BASED OUTPUT POWER LEVEL CONTROL POWER AMPLIFIER	Issued	US 2012/0139635 A1
US8766724	APPARATUS AND METHOD FOR SENSING AND CONVERTING RADIO FREQUENCY TO DIRECT CURRENT	Issued	US 2012/0139645 A1
US8843083	CMOS SWITCHING CIRCUITRY OF A TRANSMITTER MODULE	Issued	20140009208A1

US8890616	POWER AMPLIFIER SYSTEM WITH A CURRENT BIAS SIGNAL PATH	Issued	US 2012/0139636 A1
US9048836	BODY BIAS SWITCHING FOR AN RF SWITCH	Issued	20150035582A1
US9196406	HIGH Q FACTOR INDUCTOR STRUCTURE	Issued	20140266544A1
US9294045	GAIN AND PHASE CALIBRATION FOR CLOSED LOOP FEEDBACK LINEARIZED AMPLIFIERS	Issued	20140266457A1
US9294046	RF POWER AMPLIFIER WITH PM FEEDBACK LINEARIZATION	Issued	20140266459A1
US9319005	MULTI-BAND/MULTI-MODE POWER AMPLIFIER WITH SIGNAL PATH HARDWARE SHARING	Issued	20140015603A1
14/215,800	WEAKLY COUPLED BASED HARMONIC REJECTION FILTER FOR FEEDBACK LINEARIZATION POWER AMPLIFIER	Pending	20140266531A1
14/216,376	AMPLIFIER PHASE DISTORTION CORRECTION BASED ON AMPLITUDE DISTORTION MEASUREMENT	Pending	20140266432A1
14/216,560	RF REPLICATOR FOR ACCURATE MODULATED AMPLITUDE AND PHASE MEASUREMENT	Pending	20140266458A1
14/217,199	POWER AMPLIFIER WITH WIDE DYNAMIC RANGE AM FEEDBACK LINEARIZATION SCHEME	Pending	20140266451A1
14/218,953	RF POWER AMPLIFIER WITH TOTAL RADIATED POWER STABILIZATION	Pending	20140266452A1
14/298,829	TUNABLE RF FILTER STRUCTURE FORMED BY A MATRIX OF WEAKLY COUPLED RESONATORS	Pending	20140361848A1
14/298,830	TUNABLE RF FILTER PATHS FOR TUNABLE RF FILTER STRUCTURES	Pending	20140361852A1
14/298,834	HIGH QUALITY FACTOR INTERCONNECT FOR RF CIRCUITS	Pending	20140361856A1
14/298,852	MULTI-BAND INTERFERENCE OPTIMIZATION	Pending	20140364077A1
14/298,863	TUNABLE RF FILTER BASED RF COMMUNICATIONS SYSTEM	Pending	20140361849A1
14/449,764	CALIBRATION FOR A TUNABLE RF FILTER STRUCTURE	Pending	20150035612A1
14/449,913	COOPERATIVE TUNABLE RF FILTERS	Pending	20150035617A1
14/450,028	VSWR DETECTOR FOR A TUNABLE RF FILTER STRUCTURE	Pending	20150038094A1
14/450,156	ADVANCED 3D INDUCTOR STRUCTURES WITH CONFINED MAGNETIC FIELD	Pending	20150035637A1
14/450,199	WEAKLY COUPLED TUNABLE RF RECEIVER ARCHITECTURE	Pending	20150038101A1
14/450,200	INTERFERENCE REJECTION RF FILTERS	Pending	20150035622A1

14/450,204	WEAKLY COUPLED TUNABLE RF TRANSMITTER ARCHITECTURE	Pending	20150065070A1
14/523,065	BROADBAND ISOLATION LOW-LOSS ISM/MB-HB TUNABLE DIPLEXER	Pending	20150117280A1
14/525,092	TRANSMIT AND RECEIVE RF MULTIPLEXER	Pending	20150118978A1
14/554,774	HIGH EFFICIENCY RADIO FREQUENCY POWER AMPLIFIER CIRCUITRY WITH REDUCED DISTORTION	Pending	20150145604A1
14/554,943	MULTI-BAND IMPEDANCE TUNERS USING WEAKLY-COUPLED LC RESONATORS	Pending	20150084718A1
14/554,975	RF FILTER STRUCTURE FOR ANTENNA DIVERSITY AND BEAM FORMING	Pending	20150084699A1
14/555,053	WEAKLY COUPLED RF NETWORK BASED POWER AMPLIFIER ARCHITECTURE	Pending	20150094008A1
14/555,371	FILTERING CHARACTERISTIC ADJUSTMENTS OF WEAKLY COUPLED TUNABLE RF FILTERS	Pending	20150084713A1
14/555,557	HYBRID ACTIVE AND PASSIVE TUNABLE RF FILTERS	Pending	20150092625A1
14/930,937	TUNABLE SLOW-WAVE TRANSMISSION LINE	Pending	
15/130,328	MULTI-BAND/MULTI-MODE POWER AMPLIFIER WITH SIGNAL PATH HARDWARE SHARING (Divisional)	Pending	
EP 05768989.5	POWER AMPLIFIER UTILIZING HIGH BREAKDOWN VOLTAGE CIRCUIT TOPOLOGY (Europe)	Abandoned	
US6718958.9	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER (Europe)	Abandoned	
US6718960.5	METHOD AND APPARATUS FOR AN IMPROVED POWER AMPLIFIER (Europe)	Abandoned	
10/887,657	RECEIVER FRONT-END FILTERING USING LOW PASS FILTERING AND EQUALIZATION	Abandoned	
11/440,231	METHOD FOR REDUCING SUBSTRATE NOISE FROM PENETRATING NOISE SENSITIVE CIRCUITS	Abandoned	
12/893,198	METHOD FOR OPTIMIZING SYSTEM LINEARITY OF RF POWER AMPLIFIERS	Abandoned	



## CERTIFICATE CONFIRMING INCORPORATION OF COMPANY

**Company Name** : QORVO INTERNATIONAL PTE. LTD. (name change effective from 02/05/2016)

**UEN** : 201106524G

This is to confirm that the company was incorporated under the Companies Act, on and from **18/03/2011** and that the company is a **PRIVATE COMPANY LIMITED BY SHARES**.

The company was formerly known as:

S/N	Company Name	Effective From
1.	TRIQUINT INTERNATIONAL PTE. LTD.	18/03/2011

(Note: Only the five (5) most recent former names are listed. Any change in company name effected before 13 Jan 2003 will not be listed)



TAN YONG TAT  
ASST REGISTRAR OF COMPANIES & BUSINESS NAMES  
ACCOUNTING AND CORPORATE REGULATORY AUTHORITY  
SINGAPORE

Dated : 02/05/2016  
Receipt Number: ACRA160502100013



Authentication No. : I160243092