#### 505565043 07/10/2019

### PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT5611840

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	ASSIGNMENT		

#### **CONVEYING PARTY DATA**

Name	Execution Date
SHOGO INOUE	03/31/2016
MARC SOLAL	03/31/2016
ROBERT AIGNER	03/31/2016

#### **RECEIVING PARTY DATA**

Name:	QORVO US, INC.	
Street Address:	ess: 7628 THORNDIKE ROAD	
City:	GREENSBORO	
State/Country: NORTH CAROLINA		
Postal Code:	27409	

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number	
Application Number:	16507678	

#### CORRESPONDENCE DATA

Fax Number: (877)812-1249

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: 9192382300 Email: sbaker@wt-ip.com

QORVO AND WITHROW + TERRANOVA **Correspondent Name:** 

Address Line 1: 106 PINEDALE SPRINGS WAY Address Line 4: CARY, NORTH CAROLINA 27511

ATTORNEY DOCKET NUMBER:	2867-1981C
NAME OF SUBMITTER:	SARAH BAKER
SIGNATURE:	/Sarah Baker/
DATE SIGNED:	07/10/2019

#### **Total Attachments: 9**

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**PATENT REEL: 049715 FRAME: 0592** 505565043

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> PATENT REEL: 049715 FRAME: 0593

## 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	METHODS FOR FABRICATION OF BONDED WAFERS AND SURFACE		
Invention As the below pamer	ACOUSTIC WAVE DEVICES USING SAME  d inventor, I hereby declare that:		
As the below hamed	iniventor, i nereby declare diat.		
This declaration is o	lirected to:  The attached application; or  United States application or PCT international application number, filed on		
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.		
WHEREAS, <u>RF Micro Devices, 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.			
	transfer and set over unto the said ASSIGNEE the rights to the priority application, onal application 62/197,650 filed on July 28, 2015.		
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 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: Shogo Inoue

Date:  $\frac{3}{31/2016}$ 

Signature: Shogo Anaue

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

ı						
	Title of	METHODS FOR FABRICATION OF BONDED WAFERS AND SURFACE				
	Invention	ACOUSTIC WAVE DEVICES USING SAME				
As the below named inventor, I hereby declare that:						
	This declaration is directed to:  The attached application; or  United States application or PCT international application number, filed on.					
The above-identified application is made or authorized to be made by me.						
I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.						
I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.						
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						

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.

I, the said assignor, transfer and set over unto the said ASSIGNEE the rights to the priority application, namely U.S. provisional application 62/197,650 filed on July 28, 2015.

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 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: Marc Solal

Signature:

Date: 3-31-2016

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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

Title of METHODS FOR FABRICATION OF BONDED WAFERS AND SURFACE				
Invention ACOUSTIC WAVE DEVICES USING SAME				
As the below named	As the below named inventor, I hereby declare that:			
This declaration is o	lirected to: The attached application; or United States application or PCT international application number, filed on			
The above-identifie	d application is made or authorized to be made by me.			
I believe that I am thapplication.	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 North Carolina, 274 right, title, and inter	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 est in and to said invention as described in the specification executed by me th, 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, namely U.S. provisi	transfer and set over unto the said ASSIGNEE the rights to the priority application, ional application 62/197,650 filed on July 28, 2015.			
And for the conside	ration aforesaid, I hereby covenant and agree to and with the said ASSIGNEE, its			

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

successors and assigns, that at the time of the execution and delivery of these presents I am a joint and 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.

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: Robert Aigner-

Signature:

Date: 3/3//2016

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Page 1

## Delaware The First State

I, JEFFREY W. BULLOCK, SECRETARY OF STATE OF THE STATE OF DELAWARE, DO HEREBY CERTIFY THE ATTACHED IS A TRUE AND CORRECT COPY OF THE CERTIFICATE OF MERGER, WHICH MERGES:

"RF MICRO DEVICES, INC.", A NORTH CAROLINA CORPORATION, WITH AND INTO "TRIQUINT SEMICONDUCTOR, INC." UNDER THE NAME OF "QORVO US, INC.", A CORPORATION ORGANIZED AND EXISTING UNDER THE LAWS OF THE STATE OF DELAWARE, AS RECEIVED AND FILED IN THIS OFFICE ON THE FIFTH DAY OF APRIL, A.D. 2016, AT 2:05 O'CLOCK P.M.

AND I DO HEREBY FURTHER CERTIFY THAT THE EFFECTIVE DATE OF THE AFORESAID CERTIFICATE OF MERGER IS THE SECOND DAY OF MAY, A.D. 2016 AT 12:01 O'CLOCK A.M.

A FILED COPY OF THIS CERTIFICATE HAS BEEN FORWARDED TO THE NEW CASTLE COUNTY RECORDER OF DEEDS.

Authentication: 202097223

Date: 04-05-16

2667283 8100M SR# 20162085825 State of Delaware
Secretary of State
Division of Corporations
Delivered 02:05 PM 04/05/2016
FILED 02:05 PM 04/05/2016
SR 20162085825 - File Number 2667283

# CERTIFICATE OF MERGER OF RF MICRO DEVICES, INC. INTO TRIQUINT SEMICONDUCTOR, INC.

Under Sections 55-11-05(a) and 55-11-07(a) of the North Carolina General Statutes and Section 252 of the General Corporation Law of the State of Delaware

TriQuint Semiconductor, Inc. hereby certifies that:

- 1. The name and state of incorporation of each of the constituent corporations are:
  - (a) TriQuint Semiconductor, Inc., a Delaware corporation; and
  - (b) RF Micro Devices, Inc., a North Carolina corporation.
- 2. An Agreement and Plan of Merger has been approved, adopted, certified, executed and acknowledged by each of the constituent corporations in accordance with the provisions of Sections 55-11-01, 55-11-03, 55-11-05(a) and 55-11-07(a) of the North Carolina General Statutes and Section 252(c)(2) of the General Corporation Law of the State of Delaware.
- 3. The name of the surviving corporation is TriQuint Semiconductor, Inc.
- 4. The certificate of incorporation of the surviving corporation shall be amended by deleting Article I thereof and replacing such Article I with the following:

"The name of this Corporation is: Qorvo US, Inc."

Other than the above-described amendment, the Certificate of Incorporation of the surviving entity shall be that of the surviving entity immediately following the merger in all respects.

- 5. The executed Agreement and Plan of Merger is on file at the surviving corporation's offices located at 2300 N.E. Brookwood Parkway, Hillsboro, Oregon 97124.
- 6. A copy of the Agreement and Plan of Merger will be furnished by the surviving corporation, on request and without cost, to any stockholder of any constituent corporation.
- 7. RF Micro Devices, Inc. is authorized to issue 1,000 shares of common stock, no par value per share.
- 8. This Certificate of Merger shall be effective at 12:01 a.m., Eastern Time, on May 2, 2016.

PATENT REEL: 049715 FRAME: 0601

WCSR 34594795v6

IN WITNESS WHEREOF,	TriQuint So	emiconductor,	Inc. has	caused thi	s certificate to be
signed by an authorized officer on	March 30	, 2016	5.		
		***************************************			
	TRIQUI)	T/ŞEMIÇONI	DUCTO	R.INC.	

Robert A. Bruggeworth, President

[Signature Page to Certificate of Merger (TriQuint Semiconductor, Inc./RF Micro Devices, Inc.)]

PATENT REEL: 049715 FRAME: 0602

**RECORDED: 07/10/2019**