504694797 12/19/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4741519

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
ANKUSH MOHAN	12/19/2017
ERIC JACKSON	12/13/2017
SOACK YOON	12/13/2017
JOHN KITT	12/14/2017

RECEIVING PARTY DATA

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

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15846840

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: 919-238-2300

Email: wperkins@wt-ip.com

Correspondent Name: WITHROW & TERRANOVA, P.L.L.C.
Address Line 1: 106 PINEDALE SPRINGS WAY
Address Line 4: CARY, NORTH CAROLINA 27511

ATTORNEY DOCKET NUMBER:	2867-2218
NAME OF SUBMITTER:	WARREN PERKINS
SIGNATURE:	/Warren Perkins/
DATE SIGNED:	12/19/2017

Total Attachments: 8

source=2867-2218_Assignments-Declarations#page1.tif source=2867-2218_Assignments-Declarations#page2.tif source=2867-2218_Assignments-Declarations#page3.tif

PATENT 504694797 REEL: 044434 FRAME: 0354

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PATENT REEL: 044434 FRAME: 0355

Title of	SPATIAL COMBINING DEVICES FOR HIGH-FREQUENCY	
Invention	OPERATION	
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 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.	
WHEREAS, Oorvo US, Inc., a corporation duly organized and existing under the laws of the state of		

WHEREAS, <u>Qorvo US</u>, <u>Inc.</u>, a corporation duly organized and existing under the laws of the state of Delaware 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 application, namely U.S. provisional application 62/548,460 filed on August 22, 2017.

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

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: Ankush Mohan	Date:	12/19/17
Signature:		

Title of	SPATIAL COMBINING DEVICES FOR HIGH-FREQUENCY	
Invention	OPERATION	
As the below named	l inventor, I hereby declare that:	
This declaration is d	lirected to: The attached application; or United States application or PCT international application number, filed on.	
The above-identified	d application is made or authorized to be made by me.	
I believe that I am that application.	ne 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>Qorvo US</u> , <u>Inc.</u> , a corporation duly organized and existing under the laws of the state of Delaware 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.

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

LEGAL NAME OF INVENTOR

Inventor: Eric Jackson			Date:	12-13-2017
Signature: _	EM	Juda		

Title of	SPATIAL COMBINING DEVICES FOR HIGH-FREQUENCY
Invention	OPERATION
As the below named	l inventor, I hereby declare that:
This declaration is o	lirected to:
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>Oorvo US</u>, <u>Inc.</u>, a corporation duly organized and existing under the laws of the state of Delaware 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.

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PATENT REEL: 044434 FRAME: 0360

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

Date: $\frac{12}{13}/2017$

Signature:

Inventor: Soack Yoon

Title of	SPATIAL COMBINING DEVICES FOR HIGH-FREQUENCY	
Invention	OPERATION	
As the below named inventor, I hereby declare that:		
This declaration is d	lirected to: The attached application; or United States application or PCT international application number, filed on.	
The above-identified	d application is made or authorized to be made by me.	
I believe that I am that application.	ne original inventor or an original joint inventor of a claimed invention in the	
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IN WITNESS WHEREOF, I hereunto set my hand and seal.

LEGAL NAME OF INVENTOR

Inventor: John Kitt

Signature: