

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT3744682

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
WEIMIN SUN	11/05/2015
XIAOFANG MU	02/10/2016
HONGXIAO SHAO	11/03/2015
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	Skyworks Solutions, Inc.
<b>Street Address:</b>	20 Sylvan Road
<b>City:</b>	Woburn
<b>State/Country:</b>	MASSACHUSETTS
<b>Postal Code:</b>	01801
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	14825121
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(949)231-3206
<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>	9492313073
<b>Email:</b>	ip.docketing@skyworksinc.com
<b>Correspondent Name:</b>	DONALD BOLLELLA
<b>Address Line 1:</b>	5221 CALIFORNIA AVENUE, 21-1
<b>Address Line 4:</b>	IRVINE, CALIFORNIA 92617
<b>ATTORNEY DOCKET NUMBER:</b>	15SKY0257.01 US
<b>NAME OF SUBMITTER:</b>	DONALD BOLLELLA
<b>SIGNATURE:</b>	/Donald Bollella/
<b>DATE SIGNED:</b>	02/18/2016
<b>Total Attachments: 6</b>	
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**ASSIGNMENT**

WHEREAS, we, Weimin Sun residing at 11160 Sumac lane, Santa Rosa Valley, California 93012; Xiaofang Mu residing at 10130 United Place, Cupertino, California 95014; and Hongxiao Shao residing at 3377 Crossland Street, Thousand Oaks, California 91362, have invented certain new and useful DEVICES AND METHODS RELATED TO DIRECTIONAL COUPLERS for which we have made application for Letters Patent of the United States as fully set forth and described in the specification duly filed in the United States Patent and Trademark Office on August 12, 2015 and assigned Application Serial No. 14/825,121, which derived priority benefit from U.S. Provisional Patent Application Serial No. 62/011,372 filed June 12, 2014; and

WHEREAS, Skyworks Solutions, Inc., a corporation duly organized and existing under and by virtue of the laws of the State of Delaware, having a principal business address at 20 Sylvan Road, Woburn, Massachusetts 01801, is desirous of acquiring the entire interest in and to said invention, said non-provisional and provisional applications, any and all inventions and improvements disclosed in said applications, and all Letters Patent to be had therefor.

NOW THEREFORE, to all whom it may concern, be it known, that for good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, we, said Weimin Sun, Xiaofang Mu, and Hongxiao Shao have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over unto said Skyworks Solutions, Inc., the whole right, title, and interest in and to said DEVICES AND METHODS RELATED TO DIRECTIONAL COUPLERS, the aforesaid applications, and any and all inventions and improvements disclosed in the aforesaid non-provisional and provisional applications for patent, as fully set forth and described therein, and all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent derived from or claiming priority to the aforesaid applications which have been or shall be filed in the United States and in and to the United States Letters Patent to be issued thereon for the territory of the United States, and all corresponding foreign counterpart applications derived from or claiming priority to the aforesaid United States non-provisional and provisional patent applications and related applications as prepared for and filed in any and all foreign countries, said whole right, title, and interest being the same for said Skyworks Solutions, Inc.'s own use and for the use of its assigns, successors, and legal representatives to the full end of the term for which all said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made. And we hereby acknowledge, agree, and understand that this assignment conveys any and all other related intellectual property rights including, but not so limited to, copyright rights, copyrightable subject matter, know how, trade secrets, copyright registrations, and reproduction rights, including any and all right to sue for past, current, or future infringement of the intellectual property rights hereby sold, assigned, and transferred, and we further hereby waive any and all moral rights under 17 U.S.C. § 106A or as so otherwise provided.

And we, for ourselves, our heirs, assigns, and legal representatives hereby covenant to and with said assignee Skyworks Solutions, Inc., its assigns, successors, and legal representatives, that we have full right to sell, assign, and transfer the whole right, title, and interest in and to said inventions and improvements, said non-provisional and provisional applications, and all the Letters Patent to be had therefor and that the entire interest herein conveyed is free from all prior

assignment, grant, mortgage, license, or other encumbrance whatsoever. And we also, for ourselves, our heirs, assigns, and legal representatives hereby further covenant to and with said assignee Skyworks Solutions, Inc., its assigns, successors, and legal representatives to fully cooperate therewith in the prosecution of the aforesaid applications in the United States Patent and Trademark Office and in any and all foreign jurisdictions, said cooperation extending to any U.S. or foreign divisional, continuing, substitute, renewal, reissue, or any other application derived from or claiming priority to the aforesaid applications, and including the execution of additional declarations, assignments, and other formal documents as may be required in connection therewith.

And we do hereby covenant and agree not to challenge or oppose, on any grounds whatsoever, the validity of this assignment or to assist or request any third party to contest the validity of this assignment, and we further agree not to contest the validity or enforceability of any intellectual property rights assigned herein, or to assist or request any third party to contest the validity or enforceability of any intellectual property rights assigned herein. And we also agree that no course of conduct or dealing by us shall act as an amendment, modification, or waiver of any provision of this assignment unless specifically set forth in writing.

And we do hereby authorize and request the United States Commissioner of Patents to issue Letters Patent to said Skyworks Solutions, Inc. as the assignee of our entire right, title, and interest therein.

IN TESTIMONY WHEREOF, we have hereunto set our respective hand and seal on the day and month of the year 2015 as indicated below.

Wei-min Sun L.S. Date: 11/15/2015  
Wei-min Sun

Acknowledgment

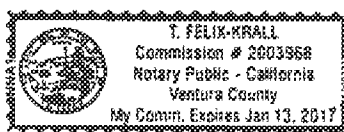
A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document and not the truthfulness, accuracy, or validity of that document.

State of California }  
County of Ventura }

On this 5th day of November, 2015 before me, T. Felix Krall, Notary Public, personally appeared Wei-min Sun, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal

(Official Seal) 

T. Felix Krall  
Notary Public

\_\_\_\_\_  
L.S. Date: \_\_\_\_\_  
*Xianlong Ma*

Acknowledgment

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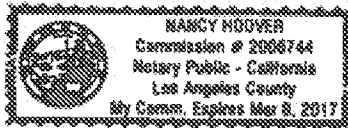
State of California

County of *VENTURA*

On this *3rd* day of *December*, 2015 before me, *Nancy Hoover, Notary Public*, personally appeared *Hongxiao Shao* who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



*Nancy Hoover*  
Notary Public

(Official Seal)

.....  
\_\_\_\_\_  
L.S. Date: *11/03/2015*  
*Hongxiao Shao*

Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document and not the truthfulness, accuracy, or validity of that document.

State of California )

County of \_\_\_\_\_ )

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015 before me, \_\_\_\_\_ Notary Public, personally appeared \_\_\_\_\_ who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(Official Seal)

\_\_\_\_\_  
Notary Public

**ASSIGNMENT**

WHEREAS, we, Weimin Sun residing at 11160 Sumac lane, Santa Rosa Valley, California 93012; Xiaofang Mu residing at 10130 United Place, Cupertino, California 95014; and Hongxiao Shao residing at 3377 Crossland Street, Thousand Oaks, California 91362, have invented certain new and useful DEVICES AND METHODS RELATED TO DIRECTIONAL COUPLERS for which we have made application for Letters Patent of the United States as fully set forth and described in the specification duly filed in the United States Patent and Trademark Office on August 12, 2015 and assigned Application Serial No. 14/825,121, which derived priority benefit from U.S. Provisional Patent Application Serial No. 62/011,372 filed June 12, 2014; and

WHEREAS, Skyworks Solutions, Inc., a corporation duly organized and existing under and by virtue of the laws of the State of Delaware, having a principal business address at 20 Sylvan Road, Woburn, Massachusetts 01801, is desirous of acquiring the entire interest in and to said invention, said non-provisional and provisional applications, any and all inventions and improvements disclosed in said applications, and all Letters Patent to be had therefor.

NOW THEREFORE, to all whom it may concern, be it known, that for good and valuable consideration, the sufficiency and receipt of which are hereby acknowledged, we, said Weimin Sun, Xiaofang Mu, and Hongxiao Shao have sold, assigned, transferred, and set over, and by these presents do sell, assign, transfer, and set over unto said Skyworks Solutions, Inc., the whole right, title, and interest in and to said DEVICES AND METHODS RELATED TO DIRECTIONAL COUPLERS, the aforesaid applications, and any and all inventions and improvements disclosed in the aforesaid non-provisional and provisional applications for patent, as fully set forth and described therein, and all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent derived from or claiming priority to the aforesaid applications which have been or shall be filed in the United States and in and to the United States Letters Patent to be issued thereon for the territory of the United States, and all corresponding foreign counterpart applications derived from or claiming priority to the aforesaid United States non-provisional and provisional patent applications and related applications as prepared for and filed in any and all foreign countries, said whole right, title, and interest being the same for said Skyworks Solutions, Inc.'s own use and for the use of its assigns, successors, and legal representatives to the full end of the term for which all said Letters Patent may be granted, as fully and entirely as the same would have been held and enjoyed by us had this assignment and sale not been made. And we hereby acknowledge, agree, and understand that this assignment conveys any and all other related intellectual property rights including, but not so limited to, copyright rights, copyrightable subject matter, know how, trade secrets, copyright registrations, and reproduction rights, including any and all right to sue for past, current, or future infringement of the intellectual property rights hereby sold, assigned, and transferred, and we further hereby waive any and all moral rights under 17 U.S.C. § 106A or as so otherwise provided.

And we, for ourselves, our heirs, assigns, and legal representatives hereby covenant to and with said assignee Skyworks Solutions, Inc., its assigns, successors, and legal representatives, that we have full right to sell, assign, and transfer the whole right, title, and interest in and to said inventions and improvements, said non-provisional and provisional applications, and all the Letters Patent to be had therefor and that the entire interest herein conveyed is free from all prior

assignment, grant, mortgage, license, or other encumbrance whatsoever. And we also, for ourselves, our heirs, assigns, and legal representatives hereby further covenant to and with said assignee Skyworks Solutions, Inc., its assigns, successors, and legal representatives to fully cooperate therewith in the prosecution of the aforesaid applications in the United States Patent and Trademark Office and in any and all foreign jurisdictions, said cooperation extending to any U.S. or foreign divisional, continuing, substitute, renewal, reissue, or any other application derived from or claiming priority to the aforesaid applications, and including the execution of additional declarations, assignments, and other formal documents as may be required in connection therewith.

And we do hereby covenant and agree not to challenge or oppose, on any grounds whatsoever, the validity of this assignment or to assist or request any third party to contest the validity of this assignment, and we further agree not to contest the validity or enforceability of any intellectual property rights assigned herein, or to assist or request any third party to contest the validity or enforceability of any intellectual property rights assigned herein. And we also agree that no course of conduct or dealing by us shall act as an amendment, modification, or waiver of any provision of this assignment unless specifically set forth in writing.

And we do hereby authorize and request the United States Commissioner of Patents to issue Letters Patent to said Skyworks Solutions, Inc. as the assignee of our entire right, title, and interest therein.

IN TESTIMONY WHEREOF, we have hereunto set our respective hand and seal on the day and month of the year 2015 as indicated below.

..... L.S. Date:.....  
Weimin Sun

Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document and not the truthfulness, accuracy, or validity of that document.

State of California }  
County of Ventura }

On this ..... day of ..... 2015 before me, T. Felix-Kreit, Notary Public, personally appeared Weimin Sun, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(Official Seal)

.....  
Notary Public

\*\*\*\*\*

[Signature] L.S. Date: 02/10/2016  
Xiaofang Mu

Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document and not the truthfulness, accuracy, or validity of that document.

State of California }  
County of Santa Clara }

On this 10<sup>th</sup> day of February, 2016 before me Patricia G. Shore, personally appeared Xiaofang Mu, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



[Signature]  
Notary Public

.....  
L.S. Date: \_\_\_\_\_  
Hongxiao Shao

Acknowledgment

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document and not the truthfulness, accuracy, or validity of that document.

State of California }  
County of \_\_\_\_\_ }

On this \_\_\_\_\_ day of \_\_\_\_\_, 2015 before me \_\_\_\_\_, Notary Public, personally appeared Hongxiao Shao, who proved to me on the basis of satisfactory evidence to be the person whose name is subscribed to the within instrument and acknowledged to me that he executed the same in his authorized capacity, and that by his signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

(Official Seal)

\_\_\_\_\_  
Notary Public