

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT										
NATURE OF CONVEYANCE:	ASSIGNMENT										
CONVEYING PARTY DATA											
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Qingchun Zhang</td> <td>12/21/2012</td> </tr> <tr> <td>Brett Hull</td> <td>12/26/2012</td> </tr> </tbody> </table>		Name	Execution Date	Qingchun Zhang	12/21/2012	Brett Hull	12/26/2012				
Name	Execution Date										
Qingchun Zhang	12/21/2012										
Brett Hull	12/26/2012										
RECEIVING PARTY DATA											
<table border="1"> <tr> <td>Name:</td> <td>Cree, Inc.</td> </tr> <tr> <td>Street Address:</td> <td>4600 Silicon Drive</td> </tr> <tr> <td>City:</td> <td>Durham</td> </tr> <tr> <td>State/Country:</td> <td>NORTH CAROLINA</td> </tr> <tr> <td>Postal Code:</td> <td>27703</td> </tr> </table>		Name:	Cree, Inc.	Street Address:	4600 Silicon Drive	City:	Durham	State/Country:	NORTH CAROLINA	Postal Code:	27703
Name:	Cree, Inc.										
Street Address:	4600 Silicon Drive										
City:	Durham										
State/Country:	NORTH CAROLINA										
Postal Code:	27703										
PROPERTY NUMBERS Total: 1											
<table border="1"> <thead> <tr> <th>Property Type</th> <th>Number</th> </tr> </thead> <tbody> <tr> <td>Application Number:</td> <td>13730068</td> </tr> </tbody> </table>		Property Type	Number	Application Number:	13730068						
Property Type	Number										
Application Number:	13730068										
CORRESPONDENCE DATA											
<p>Fax Number: 9192382301 <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i> Phone: 9192382300 Email: mfitzsimmons@wt-ip.com Correspondent Name: Withrow & Terranova, PLLC Address Line 1: 100 Regency Forest Drive Address Line 2: Suite 160 Address Line 4: Cary, NORTH CAROLINA 27518</p>											
ATTORNEY DOCKET NUMBER:	1194-123										
NAME OF SUBMITTER:	Michele Fitzsimmons										
<p>Total Attachments: 6 source=1194-123_Assignment_1_8_2013#page1.tif source=1194-123_Assignment_1_8_2013#page2.tif source=1194-123_Assignment_1_8_2013#page3.tif source=1194-123_Assignment_1_8_2013#page4.tif source=1194-123_Assignment_1_8_2013#page5.tif source=1194-123_Assignment_1_8_2013#page6.tif</p>											

OP \$40.00 13730068

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 Invention	TRANSISTOR STRUCTURES HAVING A DEEP RECESSED P+ JUNCTION AND METHODS FOR MAKING 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 application in the application.

WHEREAS, Cree, Inc., a corporation duly organized and existing under the laws of the State of North Carolina and having a principal place of business at 4600 Silicon Drive, Durham, North Carolina 27703 (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.

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: Qingchun Zhang

Date: 12/21/2012

Signature: 

**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 Invention	TRANSISTOR STRUCTURES HAVING A DEEP RECESSED P+ JUNCTION AND METHODS FOR MAKING 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 application in the application.

WHEREAS, Cree, Inc., a corporation duly organized and existing under the laws of the State of North Carolina and having a principal place of business at 4600 Silicon Drive, Durham, North Carolina 27703 (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.

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: Brett Hull

Date: 12/26/12

Signature: 

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of: Qingchun Zhang et al.

For: **TRANSISTOR STRUCTURES HAVING A DEEP RECESSED P+ JUNCTION
AND METHODS FOR MAKING SAME**

Filed concurrently herewith.

Serial Number to be assigned.

Commissioner for Patents
PO Box 1450
Alexandria, VA 22313-1450

POWER OF ATTORNEY

Sir:

The undersigned, assignee of the entire interest in and to an application of Qingchun Zhang et al. for U.S. Letters Patent for **TRANSISTOR STRUCTURES HAVING A DEEP RECESSED P+ JUNCTION AND METHODS FOR MAKING SAME**, by an assignment document being recorded contemporaneously herewith (a copy attached hereto), hereby appoints the firm of Withrow & Terranova, P.L.L.C., Customer No. 27820, comprising Benjamin S. Withrow, Reg. No. 40,876, Steven N. Terranova, Reg. No. 43,185, John R. Witcher, III, Reg. No. 39,877, Richard C. Bevins, Reg. No. 51,468, Anthony J. Josephson, Reg. No. 45,742, Eric P. Jensen, Reg. No. 37,647, Bentley D. Frink, Reg. No. 50,294, Dennis Núñez, Reg. No. 58,837, Taylor M. Davenport, Reg. No. 42,466, Stephen Bylciw, Reg. No. 65,913, Ed Garcia-Otero, Reg. No. 56,609, Jerome A. DeLuca, Reg. No. 55,106, Bruce E. Owens, Jr., Reg. No. 58,685, Scott E. Snyder, Reg. No. 67,958, and Matthew J. Selby, Reg. No. 70,765, as my attorneys and/or agents with full power of substitution and revocation, to prosecute this application, to

make alterations and amendments therein, to receive the patent, and to transact all business in the Patent and Trademark Office connected therewith.

Furthermore, in accordance with 37 CFR §3.73(c), the undersigned hereby states that the documentary evidence of a chain of title from the original owner to the assignee, i.e. assignment document referenced above, has been reviewed and the undersigned certifies that, to the best of assignee's knowledge and belief, title is in assignee who seeks to prosecute this application.

PLEASE ADDRESS ALL COMMUNICATIONS AND TELEPHONE CALLS TO:
CUSTOMER NO. 27820, WITHROW & TERRANOVA, P.L.L.C., 100 REGENCY
FOREST DRIVE, SUITE 160, CARY, NORTH CAROLINA 27518, (919) 238-2300.

Cred, Inc.

BY: 

Name: Charles A. Jacobson

Title: Associate General Counsel for Intellectual Property

Date: DECEMBER 21, 2012

File No.: 1194-123