FORM PTO-1695 (Rev. 6-93) OMB No. 0651-0011 (exp. 4/94)	U.S. DEPARTMENT OF COMMERCE Patent and Trademark Office
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To the Honorable Commissioner of Patents and Transfer	169729 original documents or copy thereof.
1. Name of conveying party(ies): (1) Michio OHKUBO (2) Nariaki IKEDA (3) Akihiko KASUKAWA Additlonal name(s) of conveying party(ies) attached? U Yes MXVo	2. Name and address of receiving party(ies) NameFURUKAWA ELECTRIC CO., LTD Internal Address:
3. Nature of conveyance:	
☐ Assignment ☐ Merger	Street Address: 6-1, Marunouchi 2-chome
☐ Security Agreement ☐ Change of Name equest to correct third inventor's name ☐ CM Other Previously recorded on Ree19893 and Frame 0970. Execution Date: 11/21/95 (1), 4/8/1999 both 2 & 3	Chiyoda-ku City: Tokyo State: ZIP: COUNTRY: JAPAN Additional name(s) & address(es) attached? □ Yes □ No
Application number(s) or patent number(s): If this document is being filed together with a new application.	11/25/95 (1) n, the execution date of the application is: $4/8/1999 2 & 3$
A. Patent Application No.(s) SERIAL NO: 08/566, 188	B. Palent No.(s)
Additional numbers at Attorney's Docket No.: SOH 13.107	lached? ☐ Yes ☐KNo
Name and address of party to whom correspondence concerning document should be mailed:	6. Total number of applications and patents involved:
Name: HELFGOTT & KARAS, P.C.	7. Total fee (37 CFR 3.41)\$40.00
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PATENT REEL: 010243 FRAME: 0274

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The state of the s	atents and Trademarks: I	lease record the attached original documents or copy thereof.					
1. Name of conveying party(ies): (1) Michio OHKUBO (2) Nariaki IKEDA (3) Akihiko KAUKAWA K 4 5 4 は 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	70 XX	Name and address of receiving party(ies) Name: <u>FURUKAWA ELECTRIC CO., LTD.</u> Internal Address:					
3. Nature of conveyance:							
★ Assignment	☐ Merger	Street Address: 6-1, Marunouchi 2-chome,					
Security Agreement	☐ Change of Name	Chiyoda-ku					
120x Other <u>Assignment by (1) recor</u> Reel/Frame: 7819/0817	ded previously on	City: Tokyo State: Japan ZIP:					
Execution Date: (1) 11/21/1	. <u>995</u> /1999	Additional name(s) & address(es) attached? U Yes 181 No					
4. Application number(s) or patent nu	mber(s):						
If this document is being liled toget	ther with a new application	on, the execution date of the application is:					
A. Patent Application No.(s)		B. Patent No.(s)					
		5,814,843					
Additional numbers attached? U Yes 💢 No DOCKET NO -: SOH 13.107							
Name and address of party to whom correspondence concerning document should be malled:		6. Total number of applications and patents involved:					
Name: HELFGOTT & KARAS	P.C.	7. Total fee (37 CFR 3.41)\$ 40 • 00					
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01 FC:581 40.00 0 Street Address: 350 5th Ave		8. Deposit account number:					
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City: New York State: State:	NY ZIP: 10118	(Attach duplicate copy of this page if paying by deposit account)					
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PATENT

REEL: 010243 FRAME: 0275

assiunment

Docket No. SOH 13.107

WHEREAS, the below named inventor, ASSIGNOR, has made a certain now and useful invention in :
HETEROJUNCTION BEFOLAR TRANSISTOR HAVING A GRADED-COMPOSITION
BASE REGION
for which
(check one) [7] an application is being filed concurrently herewith,
1 an application for a Patent of the United States was filed on
[] and given Application Serial No.
and WHEREAS. The Furukawa Electric Co., Ltd.
having a place of business at 6-1, Marunouchi 2-chome, Chivoda-ku, Tokvo, Japan
ASSIGNED
Is desirous of obtaining the entire right, title and interest in, to end under the said invention and the said application:
NOW, THEREFORE, in consideration of the sum of One Dellar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, the said ASSIGNOR, has seid, axigned, transferred and set over, and by these presents does hereby sell, assign, transfer and jet over, unto the said ASSIGNEE, its successors, logal representatives and essigns, the entire right, title and interest in, to and under the taid invention, and the said United States application and all indivisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all supplications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filled for said invention in any country or countries foreign to the United States, beginer with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the demestic laws of the country in which any such application is filled, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventor's cartificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and religious thereof. ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to Issue patents or other ovidence or forms of industrial property protection on applications as aformald, to Issue the same to the said ASSIGNEE, its successors, legal representatives and agrees that he has full right to convey the entire laterest
legal representatives and assigns, my facts known respecting said invention, and tastify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, relates and feroign applications, make all rightful casts, and generally the enough parasible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and anforce projection for said invention in all countries.
Full name of sale or flast inventory _MICHIO_OHKUBO
Inventor's algenture T7 (7, 49 725 Date 21/11/1995
Residence Kanadawa, Japan Chizenship Japanese
PostOffice Address 2-19-7, Nighitomi, Fujisawa-shi, Kanagawa 251, Japan
Well name of record lains in successful.
Full name of second Joint inventor, if any Second Inventor's vieworks
Second Inventor's signature
Residences Citizenship
Post Office Address
Full name of third Joint Inventor, If any
Tilled Inventor's Agrinture
Rosidence Citizenship
Post Office Address

PATENT REEL: 010243 FRAME: 0276

ASSIGNMENT Docket No. SOH 13.107T

WHEREAS, the below named inventor, ASSIGNOR, has made a certain new and useful invention in:
HETEROJUNCTION BIPOLAR TRANSISTOR HAVING A GRADED-COMPOSITION BASE REGION

for which (check one) [] an application is

[] an application is being filed concurrently herewith,

[X] an application for a Patent of the United States was filed on December 1, 1995 and given Application Serial No. 08/566,188 and issued as Patent Number 5,814,843 on September 29, 1998.

and WHEREAS, FURUKAWA ELECTRIC CO., LTD.

having a place of business at 6-1, Marunouchi 2-chome, Chiyoda-ku, Tokyo, Japan ASSIGNEE is desirous of obtaining the entire right, title and interest in, to and under the said invention and the said application.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00) to me in hand paid, and other good and valuable consideration, the receipt of which is hereby acknowledged, the said ASSIGNOR has soid, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto the said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title and interest in, to and under the said invention, and the said United States application and all divisions, renewals and continuations thereof, and all Patents of the United States which may be granted thereon and all reissues and extensions thereof; and all applications for industrial property protection, including, without limitation, all applications for patents, utility models, and designs which may hereafter be filed for said invention in any country or countries foreign to the United States, together with the right to file such applications and the right to claim for the same the priority rights derived from said United States application under the Patent Laws of the United States, the International Convention for the Protection of Industrial Property, or any other international agreement or the domestic laws of the country in which any such application is filed, as may be applicable; and all forms of industrial property protection, including, without limitation, patents, utility models, inventor's certificates and designs which may be granted for said invention in any country or countries foreign to the United States and all extensions, renewals and reissues thereof;

ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents or other evidence or forms of industrial property protection on applications as aforesaid, to issue the same to the said ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument; and

ASSIGNOR covenants and agrees that he has full right to convey the entire interest herein assigned, and has not executed, and will not execute, any agreement in conflict herewith; and

ASSIGNOR further covenants and agrees that he will communicate to the said ASSIGNEE, its successors, legal representatives and assigns, any facts known respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, reissue and foreign applications, make all rightful oaths, and generally do everything possible to aid the said ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper protection for said invention in all countries.

Full name of sole or fi		MICHIO OHKUBO		
Residence Kana	zawa, Japan			Japan
Post Office Address	2-18-7, 1	Nishitomi, Fujisawa	Kanagawa	251, Japan
Full name of second j	oint inventor, if any	NARIAKI IK	EDA	
Second Inventor's Sig	nature <u>habiak</u>	i Sheda		Date <u>April 8, 1999</u>
Residence Kana	lawa. Japan		Citizen	ship Tapan
Post Office Address	_11-3-301, /	Asahi-ku, Yakah	ama Kan	agawa 241-0825, Japan
Full name of third join	it inventor if to	AKHIKO K	ASUKAWA	Date April 8, 1999
Third Inventor's Signs	ture	Kasillama		
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Post Office Address	3-15-0.	Minari-Const	Ohta-	Cu, Tokyo 125-0003. Japa

PATENT
RECORDED: 08/30/1999 REEL: 010243 FRAME: 0277