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(Rev. 10/02)

OMB No. 0651-0027 (exp. 6/30/2005) 102391438 T1-34832 To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. 1. Name of conveying party(ies): 2. Name and address of receiving party(ies) Name: Texas Instruments Incorporated 1 Gregory G. Romas 2-28-03 2 Darrel C. Oglesby, Jr. Street Address: P.O. Box 655474, MS 3999 3 Scott J. Jasper 4 Philip Najfus City: Dallas State: Texas Zip: 75265 Additional name(s) of conveying party(ies) attached? May Yes 🛄 No 3. Nature of conveyance: Assignment ☐ Merger Name: _____ Security Agreement Change of Name State Address: Other Execution Date(s): 1 02/05/2003 2 02/06/2003 City: _____ State: ____Zip:____ 3 02/06/2003 | 4 02/06/2003 Additional name(s) & address(es) attached? 📮 Yes 🚨 No 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: $\frac{02/05/2003}{2003}$ N/A B. Patent No.(s) A. Patent Application No.(s) 10/377053 Additional numbers attached? Thes Who 5. Name and address of party to whom correspondence 6. Total number of applications and patents involved: concerning document should be mailed: 7. Total fee (37 CFR 3.41).....\$40.00 Name: Jacki Garner, Reg. No. 36,144 Enclosed Company: Texas Instruments Incorporated Authorized to be charged to deposit account Address: P.O. Box 655474; MS 3999 City: Dallas Deposit account number: State: Texas 20-0668 Zip Code:_75265 (Attach duplicate copy of this page if paying by deposit account) DO NOT USE THIS SPACE Statement and signature. To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. 02/28/2003 Greg H. Parker Name of Person Signing Date Total number of pages including cover sheet attachments, and documents: Mail documents to be recorded with required cover sheet information to:

> Commissioner of Patents & Trademarks, Box Assignments Washington, D.C. 20231 10377053

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(Rev. 10/02)

OMB No. 0651-0027 (exp. 6/30/2005) TI-34832 To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof. 2. Name and address of receiving party(ies) 1. Name of conveying party(ies): 5 Venkatesh Govindaraju Name: ______ 6 Chun-Liang Yeh Street Address: ______ 7 James Lisenby City:______State:_____Zip:____ Additional name(s) of conveying party(ies) attached? 📭 Yes 👪 No 3.Execution Date(s): 5 02/06/2003 Name: _____ 02/06/2003 02/06/2003 State Address:_____ City:_____State:____Zip:____ 4. Application number(s) or patent number(s): If this document is being filed together with a new application, the execution date of the application is: A. Patent Application No.(s) B. Patent No.(s) Additional numbers attached? Thes Tho 5. Name and address of party to whom correspondence 6. Total number of applications and patents involved: concerning document should be mailed: 7. Total fee (37 CFR 3.41).....\$____\$ Name:______ Enclosed Internal Address:_____ Authorized to be charged to deposit account 8. Deposit account number: Street Address:_____ (Attach duplicate copy of this page if paying by deposit account)

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Commissioner of Patents & Trademarks, Box Assignments

Washington, D.C. 20231

City:_____State:____Zip:____

ASSIGNMENT

WHEREAS, I, the undersigned inventor (or one of the undersigned joint inventors), of residence as listed, having invented certain new and useful improvements as below entitled, for Application No. 10/279,316 filed October 24, 2002 which application for United States Letters Patent is made, the said application having been previously executed.

WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, having a place of business at 7839 Churchill Way, MS 3999, Dallas, Texas 75251, P.O. Box 655474, MS 3999, Dallas, Texas 75265, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said application and any Letters Patent that may issue thereon;

NOW, THEREFORE, for good and valuable consideration, the receipt of which is hereby acknowledged, I hereby sell and assign to the said TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my entire right, title and interest in and to the said invention and in to the said application and all patents which may be granted therefor, and all divisions, reissues, substitutions, continuations, and extensions thereof; and I hereby authorize and request the Commissioner of Patents and Trademarks to issue all patents for said invention, or patent resulting therefrom, insofar as my interest is concerned, to the said TEXAS INSTRUMENTS INCORPORATED, as assignee of my entire right, title and interest.

I also hereby sell and assign to TEXAS INSTRUMENTS INCORPORATED, its successors and assigns, my foreign rights to the invention disclosed in said application, in all countries of the world, including the right to file applications and obtain patents under the terms of the International Convention for the Protection of Industrial Property, and of the European Patent Convention, and further agree to execute any and all patent applications, assignments, affidavits, and any other papers in connection therewith necessary to perfect such patent rights.

I hereby further agree that I will communicate to said TEXAS INSTRUMENTS INCORPORATED, or to its successors, assigns, and legal representatives, any facts known to me respecting said invention, and at the expense of said assignee company, testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, reissue and substitute applications, make all lawful oaths, and generally do everything possible to aid said TEXAS INSTRUMENTS INCORPORATED, its successors, assigns and nominees to obtain and enforce proper patent protection for said invention in all countries.

IN WITNESS WHEREOF, I hereunto set my hand and seal this day and year;

TITLE OF INVENTION	A VERTICAL BIPOL	AR TRANSISTOR AND	A METHOD OF MANUF	ACTURE THEREFOR
SIGNATURE OF INVENTOR AND NAME	Gregory G. Romas	(2) Darfel C. Oglesby, Jr.	Scott of Jasper Carris	Philip Najfus
DATE	105 7003	2/6/2003	2/4/2003	2/6/03
RESIDENCE (City, State)	1500 Eldorado Parkway McKinney, TX 75069	680 Ridgeview Dr. Sherman, TX 75090	1815 Westside Dr. Sherman, Texas 75092	203 Branchford Dr. Sherman, Texas 75090
DATE APPLICATION EXECUTED	1235 FOL 3	2/10/2003	2/6/2003	1/6/03

After recordation, please return Assignment to:

Jacki Garner Texas Instruments Incorporated P.O. Box 655474, M/S 3999 Dallas, TX 75265

SIGNATURE OF INVENTOR AND NAME	Venkatesh Govindaraju	(6) Chun-Liang Yeh Min Jin , Yuh	James Lisenby James Gerenby
DATE	02/06/03	02/06/03	02/06/03
RESIDENCE (City, State)	5213 Sandalwood Drive McKinney, TX 75070	116 Parkhurst Lane Allen, Texas 75013	2773 Elliott Road Sherman, Texas 75092
DATE APPLICATION EXECUTED	02/06/03	62/06/03	02/06/03