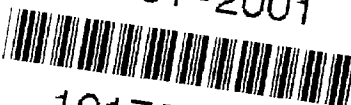


07-31-2001



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FORM PTO-1595

TI-31657

U.S. Department of Commerce
Patent and Trademark Office

To the Assistant Commissioner for Patents. Please record the attached original document.

1. Name of conveying party(ies):

Zhiliang J. Chen 6/1/01
Kuok Y. Ling 6/4/01
Hisashi Shichijo 6/7/01
Katsuo Komatsuzaki 6/4/01
Chin-Yu Tsai 6/1/01

7-2501

2. Name and Address of receiving party(ies):

Name: TEXAS INSTRUMENTS INCORPORATED

Address: P.O. Box 655474, MS 3999

City: Dallas

State: TX Zip: 75265

Additional name(s) & address(es) attached? ___ Yes ___X___ No

3. Nature of Conveyance:

☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Other _____

Execution Date in order of listed parties: 6/1/01; 6/4/01; 6/7/01; 6/4/01; 6/1/01

4. Application number(s) or patent number(s).

☐ This document is being filed together with a new application.

Execution date of the application in order of listed parties: 6/1/01; 6/4/01; 6/7/01; 6/4/01; 6/1/01

Title: Integrated Structure for Reduced Leakage and Improved Fill-Factor in CMOS Pixel

Docket No: TI-31657

A. Patent Application No.(s)

S.N. 09/855,251

B. Patent No.(s)

X,XXX,XXX

Additional numbers attached? ___ Yes ___X___ No

Additional numbers attached? ___ Yes ___X___ No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Gary C. Honeycutt
Texas Instruments Incorporated

Address: P.O. Box 655474, MS 3999

City: Dallas

State: TX Zip: 75265

6. Number of applications and patents involved: ___(1)___

7. Amount of fee enclosed or authorized to be charged: \$40

8. Deposit Account No: 20-0668 (Attach duplicate copy if paying by deposit account)

DO NOT USE THIS SPACE

9. 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.

Date

7-23-01

Gary C. Honeycutt, Reg. No. 20,250

Total Number of Pages Including Cover Sheet, Attachments and Document: 5

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 which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

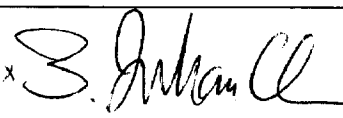
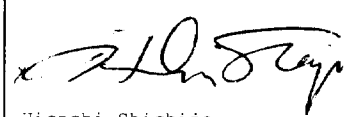
WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, with a place of business at 7839 Churchill Way, MS 3999, Dallas, Texas 75251, is desirous of acquiring my entire right, title and interest in and to the said invention, and to the said 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 hand and seal this day and year;

TITLE OF INVENTION	Integrated Structure for Reduced Leakage and Improved Fill-Factor in CMOS Pixel		
SIGNATURE OF INVENTOR AND NAME	 Zhiliang J. Chen	Kuok Y. Ling	 Hisashi Shichijo
DATE OF SIGNATURE	x 06/01/01		x 6/1/01
RESIDENCE (City, State)	Plano, Texas	Plano, Texas	Plano, Texas
DATE APPLICATION EXECUTED			

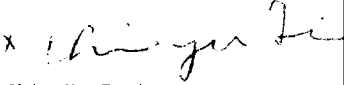
After recording Assignment, please return to:

Gary C. Honeycutt
Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, TX 75265

ATTORNEY DOCKET NO.
TI-31657

ASSIGNMENT

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

TITLE OF INVENTION	Integrated Structure for Reduced Leakage and Improved Fill-Factor in CMOS Pixel		
SIGNATURE OF INVENTOR AND NAME	Katsuo Komatsuzaki	X  Chin-Yu Tsai	N/A
DATE OF SIGNATURE		X 6/1/01	
RESIDENCE (City, County, State)	Ibaraki, Japan	Plano, Texas	
DATE APPLICATION EXECUTED			

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 which application for United States Letters Patent is made, the said application having been executed on the date set forth below; and

WHEREAS, TEXAS INSTRUMENTS INCORPORATED, a corporation organized and existing under the laws of the State of Delaware, with a place of business at 7839 Churchill Way, MS 3999, Dallas, Texas 75251, 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 hand and seal this day and year;

TITLE OF INVENTION	Integrated Structure for Reduced Leakage and Improved Fill-Factor in CMOS Pixel		
SIGNATURE OF INVENTOR AND NAME	Zhiliang J. Chen	<i>x Kuok Y. Ling</i> Kuok Y. Ling	Hisashi Shichijo
DATE OF SIGNATURE		<i>x 6/4/01</i>	
RESIDENCE (City, State)	Plano, Texas	Plano, Texas	Plano, Texas
DATE APPLICATION EXECUTED			

After recording Assignment, please return to:

Gary C. Honeycutt
Texas Instruments Incorporated
P.O. Box 655474, MS 3999
Dallas, TX 75265

ATTORNEY DOCKET NO.
TI-31657

ASSIGNMENT

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

TITLE OF INVENTION	Integrated Structure for Reduced Leakage and Improved Fill-Factor in CMOS Pixel		
SIGNATURE OF INVENTOR AND NAME	<i>*Katsuo Komatsuzaki</i> Katsuo Komatsuzaki	Chin-Yu Tsai	N/A
DATE OF SIGNATURE	<i>June 104 / 2001</i>		
RESIDENCE (City, County, State)	Ibaraki, Japan	Plano, Texas	
DATE APPLICATION EXECUTED			