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PATENTS C

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US Department of Commerce

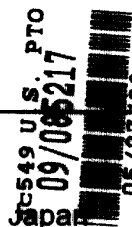
Patent and Trademark Office

To the Honorable Commissioner of Patent

original documents or copy thereof.



100730621



1. Name of conveying party(ies): Michael S. Armeen and Joseph T. Hillman  
Additional name(s) of conveying party(ies) attached? NO

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

Name: Tokyo Electron Limited

Address: TBS Broadcasting Center, 3-6 Akasaka 5-Chome, Minato-Ku, Tokyo 107 Japan

Additional name(s) and address(es) attached? \_\_\_ Yes  No

3. Nature of Conveyance:

Assignment \_\_\_ Merger \_\_\_ Security Agreement \_\_\_ Change of Name

\_\_\_ Other \_\_\_\_\_ Execution Date: 5/18/98 and 5/21/98

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: 5/13/98 and 5/21/98

A. Patent Application No.(s)

EM03233224US  
Filed 5/27/98

B. Patent No.(s)

Additional numbers attached? \_\_\_ Yes  No

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

Joseph R. Jordan  
WOOD, HERRON & EVANS, L.L.P.  
2700 Carew Tower  
Cincinnati, Ohio 45202

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41):..... \$40.00

Enclosed

Any deficiencies Authorized to be charged to:  
Deposit Account No. 23-3000.

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8. 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.

Joseph R. Jordan, Esq.  
Reg. No. 25,686

Signature

Date

5/27/98

Total number of pages including cover sheet, attachments and documents: 3

ASSIGNMENT OF INVENTION

WHEREAS, I, as a below named inventor, residing at the address stated next to my name, am a sole or joint inventor as indicated below, of certain new and useful improvements in APPARATUS FOR PREPARING AND METALLIZING HIGH ASPECT RATIO SILICON SEMICONDUCTOR DEVICE CONTACTS TO REDUCE THE RESISTIVITY THEREOF for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address.

AND WHEREAS, TOKYO ELECTRON LIMITED, a Japanese corporation with offices at TBS Broadcast Center, 3-6 Akasaka 5-Chome, Minato-Ku, Tokyo 107 Japan, (hereinafter referenced as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries.

NOW, THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto.

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto.

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense.

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto.

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with the assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow:

Serial Number: \_\_\_\_\_, Filing Date: \_\_\_\_\_.

This assignment executed on the dates indicated below.

Full Name of sole or first inventor Michael S. Ameen

(Date of Execution of U.S. Patent Application if different from the execution date of this assignment) \_\_\_\_\_

Inventor's Signature Michael S. Ameen Date May 18, 1998

Post Office Address 2 Coffin Street, Newburyport MA 01950

STATE OF Mass )  
 ) ss.  
COUNTY OF Suffolk )

On this 18th day of May, 1998, before me, the undersigned notary public, personally appeared the above named assignor, known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged execution of this instrument.

[Signature]  
Notary Public Commission expires 9/24/2004

Full Name of second inventor Joseph T. Hillman

(Date of Execution of U.S. Patent Application if different from the execution date of this assignment) \_\_\_\_\_

Inventor's Signature Joseph T. Hillman Date May 21, 1998

Post Office Address 8025 E. McLellan Blvd., Scottsdale, Arizona 85250

STATE OF Arizona )  
 ) ss.  
COUNTY OF Maricopa )

On this 21st day of May, 1998, before me, the undersigned notary public, personally appeared the above named assignor, known to me (or proved to me on the basis of satisfactory evidence) to be the person whose name is subscribed to the within instrument, and acknowledged execution of this instrument.

Melody K. Dunkleberger  
Notary Public

