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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof:

<p>1. Name of conveying parties: Maki KITAOKA, Tsuyoshi HAMAMOTO, Hideki YAMAMOTO, and Takashi IZUTSU</p> <p>Additional name(s) of conveying party(ies) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>		<p>2. Name and address of receiving party(ies): Name: <u>Mitsubishi Denki Kabushiki Kaisha</u></p> <p>Internal Address: _____</p> <p>Street Address: <u>2-3, Marunouchi 2-chome, Chiyoda-ku</u></p> <p>City: <u>Tokyo 100-8311</u> State/Country: <u>Japan</u> ZIP: _____</p> <p>Additional name(s) & address(es) attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	
<p>3. Nature of conveyance: <input checked="" type="checkbox"/> Assignment <input type="checkbox"/> Merger <input type="checkbox"/> Security Agreement <input type="checkbox"/> Change of Name <input type="checkbox"/> Other _____</p> <p>Execution Date: <u>May 7, 1998</u></p>			
<p>4. Application number(s) or patent number(s): If the document is being filed together with a new application, the execution date of the application is: <u>May 7, 1998</u></p> <p>A. Patent Application No(s). _____ B. Patent No(s). _____</p> <p>Additional numbers attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>			
<p>5. Name and address of party to whom correspondence concerning document should be mailed: Name: <u>McDERMOTT, WILL & EMERY</u></p> <p>Internal Address: _____</p> <p>Street Address: <u>99 Canal Center Plaza, Suite 300</u></p> <p>City: <u>Alexandria</u> State: <u>VA</u> ZIP: <u>22314</u></p>		<p>6. Total number of applications and patents involved: <u>1</u></p> <p>7. Total fee (37 CFR 3.41)..... <u>\$40.00</u> <input type="checkbox"/> Inclosed <input checked="" type="checkbox"/> Authorized to be charged to deposit account</p> <p>8. Deposit account number: <u>500417</u></p>	
DO NOT USE THIS SPACE			
<p>9. Statement and signature. <i>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.</i></p> <p><u>Stephen A. Becker, 26527</u> _____ July 8, 1998 Name and Registration No. of Person Signing Signature Date</p> <p>Total number of pages comprising cover sheet: <u>1</u></p>			
CMB No. 0851-0011 (exp. 4/94)			

07/16/1998 JMTKINS 0000052 500417 03111001

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PATENT
REEL: 9308 FRAME: 0001

Docket No.:

ASSIGNMENT

In consideration of the premises and other good and valuable consideration in hand paid, the receipt and sufficiency of which is hereby acknowledged, the undersigned:

- (1) Maki KITAOKA (4) Takashi IZUTSU (7) _____
- (2) Tsuyoshi HAMAMOTO (5) _____ (8) _____
- (3) Hideki YAMAUCHI (6) _____ (9) _____

who have made a certain new and useful invention, hereby sell, assign and transfer unto

Mitsubishi Denki Kabushiki Kaisha of
2-3, Marunouchi 2-chome, Chivoda-ku, TOKYO 100-8310 JAPAN

its successors and assigns (hereinafter designated "ASSIGNEE") the entire right, title and interest for the United States of America as defined in 35 U.S.C. 100 in the invention entitled

SEMICONDUCTOR MEMORY DEVICE HAVING TEST MODE

(a) for which an application for United States Letters Patent was filed on _____, and identified by United States Serial No. _____; or

(b) for which an application for United States Letters Patent was executed on May 7, 1998,

and the undersigned hereby authorize and request the United States Commissioner of Patents and Trademarks to issue any and all United States Letters Patent which may be granted therefor and any and all extensions, divisions, reissues, substitutes, renewals, continuations, or continuations-in-part thereof, and the right to all benefits under the International Convention for the Protection of Industrial Property to the said ASSIGNEE, for its interest as ASSIGNEE, its successors, assigns and legal representatives; the undersigned agree that the attorneys of record in said application shall hereafter act on behalf of said ASSIGNEE:

AND the undersigned hereby agree to transfer a like interest, and to render all necessary assistance in making application for and obtaining original, divisional, reissued or extended Letters Patent of the United States, upon request of the said ASSIGNEE, its successors, assigns and legal representatives, and without further remuneration, in and to any improvements, and applications for patent based thereon, growing out of or related to the said invention; and to execute any papers by the said ASSIGNEE, its successors, assigns and legal representatives, deemed essential to ASSIGNEE's full protection and title in and to the invention hereby transferred.

SIGNED on the dates indicated aside our signatures:

INVENTORS

DATE SIGNED

- 1) Maki Kitaoka _____ May 7, 1998 _____
Name: Maki KITAOKA
- 2) Tsuyoshi Hamamoto _____ May 7, 1998 _____
Name: Tsuyoshi HAMAMOTO
- 3) Hideki Yamauchi _____ May 7, 1998 _____
Name: Hideki YAMAUCHI
- 4) Takashi Izutsu _____ May 7, 1998 _____
Name: Takashi IZUTSU
- 5) _____
Name: _____
- 6) _____
Name: _____
- 7) _____
Name: _____
- 8) _____
Name: _____
- 9) _____
Name: _____

PATENT

RECORDED: 07/08/1998

REEL: 9308 FRAME: 0002