FORM PTO-1595	101159	499 5	U.S. Department of Comme Patent and Trademark Of	
To the Assistant Commissioner for Patents	• =		ents or copy thereof.	
1. Name of conveying party(ies): Hiroyuki Yoshida Toshiyuki Nagata Atsushi Satoh Shuzoh Shiosaki Additional name(s) attached? Yes _X	man 9-21-99 No	2. Name and Add Name: Address: City: State: Zip:	dress of receiving party(ies): Texas Instruments Incorporated PO Box 655474, M/S 3999 Dallas Texas 75265	Jc#64 U. W. PTO
		Additional name(s	s) & address(es) attached? Yes _X_ No	
3. Nature of Conveyance: X Assignment Security Agreement Other Execution Date: 06/03/1999		·		
4. Application number(s) or patent number X This document is being file Execution date of the application: 09/28 Title: Semiconductor Memory Device Docket: TI-27022	ed together with a new ap /1998	Array	09/399,841	
A. Patent Application No.(s) Additional numbers attached?Ye	s _X_ No	B. Tatent No.(s)	nal numbers attached? Yes _X_ No	
5. Name and address of party to whom cor concerning document should be mailed: Name: Robby T. Holland Texas Instruments Incorporat Address: PO Box 655474, M/S 3999 City: Dallas State: Texas Zip: 75265			lications and patents involved:1	
pade. Folias E.p. 1929		8. Deposit accou	enclosed or authorized to be charged: \$40 unt number (Attach two copies of this form if posit account): 20-0668	
	DO NOT USE	THIS SPACE		
9. Statement and signature. To the best of my knowledge and belief, the particular document. 9. Statement and signature. 1 - 21 - 99 Date		rue and correct and	any attached copy is a true copy of the origin	nal

PAGE 1 OF 2

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, 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	SEMICONDUCTOR MEMORY DEVICE HAVING VARIABLE PITCH ARRAY			
SIGNATURE OF INVENTOR AND NAME	Moyuki Socialite Hiroyuki Yoshida	(2) Toshiyuki Nagata	(3) Atsushi Satoh	
DATE	6/3/49			
RESIDENCE (City, County, State)	3-9-14 Tsurukawa Machida-shi Tokyo 195-0061 Japan	1-5-27 Minamisuna Kohtoh-ku Tokyo 136-0076 Japan	457-1-203 Manzai Ryuo-cho Nakakoma-gun Yamanashi 400-0114 Japan	
DATE APPLICATION EXECUTED	6/3/49			

After recordation, please return Assignment to:

Robby T. Holland Texas Instruments Incorporated P.O. Box 655474, M/S 3999 Dallas, TX 75265

PAGE 1 OF 2

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

TITLE OF INVENTION	SEMICONDUCTOR MEMORY DEVICE HAVING VARIABLE PITCH ARRAY			
SIGNATURE OF INVENTOR AND NAME	Hiroyuki Yoshida	Loshiyuki Nagata	Atsushi Satoh	
DATE		6/2/99	1/3/39	
RESIDENCE (City, County, State)	3-9-14 Tsurukawa Machida-shi Tokyo 195-0061 Japan	1-5-27 Minamisuna Kohtoh-ku Tokyo 136-0076 Japan	457-1-203 Manzai Ryuo-cho Nakakoma-gun Yamanashi 400-0114 Japan	
DATE APPLICATION EXECUTED		6/2/99	4/=/99	

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Robby T. Holland Texas Instruments Incorporated P.O. Box 655474, M/S 3999 Dallas, TX 75265

PAGE 2 OF 2

ASSIGNMENT

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TITLE OF INVENTION	SEMICONDUCTOR ME	G VARIABLE PITCH	
SIGNATURE OF INVENTOR AND NAME	Muse Shiesake Shuzoh Shiosaki	(2)	(3)
DATE	6/3/199		
RESIDENCE (City, County, State)	2-19-21 Koiwadahigashi Tsuchiura-shi Ibaraki 300-0834 Japan		
DATE APPLICATION EXECUTED	6/3/99		

After recordation, please return Assignment to:

RECORDED: 09/21/1999

Robby T. Holland Texas Instruments Incorporated P.O. Box 655474, M/S 3999 Dallas, TX 75265