PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Kenji Suzuki	10/15/2007
Ishizaka Tadahiro	10/15/2007
Miho Jomen	10/15/2007
Jonathan Rullan	10/15/2007

RECEIVING PARTY DATA

Name:	Tokyo Electron Limited	
Street Address:	3-6 Akasaka 5-Chome, Minato-Ku	
Internal Address:	TBS Broadcast Center	
City:	Tokyo	
State/Country:	JAPAN	
Postal Code:	107	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	11864566

CORRESPONDENCE DATA

500402968

Fax Number: (513)241-6234

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

Phone: 5132412324

Email: kdavidson@whepatent.com

Correspondent Name: Kristi L. Davidson
Address Line 1: 441 Vine Street
Address Line 2: 2700 Carew Tower
Address Line 4: Cincinnati, OHIO 45202

ATTORNEY DOCKET NUMBER: TTCA-229

NAME OF SUBMITTER: Kristi L. Davidson

PATENT

REEL: 020139 FRAME: 0549

OP \$40.00 11864

Total Attachments: 2

source=TTCA-229_Executed_Assignment#page1.tif source=TTCA-229_Executed_Assignment#page2.tif

PATENT REEL: 020139 FRAME: 0550

Attorney Docket No.: TTCA-229

ASSIGNMENT OF INVENTION AND PATENTS THEREON

For valuable consideration, we, Kenji Suzuki, Ishizaka Tadahiro, Miho Jomen, Jonathan Rullan, hereby assign to Tokyo Electron Limited, a Corporation of Japan and having a place of business at TBS Broadcast Center, 3-6 Akasaka 5-Chome, Minato-ku, Tokyo, 107 JAPAN and its successors and assigns (collectively hereinafter called "the Assignee"), our entire right, title and interest throughout the world in the inventions and improvements which are subject of an application for U.S. Patent entitled VOID-FREE COPPER FILLING OF RECESSED FEATURES FOR SEMICONDUCTOR DEVICES, and filed on September 28, 2007 as Patent Application No. 11/864,566 preparatory to obtaining Letters Patent of the U.S. therefor, this assignment including said application, any continuation, division or continuation-inpart thereof and/or substitute therefor, any and all U.S. and foreign patents, utility models, and design registrations granted for any of said inventions or improvements, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes; and authorize the Assignee to apply in all countries in our name or in its own name for patents, utility models, and design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements; and agree for ourselves and our respective heirs, legal representatives and assigns, without further compensation to perform such lawful acts and to sign such further applications, assignments, Preliminary Statements and other lawful documents as the Assignee may reasonably request to effectuate fully this assignment. We hereby authorize and request any one of the attorneys of Wood, Herron & Evans, L.L.P., 2700 Carew Tower, 441 Vine Street, Cincinnati, OH 45202, to insert herein the filing date and application serial number of said application when known.

Attorney Docket No.: TTCA-229

Date Oct. 15. 2007

Date OCTOBER 15,2007

Inventor's Signature

Kenji Suzuki

Full Name: Residence:

Guilderland, New York

Inventor's Signature

Full Name: Residence:

Ishizaka Tadahiro Watervliet, New York

Inventor's Signature Full Name:

Miho Jomen

Residence:

Watervliet, New York

Inventor's Signature

Full Name:

Jonathan Rullan

Residence:

Albany, New York

Page 2 of 2

REEL: 020139 FRAME: 0552