

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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FUJITSU SEMICONDUCTOR LIMITED,  
FUJITSU SEMICONDUCTOR AMERICA, INC.,  
ADVANCED MICRO DEVICES, INC., RENESAS ELECTRONICS  
CORPORATION, RENESAS ELECTRONICS AMERICA, INC.,  
GLOBALFOUNDRIES U.S., INC., GLOBALFOUNDRIES DRESDEN  
MODULE ONE LLC & CO. KG, GLOBALFOUNDRIES DRESDEN  
MODULE TWO LLC & CO. KG, TOSHIBA AMERICA ELECTRONIC  
COMPONENTS, INC., TOSHIBA AMERICA INC., TOSHIBA  
AMERICA INFORMATION SYSTEMS, INC.,  
TOSHIBA CORPORATION, and  
THE GILLETTE COMPANY,  
Petitioners,

v.

ZOND, LLC,  
Patent Owner

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IPR2014-00821<sup>1</sup>  
Patent 6,853,142 B2

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**PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE**

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<sup>1</sup> Cases IPR 2014-00863, IPR 2014-01013, and IPR 2014-01057 have been joined with the instant proceeding.

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    E. Wang in view of Lantsman teaches “the feed gas diffusing the strongly-ionized plasma, thereby allowing additional power from the pulsed power supply to be absorbed by the strongly ionized plasma” recited in claim 1 and similarly in recited in claim 10. .... 7

    F. Wang in view of Lantsman teaches “an electrical pulse having a magnitude and a rise time that is sufficient to increase the density of the weakly-ionized plasma to generate a strongly-ionized plasma” recited in claim 1 and similarly in claim 10. .... 10

    G. Wang in view of Lantsman teaches “applying the electrical pulse comprises applying a quasi-static electric field” recited in claim 13..... 11

H. Wang in view of Lantsman teaches “selecting at least one of a pulse amplitude and a pulse width of the electrical pulse in order to increase an ionization rate of the strongly-ionized plasma” recited in claim 14..... 13

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**TABLE OF AUTHORITIES**

**Cases**

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37 C.F.R. § 42.23 ..... 1

**PETITIONER'S EXHIBIT LIST**

April 16, 2015

<b>Exhibit</b>	<b>Description</b>
1101	U.S. Patent No. 6,853,142 ("142 Patent")
1102	Kortshagen Declaration ("Kortshagen Decl.")
1103	D.V. Mozgrin, <i>et al</i> , <u>High-Current Low-Pressure Quasi-Stationary Discharge in a Magnetic Field: Experimental Research</u> , Plasma Physics Reports, Vol. 21, No. 5, 1995 ("Mozgrin")
1104	U.S. Pat. No. 6,190,512 ("Lantsman")
1105	U.S. Pat. No. 6,413,382 ("Wang")
1106	A. A. Kudryavtsev and V.N. Skerbov, <u>Ionization relaxation in a plasma produced by a pulsed inert-gas discharge</u> , Sov. Phys. Tech. Phys. 28(1), pp. 30-35, January 1983 ("Kudryavtsev")
1107	10/07/03 Office Action
1108	03/08/04 Response
1109	03/29/04 Allowance
1110	04/21/08 Response in EP 1560943
1111	U.S. Pat. No. 7,147,759 ("759 Patent")
1112	05/02/06 Response of '759 Patent File History
1113	Plasma Etching: An Introduction, by Manos and Flamm, Academic Press (1989) ("Manos")
1114	The Materials Science of Thin Films, by Ohring M., Academic Press (1992) ("Ohring")

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