

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

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

IPR2014-00819¹
Patent 6,853,142 B2

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

¹ Cases IPR 2014-00867, IPR 2014-01014, and IPR 2014-01046 have been joined with the instant proceeding.

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 A. “Weakly-Ionized Plasma” and “Strongly-Ionized Plasma” 1

III. RESPONSE TO ARGUMENTS 2

 A. Zond Improperly Confounds the Embodiments of Wang 2

 B. A person of ordinary skill in the art would have combined Wang and Kudryavtsev 3

 C. Wang in view of Kudryavtsev teaches “a cathode that is positioned adjacent to the anode and forming a gap there between” recited in claim 21 and “a dimension of the gap . . . is chosen to increase an ionization rate of the excited atoms in the weakly-ionized plasma” recited in claim 28. 6

 D. Wang in view of Kudryavtsev teaches “a quasi-static electric field” recited in claims 24 and 32. 9

 E. Wang in view of Kudryavtsev teaches “a rise time of the electric field is chosen to increase an ionization rate of the excited atoms in the weakly-ionized plasma” recited in claim 26. 11

 F. Wang in view Kudryavtsev teaches “selecting at least one of a pulse amplitude and a pulse width of the electrical pulse in order to cause the strongly-ionized plasma to be substantially uniform in an area adjacent to a surface of the cathode” recited in claim 37 and “the strongly

ionized plasma is substantially uniform proximate to the cathode”
recited in claims 27 and 38..... 14

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TABLE OF AUTHORITIES

Cases

In re Mouttet, 686 F.3d 1322, 1332 (Fed. Cir. 2012)5

Rules

37 C.F.R. § 42.23 1

PETITIONER'S EXHIBIT LIST

April 16, 2015

Exhibit	Description
1201	U.S. Patent No. 6,853,142 ("142 Patent")
1202	Kortshagen Declaration ("Kortshagen Decl.")
1203	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, pp. 400-409, 1995 ("Mozgrin")
1204	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")
1205	U.S. Pat. No. 6,413,382 ("Wang")
1206	Certified Translation of D.V. Mozgrin, <u>High-Current Low-Pressure Quasi-Stationary Discharge in a Magnetic Field: Experimental Research</u> , Thesis at Moscow Engineering Physics Institute, 1994 ("Mozgrin Thesis")
1207	Mozgrin Thesis (Original Russian)
1208	Catalogue Entry at the Russian State Library for the Mozgrin Thesis
1209	File History for U.S. Pat. No. 6,853,142, Office Action dated October 7, 2003 ("10/07/03 Office Action")
1210	File History for U.S. Pat. No. 6,853,142, Response dated March 8, 2004 ("03/08/04 Response")
1211	File History for U.S. Pat. No. 6,853,142, Notice of Allowance dated March 29, 2004 ("03/29/04 Allowance")
1212	U.S. Patent No. 7,147,759 ("759 Patent")
1213	File History for U.S. Pat. No. 7,147,759, Response dated May 2, 2006

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