

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

IPR2014-00781
Patent 7,147,759

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE

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 B. Zond Improperly Confounds the Embodiments of Wang 4

 C. A person of ordinary skill in the art would have combined Wang and
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 D. Mozgrin Thesis is Prior Art 10

 E. Wang in view of Kudryavtsev teaches “an amplitude and a rise time of
 the voltage pulse being chosen to increase an excitation rate of ground
 state atoms that are present in the weakly-ionized plasma to create a
 multi-step ionization process that generates a strongly-ionized plasma”
 recited in claim 20. 10

 F. Wang in view of Kudryavtsev teaches a “multi-step ionization process
 comprising exciting the ground state atoms to generate excited atoms,

and then ionizing the excited atoms within the weakly-ionized plasma without forming an arc discharge” recited in claim 20. 15

G. Wang in view of Kudryavtsev and Yamaguchi teaches “ionizing the feed gas comprises exposing the feed gas to an electrode that is adapted to emit electrons” recited in claim 38. 19

H. Wang in view of Kudryavtsev and Müller-Horsche teaches “the ionizing the feed gas comprises exposing the feed gas to at least one of a UV source, an X -ray source, an electron beam source, and an ion beam source” recited in claim 39. 21

I. Wang in view of Kudryavtsev and the Mozgrin Thesis teaches “the rise time of the voltage pulse is approximately between 0.01 and 100Vμsec” recited in claim 49. 22

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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

May 4, 2015

Exhibit	Description
1201	U.S. Patent No. 7,147,759 ("the '759 Patent")
1202	Kortshagen Declaration ("Kortshagen Decl.")
1203	D.V. Mozgrin, et al, <i>High-Current Low-Pressure Quasi-Stationary Discharge in a Magnetic Field: Experimental Research</i> , Plasma Physics Reports, Vol. 21, No. 5, pp. 400-409, 1995 ("Mozgrin")
1204	A. A. Kudryavtsev and V.N. Skerbov, <i>Ionization relaxation in a plasma produced by a pulsed inert-gas discharge</i> , Sov. Phys. Tech. Phys. 28(1), pp. 30-35, January 1983 ("Kudryavtsev")
1205	U.S. Pat. No. 6,413,382 ("Wang")
1206	Plasma Etching: An Introduction, by Manos and Flamm, Academic Press (1989) ("Manos")
1207	File History for U.S. Pat. No. 7,147,759, Response of June 14, 2004 ("06/14/04 Response")
1208	File History for U.S. Pat. No. 7,147,759, Office Action of August 30, 2004 ("08/30/04 Office Action")
1209	File History for U.S. Pat. No. 7,147,759, Response of February 24, 2005 ("02/24/05 Response")
1210	File History for U.S. Pat. No. 7,147,759, Office Action of May 27, 2005, ("05/27/05 Office Action")
1211	File History for U.S. Pat. No. 7,147,759, Request for Continued Examination of October 27, 2005 ("10/27/05 RCE")
1212	File History for U.S. Pat. No. 7,147,759, Office Action of January 11, 2006 ("01/11/06 Office Action")

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