DOCKET NO.: 34789.110

Filed on behalf of: Taiwan Semiconductor Manufacturing Company, Ltd. and

TSMC North America Corp.

By: David L. McCombs, Reg. No. 32,271

David M. O'Dell, Reg. No. 42,044 Richard C. Kim, Reg. No. 40,046

UNITED	STATES	<b>PATENT</b>	AND	TRAD	EMARK	OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD. and TSMC NORTH AMERICA CORP.

Petitioner

V.

ZOND, INC. Patent Owner

Case IPR\_\_\_\_\_

PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 6,806,652 CHALLENGING CLAIMS 18-34 UNDER 35 U.S.C. § 312 AND 37 C.F.R. § 42.104



## **TABLE OF CONTENTS**

I.	MAN	IDATORY NOTICES	1	
	A.	Real Party-in-Interest	1	
	B.	Related Matters	1	
	C.	Counsel	2	
	D.	Service Information.	2	
II.	CER	ΓΙFICATION OF GROUNDS FOR STANDING	2	
III.	OVE	RVIEW OF CHALLENGE AND RELIEF REQUESTED	2	
	A.	Prior Art Patents and Printed Publications	3	
	B.	Grounds for Challenge	4	
IV.	BRIE	F DESCRIPTION OF TECHNOLOGY	4	
	A.	Plasma	5	
	B.	Excited atoms	6	
V.	OVE	RVIEW OF THE '652 PATENT	7	
	A.	Summary of Alleged Invention of the '652 Patent	7	
VI.	CLA	IM CONSTRUCTION	11	
	A.	Introduction	11	
	B.	"transporting the initial plasma and excited atoms proximate to a cathode assembly"	12	
	C.	"super-ionizing the initial plasma proximate to the cathode assembly"	12	
VII.	OVERVIEW OF THE PRIMARY PRIOR ART REFERENCES			
	A.	Summary of the prior art	13	
	B.	Overview of Mozgrin	13	
	C.	Overview of Kudryavtsev	16	
	D.	Overview of Fahey	19	



	E.	Over	view of Iwamura	19		
VIII.	SPECIFIC GROUNDS FOR PETITION					
	A.		Ground I: Claims 18-30 and 33-34 would have been obvious over Mozgrin, Kudryavtsev, and Fahey			
		1.	Independent claim 18	20		
		2.	Dependent claims 19-30, 33, and 34	31		
	B.		nd II: Claims 31 and 32 would have been obvious over Mozgrin, yavtsev, Fahey, and Campbell	41		
	C.	refer	nd III: Claims 18-30 and 33-34 would have been obvious over the ences cited for Ground I (Mozgrin, Kudryavtsev, and Fahey) and nura	45		
	D.	cited	nd IV: Claims 31 and 32 would have been obvious over the references for Ground II (Mozgrin, Kudryavtsev, Fahey, and Campbell) and nura	47		
	E.		Ground V: Claims 18-30 would have been obvious over Mozgrin and Iwamura			
		1.	Independent claim 18	48		
		2.	Dependent claims 19-30	53		
	F.	Ground VI: Claims 31 and 32 would have been obvious over Mozgrin, Iwamura, and Campbell				
	G.		nd VII: Claims 33 and 34 would have been obvious over Mozgrin, nura, and Fahey	60		
IX.	CON	CLUSI	ON	60		



## **TABLE OF AUTHORITIES**

#### Cases

In re ICON Health & Fitness, Inc., 496 F.3d 1374, 1379 (Fed. Cir. 20	007)11
Statutes	
35 U.S.C. § 314(a)	
Rules	
Rule 42.104(a)	2
Rule 42.104(b)(4)-(5)	
Regulations	
37 C.F.R. § 42.100(b)	11
77 Fed. Reg. 48764 (Aug. 14, 2012)	



#### I. MANDATORY NOTICES

## A. Real Party-in-Interest

Taiwan Semiconductor Manufacturing Company, Ltd. and TSMC North America Corp. are the real parties-in-interest ("Petitioner").

### **B.** Related Matters

Zond has asserted U.S. Patent No. 6,806,652 ("the '652 Patent") (Ex. 1101) against numerous parties in the District of Massachusetts, 1:13-cv-11570-RGS (*Zond v. Intel*); 1:13-cv-11577-DPW (*Zond v. AMD, Inc., et al*); 1:13-cv-11581-DJC (*Zond v. Toshiba Am. Elec. Comp. Inc.*); 1:13-cv-11591-RGS (*Zond v. SK Hynix, Inc.*); 1:13-cv-11625-NMG (*Zond v. Renesas Elec. Corp.*); 1:13-cv-11634-WGY (*Zond v. Fujitsu, et al.*); <sup>1</sup> and 1:13-cv-11567-DJC (*Zond v. Gillette, Co.*). Petitioner is also filing additional Petitions for *Inter Partes* review in several patents by the same named inventor as the '652 Patent.

The below-listed claims of the '652 Patent are presently the subject of a substantially identical petition for *inter partes* review styled *Intel Corporation v*.

Zond, Inc., which was filed May 30, 2014 and assigned Case No. IPR2014-00843.

Petitioner plans to seek joinder with that *inter partes* review.

<sup>&</sup>lt;sup>1</sup> The Petitioner is a co-defendant with Fujitsu in this lawsuit.



# DOCKET

# Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

## **Real-Time Litigation Alerts**



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

## **Advanced Docket Research**



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

## **Analytics At Your Fingertips**



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

#### API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

#### **LAW FIRMS**

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

#### **FINANCIAL INSTITUTIONS**

Litigation and bankruptcy checks for companies and debtors.

### **E-DISCOVERY AND LEGAL VENDORS**

Sync your system to PACER to automate legal marketing.

