UNITED STATES PATENT AND TRADEMARK OFFICE _____

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD.,
Petitioner

v.

GODO KAISHA IP BRIDGE 1, Patent Owner

Case IPR2016-01249 Patent 6,538,324

PETITIONER'S UPDATED EXHIBIT LIST



Further to 37 C.F.R. § 42.63(e), Petitioner, Taiwan Semiconductor

Manufacturing Company, Ltd.'s, hereby submits a current listing of exhibits filed with the Board and counsel for Patent Owner.

Exhibit	Description	Previously
No.		Submitted
1001	U.S. Patent No. 6,538,324 to Tagami et al.	X
1002	File History of U.S. Patent No. 6,538,324.	X
1003	Expert Declaration of Dr. Sanjay Kumar Banerjee.	X
1004	U.S. Patent No. 5,893,752 to Zhang et al.	X
1005	U.S. Patent No. 6,887,353 to Ding et al.	X
1006	Holloway et al., "Tantalum as a diffusion barrier	X
	between copper and silicon: Failure mechanism and	
	effect of nitrogen additions," Journal of Applied	
	Physics, 71(11), 5433-5444 (1992).	
1007	Sun et al., "Properties of reactively sputter-deposited	X
	Ta-N thin films," Thin Solid Films, 236 (1993) 347-	
	351.	
1008	U.S. Patent No. 5,858,873 to Vitkavage et al.	X
1009	U.S. Patent No. 5,668,411 to Hong et al.	X
1010	Excerpt of El-Kareh, "Fundamentals of	X
	Semiconductor Processing Technologies," Kluwer	
	Academic Publishers (1995).	
1011	Declaration of Dr. Li Jiang.	X
1012	Library of Congress Catalog Record of Holloway et	X
	al., "Tantalum as a diffusion barrier between copper	
	and silicon: Failure mechanism and effect of nitrogen	
	additions," Journal of Applied Physics, 71(11), 5433-	
	5444 (1992).	
1013	Library of Congress Catalog Record of Sun et al.,	X
	"Properties of reactively sputter-deposited Ta-N thin	
	films," Thin Solid Films, 236 (1993) 347-351.	
1014	Library of Congress Catalog Record of El-Kareh,	X
	"Fundamentals of Semiconductor Processing	
	Technologies," Kluwer Academic Publishers (1995).	



Exhibit	Description	Previously
No.	F	Submitted
1015	Stavrev et al., "Crystallographic and morphological	X
	characterization of reactively sputtered Ta, Ta-N and	
	Ta-N-O thin films," Thin Solid Films, 307 (1997) 79-	
	88.	
1016	Library of Congress Catalog Record of Stavrev et al.,	X
	"Crystallographic and morphological characterization	
	of reactively sputtered Ta, Ta-N and Ta-N-O thin	
1017	films," Thin Solid Films, 307 (1997) 79-88.	
1017	Duan et al., "Magnetic Property and Microstructure	X
	Dependence of CoCrTa/Cr Media on Substrate	
	Temperature and Bias," IEEE Transactions on	
1010	Magnetics, Vol. 28, No. 5 (September 1992).	
1018	Library of Congress Catalog Record of Duan et al.,	X
	"Magnetic Property and Microstructure Dependence	
	of CoCrTa/Cr Media on Substrate Temperature and	
	Bias," IEEE Transactions on Magnetics, Vol. 28, No.	
1019	5 (September 1992). Moussavi et al., "Comparison of Barrier Materials and	W.
1019	Deposition Processes for Copper Integration,"	X
	Proceedings of the IEEE 1998 International	
	Interconnect Technology Conference, pp. 295-97	
	(1998).	
1020	Library of Congress Catalog Record of Moussavi et	X
1020	al., "Comparison of Barrier Materials and Deposition	11
	Processes for Copper Integration," Proceedings of the	
	IEEE 1998 International Interconnect Technology	
	Conference, pp. 295-97 (1998).	
1021	Wijekoon et al., "Development of a Production	X
	Worthy Copper CMP Process," 1998 IEEE/SEMI	
	Advanced Semiconductor Manufacturing Conference,	
	pp. 354-63 (1998).	
1022	Library of Congress Catalog Record of Wijekoon et	X
	al., "Development of a Production Worthy Copper	
	CMP Process," 1998 IEEE/SEMI Advanced	
	Semiconductor Manufacturing Conference, pp. 354-63	
	(1998).	



Ewhihit		Droviously
Exhibit No.	Description	Previously Submitted
1023	Wang et al., "Barrier Properties of Very Thin Ta and	
1023	TaN layers Against Copper Diffusion," J.	X
	Electrochem. Soc., Vol. 145, No. 7, pp. 2538-45.	
1024		v
1024	Library of Congress Catalog Record of Wang et al., "Barrier Properties of Very Thin Ta and TaN layers	X
	Against Copper Diffusion," J. Electrochem. Soc., Vol.	
	145, No. 7, pp. 2538-45.	
1025	U.K. Patent No. 2,298,657 to Cho.	v
1025	U.S. Patent No. 5,780,908 to Sekiguchi et al.	X
		X
1027	U.S. Patent No. 5,869,902 to Lee et al.	X
1028	U.S. Patent No. 5,882,399 to Ngan et al.	X
1029	U.S. Patent No. 6,057,237 to Ding et al.	X
1030	U.S. Patent No. 6,136,682 to Hegde et al.	X
1031	U.S. Patent No. 6,242,804 to Inoue et al.	X
1032	Annotated FIG. 4 of U.S. Patent No. 5,893,752 to	X
1000	Zhang et al.	
1033	U.S. Patent No. 6,458,255 to Chiang et al.	X
1034	Excerpt of "The American Heritage College	X
	Dictionary," 3 rd Ed., Houghton Mifflin Company	
	(1993).	
1035	U.S. Patent No. 5,281,485 to Colgan et al.	X
1036	May 5, 2017, Deposition Transcript of Harlan R.	X
	Harris, Ph.D.	
1037	Invalidity Contentions, Godo Kaisha IP Bridge 1 v.	X
	Broadcom Limited, et al., Case No. 2:16-cv-134	
1038	Declaration of Dr. Sanjay K. Banerjee.	X
1039	Declaration of Thomas E. Gorman.	
1039A	Ex. A to Exhibit 1039 - PACER Docket, Godo Kaisha	
	IP Bridge 1 v. Broadcom Limited, 16-cv-00134.	
1039B	Ex. B to Exhibit 1039 - Appendix_B Patent Rules	
	5.6.15.	
1039C	Ex. C to Exhibit 1039 - Docket Control Order, Godo	
	Kaisha IP Bridge 1 v. Broadcom Limited, 16-cv-	
	00134.	
1039D	Ex. D to Exhibit 1039 - Rule 3-3 Notice of	
	Compliance, Godo Kaisha IP Bridge 1 v. Broadcom	
	Limited, 16-cv-134.	



Exhibit	Description	Previously
No.		Submitted
1039E	Ex. E to Exhibit 1039 - TSMC Exhibit 1037,	
	IPR2016-01249.	
1039F	Ex. F to Exhibit 1039 - TSMC Exhibit 1037,	
	IPR2016-01264.	
1040	Email correspondence concerning authenticity of	
	Exhibit 1037.	

Petitioner hereby certifies that copies of all listed documents above have

been served on counsel for Patent Owner.

Respectfully submitted,

Dated: July 26, 2017 By: <u>/E. Robert Yoches /</u>

E. Robert Yoches, Lead Counsel

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