

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LTD.,

Petitioner,

v.

ADVANCED INTEGRATED CIRCUIT PROCESS LLC,

Patent Owner.

IPR2025-00830

U.S. Patent 8,253,180

PETITIONER'S UPDATED EXHIBIT LIST

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Patent Trial and Appeal Board
U.S. Patent & Trademark Office
P.O. Box 1450
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Pursuant to 37 C.F.R. § 42.63(e), Petitioner Taiwan Semiconductor Manufacturing Company Ltd. hereby submits a current listing of exhibits. Exhibit TSMC-1053 is being filed today.

Exhibit	Description
1001	U.S. Patent 8,253,180 to Hirase et al. (“the ’180 patent”)
1002	File History of U.S. Patent 8,253,180 (“’180 File History”)
1003	Declaration of Dr. Jack Lee in Support of IPR Petition
1004	CV of Dr. Jack Lee
1005	Translated Excerpts from JP File History
1006	U.S. Patent 7,579,227 to Hirase, et al. (“the ’227 patent”)
1007	U.S. Patent 7,923,764 to Hirase et al. (“the ’764 patent”)
1008	Reserved
1009	U.S. Publication 2003/0025135 to Matsumoto, et al. (“Matsumoto”)
1010	JP2003-258241 to Kajiyama (“JP-Kajiyama”)
1011	Certified Translation of JP2003-258241 to Kajiyama (“Kajiyama”)
1012	Reserved
1013	U.S. Publication 2005/0051856 to Ono, et al. (“Ono”)
1014	Reserved
1015	Reserved
1016	Reserved
1017	Reserved

Exhibit	Description
1018	Wilk, G. D., et al., “High-k gate dielectrics: Current status and materials properties considerations,” Journal of Applied Physics, Vol. 89, No. 10, pp. 5243-5275, May 15, 2001 (“Wilk”)
1019	Reserved
1020	Reserved
1021	Reserved
1022	Reserved
1023	U.S. Patent 6,306,712 to Rodder, et al. (“Rodder”)
1024	Sim, J. H., et al., “Effects of ALD HfO ₂ thickness on charge trapping and mobility,” Microelectronic Engineering, Vol. 80, pp. 218-221, June 17, 2005 (“Sim”)
1025	Reserved
1026	Declaration of June Ann Munford
1027	U.S. Publication 2002/0063299 to Kamata, et al. (“Kamata”)
1028	U.S. Publication 2006/0091432 to Guha, et al. (“Guha”)
1029	Koyama, M., et al., “Effects of Nitrogen in HfSiON Gate Dielectric on the Electrical and Thermal Characteristics,” Digest of International Electron Devices Meeting, pp. 849-852, Dec. 8-11, 2002 (“Koyama”)
1030	U.S. Patent 6,664,577 to Takayanagi (“Takayanagi”)
1031	Reserved
1032	Houssa, M., “High-k Dielectrics to Houssa” (IOP Publishing Ltd. 2004) (“Houssa”)
1033	Plummer, J., et al., “Silicon VLSI Technology: Fundamentals, Practice and Modeling” (Prentice Hall 2000) (“Plummer”)

Exhibit	Description
1034	Wolf, S., “Silicon Processing for the VLSI Era, Volume 4 – Deep-Submicron Process Technology” (Lattice 2002) (“Wolf”)
1035	Reserved
1036	Reserved
1037	Lee, S. J., et al. “High Quality Ultra Thin CVD HfO ₂ Gate Stack with Poly-Si Gate Electrode,” Digest of International Electron Devices Meeting, pp. 31-34, Dec. 10-13, 2000 (“Lee”)
1038	Campbell, “The Science and Engineering of Microelectronic Fabrication”, Second Edition (2001) (“Campbell”)
1039	Reserved
1040	JP2005-064190 to Ono with certified translation (“JP-Ono”)
1041	N. Weste and D. Harris, “CMOS VLSI Design: A Circuits and Systems Perspective”, Third Edition (Pearson/Addison Wesley, 2005) (“Weste”)
1042	Reserved
1043	Reserved
1044	Reserved
1045	U.S. Publication 2005/0093084 to Wang, et al. (“Wang”)
1046	Reserved
1047	Reserved
1048	Reserved
1049	Lee, B.H., et al., “Ultrathin Hafnium Oxide with Low Leakage and Excellent Reliability for Alternative Gate Dielectric Application,” Digest of International Electron Devices Meeting, pp. 133-36, Dec. 5-8, 1999 (“Lee-1999”)

Exhibit	Description
1050	Reserved
1051	U.S. Publication 2005/0139932 to Cho, et al. (“Cho”)
1052	Albertin, K.F., et al., “Study of PECVD SiO _x N _y films dielectric properties with different nitrogen concentration utilizing MOS capacitors,” Microelectronic Engineering, Vol. 77, pp. 144-49 (2005)
1053	TSMC’s stipulation regarding U.S. Patent Nos. 8,198,686; 8,907,425; 7,579,227; 7,923,764; 8,253,180; 8,587,076; and 8,796,779

Respectfully submitted,

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Date: July 25, 2025

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing **Petitioner's Updated Exhibit List** and **Exhibit TSMC-1053** were served on July 25, 2025, via e-mail directed to counsel of record for Patent Owner at the following:

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Respectfully submitted,

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