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
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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. Exhibits TSMC-1165 and TSMC-1166 are 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_xN_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
1054	Reserved
1055	United States District Courts – National Judicial Caseload Profile, 12-Month Period Ending Mar. 31, 2025, U.S. Courts (2025), available at https://www.uscourts.gov/sites/default/files/document/fcms_na_distprofile0331.2025.pdf
1056	Reserved
1057	Summary of cases by year for Judge Gilstrap, Docket Navigator, available at https://search/docketnavigator.com/patent/judge/14373/0?print=true&e=false
1058	Summary of Post-Trial Briefing Timelines for Judge Gilstrap Trials Since 2023, based on LegalMetric data
1059	USPTO U.S. Patent Statistics Chart (1963-2020)
1060	Letter from Sen. Thom Tillis to Acting Director Andrew Hirshfeld (Nov. 2, 2021)
1061	Letter from Sens. Thom Tillis and Patrick Leahy to Hon. Chief Justice John Roberts (Nov. 2, 2021)

Exhibit	Description
1062	2021 Year-End Report on the Federal Judiciary, Supreme Court of the United States (Dec. 31, 2025) (last visited July 15, 2025), available at https://www.supremecourt.gov/publicinfo/yearend/2021year-endreport.pdf
1063	Resonant Sys., Inc. v. Samsung Elecs. Co. Ltd., No. 2:22-cv-00423-JRG, Dkt. 41, Second Amended Docket Control Order (E.D. Tex. Apr. 24, 2023)
1064	Resonant Sys., Inc. v. Samsung Elecs. Co. Ltd., No. 2:22-cv-00423-JRG, Dkt. 58, Third Amended Docket Control Order (E.D. Tex. Nov. 21, 2023)
1065	Resonant Sys., Inc. v. Samsung Elecs. Co. Ltd., No. 2:22-cv-00423-JRG, Docket (E.D. Tex.)
1066	Commc'n Techs. Inc., v. Samsung Elecs. Co., Ltd., No. 2:21-cv-00444-JRG, Dkt. 34, Docket Control Order (E.D. Tex. Apr. 6, 2022)
1067	Commc'n Techs. Inc., v. Samsung Elecs. Co., Ltd., No. 2:21-cv-00444-JRG, Dkt. 83, Second Amended Docket Control Order (E.D. Tex. Oct. 31, 2022)
1068	Commc'n Techs. Inc., v. Samsung Elecs. Co., Ltd., No. 2:21-cv-00444-JRG, Dkt. 133, Third Amended Docket Control Order (E.D. Tex. Feb. 2, 2023)
1069	Commc'n Techs. Inc., v. Samsung Elecs. Co., Ltd., No. 2:21-cv-00444-JRG, Docket (E.D. Tex.)
1070	Pictiva Displays Int'l Ltd. v. Samsung Elecs. Co. Ltd., No. 2:23-cv-00495-JRG, Dkt. 40, Docket Control Order (E.D. Tex. Apr. 17, 2024)
1071	Pictiva Displays Int'l Ltd. v. Samsung Elecs. Co. Ltd., No. 2:23-cv-00495-JRG, Dkt. 224, First Amended Docket Control Order (E.D. Tex. Apr. 21, 2025)

Exhibit	Description
1072	Pictiva Displays Int'l Ltd. v. Samsung Elecs. Co. Ltd., No. 2:23-cv-00495-JRG, Docket (E.D. Tex.)
1073	Cyandia, Inc. v. SAP Am., Inc., No. 2:24-cv-00096-JRG, Dkt. 32, Docket Control Order (E.D. Tex. June 17, 2024)
1074	Cyandia, Inc. v. SAP Am., Inc., No. 2:24-cv-00096-JRG, Dkt. 102, First Amended Docket Control Order (E.D. Tex. May 9, 2025)
1075	Cyandia, Inc. v. SAP Am., Inc., No. 2:24-cv-00096-JRG, Docket (E.D. Tex.)
1076	Emerging Auto. LLC v. Kia Corp., No. 2:23-cv-0437-JRG, Dkt. 40, Docket Control Order (E.D. Tex. February 6, 2024)
1077	Emerging Auto. LLC v. Kia Corp., No. 2:23-cv-0437-JRG, Dkt. 265, First Amended Docket Control Order (E.D. Tex. May 21, 2025)
1078	Emerging Auto. LLC v. Kia Corp., No. 2:23-cv-0437-JRG, Docket (E.D. Tex.)
1079	Reserved
1080	Reserved
1081	Reserved
1082	Declaration of Michael Shen
1083	Reserved
1084	United Microelectronics Corp. and UMC Group (USA)'s stipulations regarding U.S. Patent Nos. 8,587,076; 8,253,180; 7,579,227; 8,907,425; 8,198,686; 7,923,764; and 8,796,779
1085	Reserved
1086	Institution Decisions for TSMC, based on Lex Machina data

Exhibit	Description
1087	Business Organizations Inquiry for Advanced Integrated Circuit Process LLC, Filing No. 805585855, Texas Secretary of State
1088	Certificate of Formation Limited Liability Company for Advanced Integrated Circuit Process LLC, Filing No. 805585855, Texas Secretary of State (June 12, 2024)
1089	Patent Assignment Record from Nuvoton Technology Corp. Japan to Advanced Integrated Circuit Process LLC, Reel: 068118 Frame: 0314-0317, United States Patent and Trademark Office (July 30, 2024)
1090	Intellectual Ventures I LLC v. T-Mobile USA, Inc., No. 2:17-cv-557-JRG, Dkt. 297, Pre-Trial Hearing Transcript (E.D. Tex. Jan. 3, 2019)
1091	Advanced Integrated Circuit Process LLC v. United Microelectronics Corp., No. 2:24-cv-0730-JRG (Lead Case), AICP's P.R. 3-1 Disclosure of Asserted Claims and Infringement Contentions and P.R. 3-2 Document Production Against TSMC (E.D. Tex. Jan. 7, 2025)
1092	Dockets in Advanced Integrated Circuit Process LLC v. United Microelectronics Corp., No. 2:24-cv-0730-JRG (Lead Case), Docket (E.D. Tex.)
1093	Reserved
1094	United Microelectronics Corp. v. Advanced Integrated Circuit Process LLC, IPR2025-01090, Paper 7, Motion for Joinder Under 35 U.S.C. § 315(c) and 37 C.F.R. § 42.122(b) to Related Inter Partes Review IPR2025-00683 (P.T.A.B. June 30, 2025)
1095	United Microelectronics Corp. v. Advanced Integrated Circuit Process LLC, IPR2025-01093, Paper 7, Motion for Joinder Under 35 U.S.C. § 315(c) and 37 C.F.R. § 42.122(b) to Related Inter Partes Review IPR2025-00831 (P.T.A.B. June 30, 2025)

Exhibit	Description
1096	United Microelectronics Corp. v. Advanced Integrated Circuit Process LLC, IPR2025-01092, Paper 7, Motion for Joinder Under 35 U.S.C. § 315(c) and 37 C.F.R. § 42.122(b) to Related Inter Partes Review IPR2025-00830 (P.T.A.B. June 30, 2025)
1097	United Microelectronics Corp. v. Advanced Integrated Circuit Process LLC, IPR2025-01091, Paper 7, Motion for Joinder Under 35 U.S.C. § 315(c) and 37 C.F.R. § 42.122(b) to Related Inter Partes Review IPR2025-00682 (P.T.A.B. June 30, 2025)
1098	United Microelectronics Corp. v. Advanced Integrated Circuit Process LLC, IPR2025-01079, Paper 7, Motion for Joinder Under 35 U.S.C. § 315(c) and 37 C.F.R. § 42.122(b) to Related Inter Partes Review IPR2025-00829 (P.T.A.B. June 30, 2025)
1099	United Microelectronics Corp. v. Advanced Integrated Circuit Process LLC, IPR2025-01076, Paper 7, Motion for Joinder Under 35 U.S.C. § 315(c) and 37 C.F.R. § 42.122(b) to Related Inter Partes Review IPR2025-00828 (P.T.A.B. June 30, 2025)
1100	United Microelectronics Corp. v. Advanced Integrated Circuit Process LLC, IPR2025-01053, Paper 7, Motion for Consolidation Under 35 U.S.C. § 315(d) and 37 C.F.R. § 42.122(a) with Related Inter Partes Review IPR2025-00832 (P.T.A.B. June 30, 2025)
1101	Listing of district court cases and inter partes review proceedings in which U.S. Patent No. 8,253,180 has been asserted or challenged, Docket Navigator
1102	Continuity data for U.S. Patent No. 8,253,180, Patent Center, United States Patent and Trademark Office
1103	Reserved
1104	Reserved
1105	Delaware Secretary of State Entity Search Status for AMTL LLC

Exhibit	Description
1106	Final Written Decision Outcomes for TSMC, available at https://law.lexmachina.com/party/ptab?filing_date-from=2012-09-16&filing_date-to=&final_decision_date-from=2013-07-17&final_decision_date-to=&new_trial_flowexclude=PreI_AS&party_roleinclude=Petitioner&filters=true&id=26931&id=20676624&id=64431208&tab=ptab_trial_flow&view=analytics&cols=trial%2Cfiled%2Cinstitution_decision_date%2Cpatent%2Cpetitioners%2Cpatent_owners%2Ctrial_resolution%2Cfinal_decision_date
1107	Reserved
1108	Reserved
1109	Reserved
1110	Reserved
1111	Trump on China Putting - America First (Robert C. O'Brien editor)
1112	Reserved
1113	Letter from Billie Chen to Under Secretary Andrei Iancu regarding USPTO Request for Comments on Discretion to Institute Trials Before the Patent Trial and Appeal Board, Docket No. PTO-C-2020-055
1114	Reserved
1115	U.S., Taiwan, and Semiconductors: A Critical Supply Chain Partnership, Final Report, Project 2049 Institute (US-Taiwan Business Counsel June 21, 2023)
1116	TSMC Adds High-K Metal Gate Low Power Process to 20nm Road Map, TSMC (Aug. 24, 2009) (last visited July 16, 2025), available at https://pr.tsmc.com/english/news/1572

Exhibit	Description
1117	TSMC 28nm Technology in Volume Production, PR Newswire (Oct. 24, 2011) (last visited July 16, 2025), available at https://www.prnewswire.com/news-releases/tsmc-28nmtechnology-in-volume-production-132425858.html
1118	Reserved
1119	Another Historic Investment Secured Under President Trump, Articles, The White House (Mar. 3, 2025) (last visited July 14, 2025), available at https://www.whitehouse.gov/articles/2025/03/another-historic-investment-secured-under-president-trump/
1120	Reserved
1121	Reserved
1122	Reserved
1123	CNBC Transcript: United States Commerce Secretary Howard Lutnick Speaks with CNBC's Brian Sullivan on "The Exchange" Today, CNBC (Apr. 29. 2025) (last visited July 14, 2025), available at https://www.cnbc.com/2025/04/29/cnbc-transcript-united-states-commerce-secretary-howard-lutnick-speaks-with-cnbcs-brian-sullivan-on-the-exchange-today.html
1124	Silvia Pellegrino, What is TSMC?, Tech Monitor (Jan. 2, 2023) (last visited July 14, 2025), available at https://www.techmonitor.ai/what-is/what-is-tsmc/?cf-view
1125	Reserved

Exhibit	Description
1126	Silent Giant TSMC Returns to the Peak of its Powers as the AI Boom Continues, Yahoo! finance (June 12, 2025), available at https://finance.yahoo.com/news/silent-giant-tsmc-returns-peak-230300515.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xlLmNvbS8&guce_referrer_sig=AQAAAGbNeBi6fbz4U1LAPZACoSOpXFKhZ2d8Aeym1OTBUscShGSwm5cDQL_KDbidYk16TkPx7YtIzsB2YbOGeGdO4PchwSBFYrk3fTg3HWr-MVsPIL1q7mWa7ZR5e6BG0tbKASjEzPE-8r-aiT0KakQ2cXTjpdVs4xTGUvCoXUGlVbDT
1127	Reserved
1128	Reserved
1129	Removing Barriers to American Leadership in Artificial Intelligence, Presidential Actions, The White House (Jan. 23, 2025) (last visited July 14, 2025), available at https://www.whitehouse.gov/presidential-actions/2025/01/removing-barriers-to-american-leadership-in-artificial-intelligence/
1130	TSMC Expands Collaboration with Ansys by Integrating AI Technology to Accelerate 3D-IC Design, Ansys (Sept. 25, 2024) (last visited July 14, 2025), available at https://investors.ansys.com/news-releases/news-release-details/tsmc-expands-collaboration-ansys-integrating-ai-technology
1131	Cadence and TSMC Advance AI and 3D-IC Chip Design with Certified Design Solutions for TSMC's A16 and N2P Process Technologies, Cadence (Apr. 23, 2025) (last visited July 14, 2025), available at https://www.cadence.com/en_US/home/company/newsroom/press-releases/pr/2025/cadence-and-tsmc-advance-ai-and-3d-ic-chip-design-with-certified.html
1132	Reserved
1133	Reserved

Exhibit	Description
1134	Reserved
1135	Sujai Shivakumar and Charles Wessner, Semiconductors and National Defense: What Are the Stakes?, Center for Strategic International Studies (June 8, 2022) (last visited July 14, 2025), available at https://www.csis.org/analysis/semiconductors-and-national-defense-what-are-stakes
1136	Eric Lee, How Taiwan Underwrites the US Defense Industrial Complex, The Diplomat (Nov. 9, 2021) (last visited July 14, 2025), available at https://thediplomat.com/2021/11/how-taiwan-underwrites-the-us-defense-industrial-complex/
1137	Jeffrey D. Bean and Andreas Kuehn, The U.S. Defense Industry Still Faces a Chip Challenge, Observer Research Foundation America (Apr. 1, 2025) (last visited July 14, 2025), available at https://orfamerica.org/orf-america-comments/us-defense-industry-chip-challenge
1138	Reserved
1139	Reserved
1140	Reserved
1141	Reserved
1142	Reserved
1143	Reserved
1144	Allowance Rate for U.S. patent applications for TSMC, from https://app.juristat.com/dashboard/premium-benchmarks
1145	Excerpted data on U.S. utility patent applications from ifi Claims Patent Services December 2024 Monthly Report – U.S. Utility Grants and Applications (Dec. 2024)

Exhibit	Description
1146	ifi Claims Patent Services, Top 50 patent grants from 2022-2024, available at https://www.ificlaims.com/rankings/top-50-2024/, https://www.ificlaims.com/rankings/top-50-2023/, https://www.ificlaims.com/rankings/top-50-2022/
1147	Jeremy Bowman, Nasdaq, This 1 Number May Ensure TSMC's Market Dominance, The Motley Fool (Aug. 17, 2024) (last visited July 18, 2025), available at https://www.nasdaq.com/articles/1-number-may-ensure-tsmcs-market-dominance
1148	Reserved
1149	Reserved
1150	Report of Judge Rodney Gilstrap, Calendar of Events Set for 6/1/2026/-6/30/2026 (PACER) (last visited June 27, 2025), available at https://ecf.txed.uscourts.gov/cgibin/CalEvents.pl?143870417754058-L_1_0-1
1151	Reserved
1152	Updated Summary of Judge Gilstrap Patent Trials Within One-Year Period of July 12, 2024, to July 11, 2025
1153	Virtex 7 XQ FPGAs (last visited July 31, 2025), https://www.amd.com/en/products/adaptive-socs-andfpgas/fpga/virtex-7-xq.html#advantages
1154	Reserved
1155	Reserved
1156	Certified Translation of Chinese Prosecution Excerpts
1157	Chinese Office Action from U.S. File Wrapper
1158	Reserved
1159	Reserved

Exhibit	Description
1160	Reserved
1161	Reserved
1162	Reserved
1163	Excerpted 2024 Report to Congress of the U.S. China Economic and Security Review Commission, One Hundred Eighteenth Congress, Second Session, November 2024
1164	U.S. Publication 2005/0127436 (Henson)
1165	Proceedings and Debates of the 117th Congress, Second Session, 168 Cong. Rec. S3619-07 (July 25, 2022)
1166	Excerpted 2024 Report to Congress of the U.S. China Economic and Security Review Commission, One Hundred Eighteenth Congress, Second Session, November 2024, Part II

Respectfully submitted,

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Date: August 22, 2025

CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing **Petitioner's Updated Exhibit List** and **Exhibits TSMC-1165** and **TSMC-1166** were served on August 22, 2025, via e-mail directed to counsel of record for Patent Owner at the following:

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