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BEFORE THE PATENT TRIAL AND APPEAL BOARD

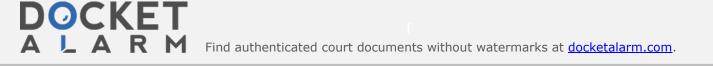
TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY, LTD., Petitioner

v.

GODO KAISHA IP BRIDGE 1, Patent Owner

> Case IPR2016-01264 Patent 6,538,324 B1

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.

DOCKET

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| Exhibit | Description | Previously |
|---------|---|------------|
| No. | | Submitted |
| 1001 | U.S. Patent No. 6,538,324 to Tagami et al. | Х |
| 1002 | File History of U.S. Patent No. 6,538,324. | Х |
| 1003 | Expert Declaration of Dr. Sanjay Kumar Banerjee. | Х |
| 1004 | U.S. Patent No. 5,893,752 to Zhang et al. | Х |
| 1005 | U.S. Patent No. 6,887,353 to Ding et al. | Х |
| 1006 | Holloway et al., "Tantalum as a diffusion barrier | Х |
| | 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 Ta-N thin films," Thin Solid Films, 236 (1993) 347- 351. | X |
| 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. | Х |
| 1012 | Library of Congress Catalog Record of Holloway et 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). | X |
| 1013 | Library of Congress Catalog Record of Sun et al., "Properties of reactively sputter-deposited Ta-N thin films," Thin Solid Films, 236 (1993) 347-351. | X |
| 1014 | Library of Congress Catalog Record of El-Kareh, "Fundamentals of Semiconductor Processing Technologies," Kluwer Academic Publishers (1995). | X |

Find authenticated court documents without watermarks at docketalarm.com.

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

| Exhibit | Description | Previously |
|---------|--|------------|
| No. | ľ | Submitted |
| 1023 | Wang et al., "Barrier Properties of Very Thin Ta and | Х |
| | TaN layers Against Copper Diffusion," J. | |
| | Electrochem. Soc., Vol. 145, No. 7, pp. 2538-45. | |
| 1024 | Library of Congress Catalog Record of Wang et al., | Х |
| | "Barrier Properties of Very Thin Ta and TaN layers | |
| | Against Copper Diffusion," J. Electrochem. Soc., Vol. | |
| | 145, No. 7, pp. 2538-45. | |
| 1025 | U.K. Patent No. 2,298,657 to Cho. | Х |
| 1026 | U.S. Patent No. 5,780,908 to Sekiguchi et al. | Х |
| 1027 | U.S. Patent No. 5,869,902 to Lee et al. | Х |
| 1028 | U.S. Patent No. 5,882,399 to Ngan et al. | Х |
| 1029 | U.S. Patent No. 6,057,237 to Ding et al. | Х |
| 1030 | U.S. Patent No. 6,136,682 to Hegde et al. | Х |
| 1031 | U.S. Patent No. 6,242,804 to Inoue et al. | Х |
| 1032 | Annotated FIG. 4 of U.S. Patent No. 5,893,752 to | Х |
| | Zhang et al. | |
| 1033 | U.S. Patent No. 6,458,255 to Chiang et al. | Х |
| 1034 | Excerpt of "The American Heritage College | Х |
| | Dictionary," 3 rd Ed., Houghton Mifflin Company | |
| | (1993). | |
| 1035 | U.S. Patent No. 5,281,485 to Colgan et al. | Х |
| 1036 | May 5, 2017, Deposition Transcript of Harlan R. | Х |
| | Harris, Ph.D. | |
| 1037 | Invalidity Contentions, Godo Kaisha IP Bridge 1 v. | Х |
| | Broadcom Limited, et al., Case No. 2:16-cv-134 | |
| 1038 | Declaration of Dr. Sanjay K. Banerjee. | Х |
| 1039 | Declaration of Thomas E. Gorman. | Х |
| 1039A | Ex. A to Exhibit 1039 - PACER Docket, Godo Kaisha | Х |
| | IP Bridge 1 v. Broadcom Limited, 16-cv-00134. | |
| 1039B | Ex. B to Exhibit 1039 - Appendix_B Patent Rules | Х |
| | 5.6.15. | |
| 1039C | Ex. C to Exhibit 1039 - Docket Control Order, Godo | Х |
| | Kaisha IP Bridge 1 v. Broadcom Limited, 16-cv- | |
| | 00134. | |
| 1039D | Ex. D to Exhibit 1039 - Rule 3-3 Notice of | Х |
| | Compliance, Godo Kaisha IP Bridge 1 v. Broadcom | |
| | Limited, 16-cv-134. | |

Case No.: IPR2016-001264 Patent No. 6,538,324

| Exhibit No. | Description | Previously Submitted |
|----------------|---|-------------------------|
| 1039E | Ex. E to Exhibit 1039 - TSMC Exhibit 1037, IPR2016-01249. | Х |
| 1039F | Ex. F to Exhibit 1039 - TSMC Exhibit 1037, IPR2016-01264. | X |
| 1040 | Email correspondence concerning authenticity of Exhibit 1037. | X |
| 1041 | Petitioner's Demonstratives. | |

Petitioner hereby certifies that copies of all listed documents above have

been served on counsel for Patent Owner.

Respectfully submitted,

Dated: August 3, 2017

By: <u>/ E. Robert Yoches /</u> E. Robert Yoches, Lead Counsel Reg. No. 30,120

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