

Filed on behalf of Godo Kaisha IP Bridge 1

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

TAIWAN SEMICONDUCTOR MANUFACTURING COMPANY LIMITED,
Petitioner,

v.

GODO KAISHA IP BRIDGE 1,
Patent Owner.

Case IPR2016-01264
U.S. Patent No. 6,538,324

**PATENT OWNER'S CONTINGENT MOTION TO AMEND
PURSUANT TO 37 C.F.R. § 42.121**

Mail Stop PATENT BOARD, PTAB
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Pursuant to 37 C.F.R. § 42.121 and the Order dated February 22, 2013

(Paper No. 13), Godo Kaisha IP Bridge 1 (“Patent Owner”) hereby submits this Contingent Motion to Amend (“Motion”). This Motion is being filed separately in both IPR2016-001249 and IPR2016-001264, and is substantively similar by submitting the same Substitute Claims and pointing out, in the same manner, that the contingent Substitute Claims are patentable over the documents of record in each IPR proceeding, known to Patent Owner and of record in U.S. Patent No. 6,538,324 (“the ‘324 patent”).

Authorization is hereby provided to charge any fee that is necessary for entry and/or consideration of this Motion and/or to substitute claims in the ‘324 patent to Deposit Account No. 19-0089.

I. Statement of Relief Requested

Patent Owner hereby moves to amend the ‘324 patent contingent upon whether instituted claims 5, 7 and/or 9 are found unpatentable in the present IPR proceeding. *See* 37 C.F.R. § 42.121. If instituted claim 5 is found to be unpatentable, Patent Owner requests that the Board cancel claim 5 and replace it with Substitute Claim 11, and/or if instituted claim 9 is found to be unpatentable, Patent Owner requests that the Board cancel claim 9, and replace it with Substitute Claim 12 and/or if instituted claim 7 is found to be unpatentable, Patent Owner

requests that the Board cancel claim 7 and replace it with Substitute Claim 13. *See* 37 C.F.R. § 42.22(a)(1); *see also* 35 U.S.C. § 316(d).

II. The Motion and Proposed Amendments Comply with § 42.121

Consistent with the requirements of 37 C.F.R. § 42.121, Patent Owner conferred with the Board on February 21, 2017.

Patent Owner's proposed amendments are responsive to the grounds of unpatentability because trial was instituted on claims 1-3, 5-7, and 9 ("challenged claims"), and the proposed amendments are to claims 5, 7 and 9. *See* Paper No. 7 at 17; *see also* 37 C.F.R. § 42.121(a)(2)(i). The grounds of unpatentability for claims 1-3, 5-7, and 9 was under 35 U.S.C. § 103(a) over (1) U.S. Patent No. 5,893,752 to *Zhang* in view of U.S. Patent No. 6,887,353 to *Ding*, and (2) *Zhang* in view of *Ding* in further view of *Sun* (collectively "*Zhang* in view of *Ding*, alone or in further view of *Sun*"). *See* Paper No. 7 at 8-17. The grounds involved Petitioner's position that, "It would have been obvious to a POSITA at the time of the application leading to the '324 patent that the two-layer diffusion barrier consisting of a crystalline Ta film and an amorphous TaN_x film in *Ding* would have been usable as the two-layer diffusion barrier in *Zhang*, as both prior-art references teach the same diffusion-barrier structure for the same purpose of preventing copper diffusion and providing good adhesion to a copper layer, and both use Ta-based thin films fabricated using similar sputtering-deposition

techniques.” The Petitioner contended that, “the POSITA would have found it obvious to modify *Zhang* to ensure the top film (32) of the two-layer diffusion barrier is crystalline and the bottom film (22) is amorphous given the teachings of *Ding*. Petition, p.17.

The Board did not adopt Patent Owner’s proposed claim constructions for limitations recited in independent claims 1 and 5 of the ‘324 patent. The Board stated that the limitations construed by Patent Owner did not require express construction, and did not require *a mixture* of crystalline metal with nitrogen *throughout* or *a noncrystalline metal nitride throughout*. Decision (Paper 7), pp. 7 and 11-12.

Institution of the IPR proceeding was granted because the Board concluded that there is a reasonable likelihood Petitioner would prevail in showing that Claims 1 and 5 would have been obvious over *Zhang* in view of *Ding* because Petitioner points out that *Zhang* and *Ding* teach similar two-layer diffusion barriers; and Petitioner identifies teachings from *Ding* that would have motivated a person of ordinary skill in the art to make the respective layers of *Zhang* amorphous and crystalline. Decision (Paper 7), pp. 12-13.

The Decision further found that *Sun*, in addition to *Ding*, evidenced that it would have been obvious to a PHOSITA to make *Zhang*’s tantalum nitride film amorphous. Decision (Paper 7), p. 16.

If the Board continues to refuse to adopt Patent Owner's proposed claim constructions, or finds that the challenged claims are unpatentable under Patent Owner's proposed claim constructions, Patent Owner amends claims 5, 7 and 9 to more explicitly recite the claimed subject matter and add an additional limitation. Proposed Substitute Claim 11 (which is to be substituted for claim 5), Substitute Claim 12 (which is to be substituted for claim 9) and Substitute Claim 13 (which is to be substituted for claim 7) more explicitly recite the claimed subject matter. Additionally Substitute Claim 13 provides an additional limitation.

Thus, the proposed amendments even more explicitly recite the subject matter of independent claim 5 and dependent claim 9 to address the Board's interpretation of these claims. While claims 5 and 9 of the '324 patent should be construed to include language as included in the proposed Substitute Claims, Patent Owner submits that these claims are contingently submitted in the event that claims 5 and/or 9 of the '324 patent are held to be unpatentable. The proposed amendment further defines the subject matter recited in dependent claim 7, and is contingently submitted in the event that claim 7 of the '324 patent is held to be unpatentable.

More specifically, Substitute Claims 11-13 are as follows:

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