UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICRON TECHNOLOGY, INC.,
Petitioner
v.

YANGTZE MEMORY TECHNOLOGIES COMPANY, LTD.,
Patent Owner

Case No.: IPR2024-00791
U.S. Patent No. 10,937,806
Issue Date: March 2, 2021

Title: THROUGH ARRAY CONTACT (TAC) FOR THREE-DIMENSIONAL MEMORY DEVICES

PETITIONER'S EXPLANATION OF MULTIPLE PETITIONS CHALLENGING U.S. PATENT 10,937,806 AND RANKING OF PETITIONS

As required by the Board's Trial Practice Guide, Petitioner Micron Technology Inc. ("Micron") provides this paper explaining the need for two parallel petitions requesting *inter partes* review ("IPR") of the claims of U.S. Patent No. 10,937,806 ("the '806 patent"). The '806 patent is owned by Yangtze Memory Technologies Company, Ltd. ("YMTC"). Micron has filed two IPR petitions relating to the '806 patent: IPR2024-00791 (filed May 3, 2024) seeks IPR of claims 8-9 and 11-12 while IPR2024-00911 (filed May 19, 2024) seeks IPR of claim 10. Both petitions rely on the same primary prior art reference: Toyama (Ex. 1005). Each '806 patent claim is addressed in only a single petition.

I. <u>Two Petitions Are Needed</u>

Micron submits that two petitions are needed here in view of YMTC's belated decision to interject additional, different asserted claims into the co-pending district court action relating to the '806 patent.

Independent claim 8 of the '806 patent is directed to a "three-dimensional (3D) memory device" that includes various components, including a "conductor/dielectric stack," a "dielectric structure" and "slit structures" that "extend[] vertically" through the stack," "first and second channel regions," a "staircase structure," "local contacts" on the channel structures and slits, a "through array contact (TAC) region," and a "plurality of non-electrical functional channel structures" that both surround the TAC region and are "between" the channel

regions. Dependent claims 9, 11, and 12 all reference and impose further limitations on these already required components. Dependent claim 10, however, requires further components not mentioned in claim 8 including a "substrate," "etch stop plug," and "an epitaxial layer" between the substrate and channel structures.

YMTC filed a district court complaint alleging infringement of the '806 patent and several other unrelated patents on November 9, 2023. *See* Ex. 1038. The complaint identified independent claim 8 as the sole asserted claim from the '806 patent. *See id.* at 19. YMTC filed an amended complaint on February 2, 2024. *See* Ex. 1039. Once again, YMTC identified claim 8 as the only '806 patent asserted claim. *See id.* at 20.

In view of YMTC's identification of claim 8, Micron filed its first petition for IPR of the '806 patent addressing claim 8 and the set of dependent claims referencing the same components required by that claim on May 3, 2024. *See* IPR2024-00791, Paper 1. This first petition did not address dependent claim 10 because YMTC had not yet (and could not have credibly) alleged that any Micron product included the type of "epitaxial layer" this claim requires.

A week after receiving Micron's IPR petition, YMTC served a "Disclosure of Asserted Claims and Infringement Contentions" in the co-pending district court action involving the '806 patent. *See* Ex. 1040. These contentions expanded the collection of asserted '806 patent claims to include not just independent claim 8 and

associated dependent claims 9 and 11-12, but also dependent claim 10 that grafts on additional required components. *See id.* at 2. While Micron does not believe that these expanded infringement allegations have merit, it followed up by expeditiously filing a further IPR petition challenging the newly asserted claim.

The Board has explained that multiple, parallel petitions are justified when a Patent Owner "has asserted a large number of claims in litigation." Nov. 2019 Consolidated Trial Practice Guide, 59. Here, YMTC asserted a collection of claims from the '806 patent with differing scope. This includes broad independent claim 8 and dependent claims 9 and 11-12 referencing the same components, and narrower dependent claim 10 that further requires an "etch stop plug" and "epitaxial layer." Moreover, not only did YMTC assert different sets of claims with different scope, but it did so in a staggered, staged fashion. Thus, even if it were possible for Micron to challenge all of the now asserted claims in a single petition, it was not put on notice of the need to do so until ***after*** it had already filed its first petition. Two petitions are justified to account for these unique factual circumstances.

Micron also submits that any additional burden on either the Board or Patent Owner resulting from multiple petitions in this case should be negligible. Both petitions rely on overlapping prior art. In addition, Micron has employed the same expert witness to support both petitions. This will maximize the efficiency of depositions, briefing, and oral argument and avoid duplication of effort. This further

supports institution.

II. Petition Ranking

For the reasons discussed above and in the petitions themselves, the Board should institute both petitions. Under the circumstances, Micron submits that a ranking of petitions is not appropriate given that they challenge unique claim sets with no overlap. In the event, however, that the Board determines that only one petition should be instituted, Micron requests that the Board consider the petitions in the following order:

Rank	Petition	Challenged Claims
1	IPR2024-00791	8-9 and 11-12
2	IPR2024-00911	10

Respectfully submitted,

ORRICK, HERRINGTON & SUTCLIFFE LLP

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CERTIFICATE OF SERVICE

The undersigned hereby confirms that the foregoing paper was caused to be served on May 19, 2024 via electronic mail, upon the following attorneys of record for the Patent Owner:

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