UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MACRONIX INTERNATIONAL CO., LTD., MACRONIX ASIA LIMITED, MACRONIX (HONG KONG) CO., LTD. and MACRONIX AMERICA, INC.
Petitioners

v.

SPANSION LLC
Patent Owner

Case No. IPR2014-00898
Patent Number 7,151,027

Before the Honorable HOWARD B. BLANKENSHIP, DEBRA K. STEPHENS, KRISTEN L. DROESCH, JUSTIN T. ARBES, and RICHARD E. RICE, *Administrative Patent Judges.*

PATENT OWNER'S PRELIMINARY RESPONSE UNDER 37 C.F.R. § 42.107

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Pursuant to 37 C.F.R. § 42.107,[1] Patent Owner Spansion LLC submits this Preliminary Response to the above-captioned Petition for *Inter Partes* Review of U.S. Patent No. 7,151,027 ("Pet.," Paper 2).

I. Introduction

On its face, Petitioner's[2] submission, like its prior petition attempting review of these claims, fails to provide the Board with basic evidence required to institute an *inter partes* review of claims 7 and 14 of the '027 Patent. If the Board nonetheless institutes trial on either of the challenged claims, Patent Owner will address in detail in its § 42.120 Response the numerous substantive errors and shortcomings that underlie each of Petitioner's arguments and its purported evidence. In this paper, however, where Patent Owner is not permitted to submit expert testimony (Rule § 42.107(c)), Patent Owner addresses only the meaning of certain of the challenged claims' pertinent terms, and some fundamental shortcomings of the Petition under Rule § 42.107: in particular, Petitioner's failure to demonstrate, as to *either* of the challenged claims, a reasonable likelihood of success on any asserted ground of

[1] All emphasis herein is added, and all statutory and regulatory citations are to either 35 U.S.C. or 37 C.F.R., as the context indicates, unless otherwise stated.

[2] Macronix International Co., Ltd., Macronix Asia Limited, Macronix (Hong Kong) Co., Ltd., and Macronix America, Inc. are collectively referred to herein as "Petitioner."

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invalidity. Because of this clear threshold failure, as before, the Petition should be denied and no *inter partes* review should be instituted under 35 U.S.C. § 314.

The challenged patent, U.S. Patent No. 7,151,027 ("the '027 Patent"), relates to methods for reducing the area of the interface between the memory array and periphery in memory devices, which also increases manufacturing yield by reducing the risk of potentially damaging stringer spacers during the fabrication process. *See* MX027II-1001 at 1:7-9; 1:66-2:12. The '027 Patent has two independent claims and twelve dependent claims. Petitioner has separately challenged various of these claims in a separate proceeding, IPR2014-00108, in which the Board instituted trial on certain claims but denied them as to claims 7 and 14, which Petitioner tries again to challenge here. Independent claims 1 and 8 are directed to methods of fabricating a memory device including steps to fabricate a polysilicon structure at the interface between a memory array and a periphery. The challenged claims—dependent claims 7 and 14, which depend on claims 1 and 8 respectively—require that the structure at the interface must be the same height as the memory array proximate to the memory array and the same height as the periphery proximate to the periphery, such that step size is smoothed out, reducing the occurrence of stringers from spacer etching.

To justify institution of an *inter partes* review, Petitioner's papers must make a *prima facie* showing that, as a factual and legal matter for its single asserted ground, it has a reasonable likelihood of proving at least one challenged claim unpatentable. *See,*

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e.g., 37 C.F.R. § 42.108(c); 35 U.S.C. § 314; 77 Fed. Reg. 48680, 48694 (Aug. 14, 2012). But it is apparent even from Petitioner's own arguments and evidence that it cannot meet that burden.

Petitioner's sole contention in its latest Petition is that a *triple* combination of Yuzuriha (US 6,458,655), Tsukamoto (US 2003/0042520) and Lin (C.-F. Lin, *et al.*, *A ULSI shallow trench isolation process through the integration of multilayered dielectric process and chemical-mechanical planarization*) renders obvious dependent claims 7 and 14. This Board has already concluded in its Institution Decision ("ID") in IPR2014-00108 (Paper 16) that Yuzuriha in view of additional prior art urged by Petitioner fails to render obvious at least the "same height" limitations of claims 7 and 14. ID at 27-29. And as addressed in more detail below, the addition of Tsukamoto and Lin simply does not cure this deficiency. In particular, Petitioner attempts to add to Yuzuriha Tsukamoto's disclosure of a structure located *in* the memory array—*i.e.*, *not at the required "interface between a memory array and a periphery of [the] memory device"*—to disclose the "same height" limitation, but provides *no* evidence or explanation to show why a person of ordinary skill in the art would have been motivated to apply this teaching to Yuzuriha's structure located *outside* the memory array when the stated purpose of Tsukamoto's structure is to diminish defects *in the memory array*. Moreover, Tsukamoto in fact *fails* to disclose that the asserted structure is the "same height" as the memory array proximate to the memory array and the "same height" as the

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