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Reg. No. 42,557

Paper No. 4

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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SAMSUNG ELECTRONICS CO., LTD.,  
Petitioner,

v.

DANIEL L. FLAMM,  
Patent Owner.

CASE IPR2016-01510  
U.S. Patent No. RE40,264

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

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Patent Trial and Appeal Board  
U.S. Patent & Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Tokyo Electron Limited  
EXHIBIT 1017**

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Daniel L. Flamm, Sc.D., the inventor and sole owner of the U.S. Patent No. RE40,264 (“the ‘264 patent”), through his counsel, submits this preliminary response pursuant to 37 C.F.R. § 42.107 and asks that the Patent Trial and Appeals Board decline to institute *inter partes* review on the instant petition because the petition fails to show a reasonable likelihood that any challenged claim is unpatentable.

## **I. Introduction**

Samsung is not the first party to challenge the validity of the ‘264 patent through *inter partes* review. Lam Research Corp. sells tools used in semiconductor manufacturing to entities such as Samsung. Dr. Flamm has accused Samsung of using the tools it purchased from Lam and others in a manner that infringes the methods claims in the ‘264 patent.

In addition to commencing an action for declaratory judgment in the United States District Court for the Northern District of California, Lam asserted seven petitions for *inter partes* review of the ‘264 patent. *See* Case Nos. IPR2015-01759; IPR2015-01764; IPR2015-01766; IPR2015-01768; IPR2016-0468; IPR2016-0469; and IPR2016-0470.<sup>1</sup> The Board instituted trial on only two of those petitions, IPR2015-01764 and IPR2015-01768 and denied to

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<sup>1</sup> A chart summarizing the claims of the ‘264 patent to which Lam’s seven petitions were directed is attached hereto as Appendix A.

institute on the remaining five.

Independent claim 13 of the '264 patent and the claims that depend from it (*i.e.*, claims 14-26 and 64-65) were the subject of both IPR2015-01759 and IPR2016-0468. The Board declined to institute on either of those petitions.

Samsung does not assert anticipation under 35 U.S.C. § 102. Instead, the sole contention of invalidity of claim 13 under 35 U.S.C. § 103, is based on a combination of three references, Okada I, Incropera, and Anderson. Samsung relies on sixteen additional references (many of which were also cited by Lam) for the assertion of invalidity of the claims that depend from claim 13.

As demonstrated below, Samsung fails to identify any combination of prior art that teaches all of the elements of claim 13. For that reason, the Board should not institute *inter partes* review with respect to that claim or any claim that depends from that claim.

## **II. Overview of the '264 Patent**

The invention set forth in the '264 patent provides a method “for etching a substrate,” including “a chamber and a substrate holder,” the latter having “a selected thermal mass to facilitate changing the temperature of the substrate to be etched.” (Ex. 1001, Abstract.) Such change is “from a first temperature to a second temperature within a characteristic time period.” (*Id.*) While methods involving the use of various temperatures for manufacturing semiconductors were

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