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Reg. No. 42,557

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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INTEL CORPORATION, GLOBALFOUNDRIES U.S., INC.,  
MICRON TECHNOLOGY, INC., AND  
SAMSUNG ELECTRONICS COMPANY, LTD.,

Petitioners

v.

DANIEL L. FLAMM,

Patent Owner

CASE IPR2017-00282<sup>1</sup>  
U.S. Patent No. RE40,264 E

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

**Claims 56-63 & 70-71**

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<sup>1</sup> Samsung Electronics Company, Ltd. Was joined as a party to this proceeding via a Motion for Joinder in IPR2017-01752.

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COMES NOW Patent Owner, Daniel L. Flamm, Sc.D., the sole inventor and owner of the U.S. Patent No. RE40,264 (“the ‘264 patent”), through his counsel, submits this response pursuant to 37 C.F.R. § 42.107 and asks that the Patent Trial and Appeals Board confirm the patentability of independent claims 56 and 60 and all their independent claims.

### **I. Introduction**

This response addresses the two independent claims, 56 and 60, and their dependent claims that are the subject of the institution Order. The Board ruled that these claims would have been obvious “using Matsumura’s control “recipes” in Kadomura’s dry etching apparatus and method” (Decision p. 22), and by combining Kikuchi with Matsumura (*Id.* p. 34).

The obviousness issue revolves around the claim limitation, changing the temperature “within a preselected time interval,” specifically:

“the substrate temperature is changed from the first substrate temperature to the second substrate temperature with a control circuit operable to effectuate the changing within a preselected time period that is less than the overall process time associated with the etching the first silicon-containing layer and the second silicon- containing layer”

(Claim 56 Ex. 1001 at 22:22-28.)

“wherein the first substrate temperature is different from the second substrate temperature and the first substrate temperature is changed to the second substrate temperature with a substrate temperature control circuit within a preselected time to etch the silicide layer”

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