Paper No. ___ Filed: July 24, 2017

UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD
SAMSUNG ELECTRONICS CO., LTD.
Petitioner
V.
DANIEL L. FLAMM,
Patent Owner
Case IPR2016-01512
Patent No. RE 40,264 E

PETITIONER'S REPLY TO PATENT OWNER'S RESPONSE



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LIST OF EXHIBITS

Exhibit	Description	Previously
No.	_	Submitted
1001	U.S. Patent No. 40,264 E	X
1002	Declaration of Stanley Shanfield, Ph.D.	X
1003	Prosecution History of Reissue Patent 40,264	X
1004	Prosecution History of U.S. Patent Application No.	X
	09/151,163	
1005	File History of U.S. Patent Application No. 08/567,224	X
1006	U.S. Patent No. 6,063,710 to <i>Kadomura</i> et al.	X
1007	U.S. Patent No. 5,151,871 to <i>Matsumura</i> et al.	X
1008	U.S. Patent No. 4,913,790 to <i>Narita</i> et al.	X
1009	U.S. Patent No. 5,219,485 to <i>Wang</i>	X
1010	European Patent Application No. 87311193.4 to Wang et.	X
	al.	
1011	Deposition Transcript of Dr. Daniel Flamm	
1012	Shih et al., "Patterned, Photon-driven Cryoetching of	
	GaAs and AlGaAs," J. Vac. Sci. Technol. B 13(1), pp.	
	43-54 (1995).	
1013	Rebuttal Declaration of Dr. Stanley Shanfield	



I. Introduction

Petitioner Samsung Electronics Co., Ltd. ("Petitioner") submits the following reply to the Patent Owner Response (Paper No. 9, "Response") of U.S. Patent No. RE 40,264 ("the '264 patent") (Ex. 1001). Patent Owner's arguments should be rejected and challenged claims 27, 31, 32, 34, 37, 40, 41, 44, 47, 48, and 50 of the '264 patent found unpatentable and canceled for at least the reasons set forth in the Petition (Paper No. 1) and accompanying exhibits, the Board's decision to institute *inter partes* review (Paper No. 6, "Decision"), cross-examination testimony, and the additional reasons below.

Patent Owner does not dispute that the asserted combinations of prior art disclose the features recited in the challenged claims. Instead, Patent Owner focuses on whether the asserted combinations are proper. However, Patent Owner's attacks on Petitioner's obviousness positions lack legal and factual bases and do not overcome the evidence demonstrating that the challenged claims are unpatentable. For instance, Patent Owner's primary argument regarding independent claims 27 and 37 is that controlling the time for changing the substrate temperature in *Kadomura* is of "no importance" and therefore, there would be no benefit to use *Matsumura*'s recipes in *Kadomura*. (*See* Response at 5, 9-10, 19-20, 22.) But, Patent Owner overlooks *Kadomura*'s disclosure that the time for



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