

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

APPLE INC.,
Petitioner

v.

TELEFONAKTIEBOLAGET LM ERICSSON,
Patent Owner

Inter Partes Review Case No. IPR2022-00716
U.S. Patent No. 9,705,400

**DECLARATION OF DR. MARWAN HASSOUN, PH.D. IN SUPPORT OF
PETITION FOR INTER PARTES REVIEW OF
U.S. PATENT NO. 9,705,400**

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LIST OF EXHIBITS FOR THE PETITION

Exhibit 1001	U.S. Patent No. 9,705,400
Exhibit 1002	File History of U.S. Patent No. 9,705,400
Exhibit 1003	File History of European Patent No. EP2811646
Exhibit 1004	International Publication WO 2010/111433 A2 (“Smith”)
Exhibit 1005	United States Patent No. 5,506,493 (Stengel)
Exhibit 1007	Curriculum Vitae of Dr. Marwan Hassoun, Ph.D.
Exhibit 1008	Hart, Daniel W., <i>“Power Electronics,”</i> McGraw-Hill, 2011
Exhibit 1009	Maxim Integrated, <i>“Fundamentals of Class D Amplifiers,”</i> Application Note 3977, Jan. 31, 2007.
Exhibit 1010	Honda, Jun et al. <i>“Class D Audio Amplifier Basics,”</i> Application Note AN-1071, Internal Rectifier, Feb. 8, 2005
Exhibit 1011	Sattar, Abdus, <i>“Insulated Gate Bipolar Transistor (IGBT) Basics,”</i> IXYS Corp., 2008
Exhibit 1012	Dodge, Jonathan, <i>“IGBT Tutorial,”</i> Application Note APT0201 Rev. B, Advanced Power Technology, July 1, 2002
Exhibit 1013	<i>In the Matter of Certain Mobile Phones and Tablet Computers, All With Switchable Connectivity</i> , ITC-337-TA-1300, Exhibit 15A to Complaint, Complainant’s Proof of Infringement (ITC Jan. 18, 2022)
Exhibit 1014	<i>In the Matter of Certain Mobile Phones and Tablet Computers, All with Switchable Connectivity</i> , ITC-337-TA-1300, Proposed Scheduling Order (ITC Mar. 11, 2022)

I, Dr. Marwan Hassoun, hereby declare as follows:

I. ASSIGNMENT

1. I have been retained as an expert witness on behalf of Apple Inc. (“Apple” or “Petitioner”) to offer technical opinions in connection with the above-captioned Petition for Inter Partes Review (“IPR”) of U.S. Patent No. 9,705,400 (“the ’400 patent”) (Ex. 1001).

2. I have been asked to provide my independent analysis of the ’400 Patent in light of the prior art patents and publications cited below.

3. I have been asked to provide my opinions regarding whether certain limitations of claims 1, 2, 8, 10, and 14 (the “Challenged Claims”) of the ’400 patent were known in the art to a person having ordinary skill in the art (“POSITA”) at the time of the alleged invention and whether a POSITA would have been motivated to modify *Smith’s* disclosed circuit in view of *Stengel*.

4. In preparing my Declaration, I reviewed the ’400 patent, the file history of the patent, prior art references, technical references, and the other publications set forth in the Exhibit List above from the time of the alleged invention, which are discussed herein.

5. For the purposes of my Declaration, I have been asked to assume that the priority date of the alleged invention recited in the Ericsson ’400 patent is June 3, 2013 (hereinafter the “Priority Date”).

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