

**DECLARATION OF JINSUNG CHOI, PH.D.**  
**CONCERNING THE PUBLICATION OF A PAPER AUTHORED BY DR. CHOI**

I, Jinsung Choi, declare as follows:

1. I am currently employed by Qorvo, Inc., which is an American semiconductor company that designs, manufactures, and supplies radio-frequency (RF) systems and solutions for wireless and broadband communications. I have worked at Qorvo for approximately six years. At Qorvo, I am a member of the technical staff. In that role, I contribute to the design of RF components such as switches and low noise amplifiers. A copy of my curriculum vitae is attached hereto as Exhibit A.

2. I earned my Bachelor of Science degree in electrical engineering from Pohang University of Science and Technology in South Korea in 2003. I earned my Doctor of Philosophy degree in electrical engineering from Pohang University of Science and Technology in 2009.

3. I am the co-author of a paper entitled “Envelope Tracking Power Amplifier Robust to Battery Depletion” (the “Choi 2010 paper”), submitted as Exhibit B to this declaration. The paper was published by the Institute of Electrical and Electronics Engineers (IEEE) in 2010. According to the IEEE website (<https://ieeexplore.ieee.org/document/5517825/>), the paper was added to IEEE’s digital library—IEEE *Xplore*—on July 23, 2010.

4. Earlier in 2010, I attended the IEEE International Microwave Symposium (“IMS”) 2010 conference, held in Anaheim, California from May 23 to 28, 2010. The IMS is an annual technical conference for professionals specializing in RF/microwave theory and applications. The conference is well publicized in the field, and is open to any member of the public interested in the topic. On information and belief, the IMS is the largest gathering of RF/microwave professionals in the world.

5. The IMS 2010 conference was attended by hundreds of people. These attendees included many engineers specializing in RF circuit and power supply design for RF. The

conference included, for example, leading engineers in these areas from academia and industry, including many electrical engineers with multiple years' experience designing RF circuits and/or power supplies. At the time of the IMS 2010 conference, I had earned my doctorate in electrical engineering and had over five years' experience designing RF circuits and power supplies.

6. I presented the Choi 2010 paper at the IMS 2010 conference during the Power Amplifier Circuits technical session on Wednesday, May 26, 2010. About a hundred people attended the session where I presented my paper, and there were also other parallel sessions.

7. Before the IMS 2010 conference, a program book was made available to attendees and potential attendees. A copy of that program book is attached as Exhibit C. My presentation is listed on page 40 of the program book, in the middle column, near the bottom, at the WEPF-5 session. The program book confirms my memory that I presented the Choi 2010 paper on Wednesday, May 26, 2010.

8. People registering for IMS 2010 could pay a small extra fee to receive a USB drive. The fees for registration and the USB drive are shown at page 9 of the program book (Exhibit C). My understanding is that each USB drive contained PDF copies of the presented papers, including a copy of my Choi 2010 paper.

9. I also recall that IMS 2010 had printing stations set up at the conference venue. Attendees could use any of these printing stations to print a copy of any paper being presented at the conference, including my own paper. These printing stations are mentioned on page 5 of the program book (Exhibit C), which states that "Print on Demand (PoD) is back again and will be available at a centralized station located in the Registration area at the Anaheim Convention Center. This will allow all registered attendees to print out any paper FREE!" This is what I recall seeing at IMS 2010.

10. No confidentiality restrictions were imposed on attendees at IMS 2010, and no confidentiality restrictions were placed on any of the papers contained on the USB drives. Attendees were free to disseminate and discuss the technical material presented during the conference.

11. I am not receiving any compensation for my declaration or testimony in this matter, aside from my standard Qorvo salary, which does not depend on my submission of this declaration or its contents.

12. I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like are punishable by fine or imprisonment, or both, under Section 1101 of Title 18 of the United States Code.

Signed: JINSUNG CHOI

Dated: May, 20, 2018