IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

IN-DEPTH TEST LLC,	§	
	§	
Plaintiff,	§	**Case No.**
	§	
v.	§	
	§	
QORVO, INC.	§	**JURY TRIAL DEMANDED**
	§	
Defendant.	§	
	§	
	§	

ORIGINAL COMPLAINT AND JURY DEMAND

This is an action for patent infringement in which Plaintiff In-Depth Test LLC ("In-Depth") complains against Defendant Qorvo, Inc. (hereinafter "Qorvo" or "Defendant") as follows:

PARTIES

1. Plaintiff In-Depth is a Texas limited liability company having a place of business in Plano, Texas.

2. On information and belief, Defendant Qorvo is a Delaware corporation having principal places of business in Greensboro, North Carolina, Richardson, Texas and Farmers Branch, Texas.

3. Qorvo was formed by the merger of TriQuint Semiconductor and RF Micro Devices in January of 2015.

JURISDICTION AND VENUE

4. This action arises under the patent laws of the United States, Title 35 of the United States Code. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).

5. Venue is proper in this district under 28 U.S.C. §§ 1391(b) and (c) and 1400(b). Defendant is a Delaware corporation and has transacted business in this district.

6. Defendant is subject to this Court's specific and general personal jurisdiction pursuant to due process and/or the Delaware Long Arm Statute, due at least to their incorporation in and substantial business in this forum, directly or through intermediaries, including regularly doing or soliciting business, engaging in other persistent courses of conduct, and/or deriving substantial revenue from goods and services provided to individuals in this Judicial District.

7. The patent involved in this action have been asserted by Plaintiff during ongoing patent infringement litigations in this District, including:

- *In-Depth Test, LLC v. Maxim Integrated Products, Inc.*, Civil Action No. 14-cv-887-GMS;
- *In-Depth Test, LLC v. Vishay Intertechnology Inc. and Siliconix Inc.*, Civil Action No. 14-cv-888-GMS; and
- *In-Depth Test, LLC v. Fairchild Semiconductor Corp.*, Civil Action No. 14-cv-1090-GMS.

8. The litigation against Fairchild Semiconductor Corp. has recently been resolved, while the matters against Maxim Integrated Products, Inc., Vishay Intertechnology, Inc., and Siliconix Inc. are currently ongoing.

COUNT I
INFRINGEMENT OF U.S. PATENT NO. 6,792,373

9. Plaintiff In-Depth is the owner by assignment of United States Patent No. 6,792,373 ("the '373 patent") entitled "Method and Apparatus For Semiconductor Testing" – including all rights to recover for past and future acts of infringement. The '373 Patent was filed on May 24, 2002 and claims the benefit of U.S. Provisional Application Serial No. 60/293,577, filed on May 24, 2001. Plaintiff contends, therefore, that the claims of the '373 Patent are entitled to an earliest effective filing date of May 24, 2001. The '373 patent was duly and legally issued on September 14, 2004. A true and correct copy of the '373 patent is attached as Exhibit A.

10. The '373 patent is generally related to test systems for semiconductor devices. The inventions of the '373 patent enhance the test process for components by performing additional testing that more accurately determines whether the components being tested are likely to fail or malfunction. The patent specification describes using a computer to perform a statistical analysis on the test results generated by conventional test equipment. The analysis performed identifies and reports components that fell within the control limits but that are statistical "outliers" relative to other components that also fell within the control limits. The specific identification in the output report of outliers in the results is significant because it provides a more granular level of test results that can be used to classify or grade the performance of the component in the remainder of the manufacturing process or to improve the manufacturing process itself.

11. The invention claimed in the '373 patent does not simply add a general purpose computer or utilize existing computer processing capabilities to more efficiently accomplish a well-known task that could be performed within the human mind or through

human interaction. Instead, the claims are drawn to a specific type of apparatus aimed at improving the actual functionality of the computer components themselves, thus having functional and palpable applications in the field of computer technology.

12. The validity of the '373 patent has been repeatedly upheld by the Patent Trial and Appeal Board ("the Board"). The '373 patent has been the subject of the following proceedings before the Board:

- IPR2015-00421, terminated;
- CBM2015-00060, terminated;
- IPR2015-01627, terminated;
- IPR2015-01994, terminated;
- IPR2015-01998, terminated;
- IPR2016-01833, institution denied;
- IPR2017-02009, institution denied; and
- IPR2017-02094, institution denied.

13. In the instances where institution was denied, the Board found that the respective Petitions did not establish a reasonable likelihood of success in invalidating the challenged claims, including several of which that are asserted in the present litigation.

14. On information and belief, Defendant has been and is directly infringing, either literally or under the doctrine of equivalents, at least claim 1 of the '373 patent. Defendant's direct infringements include, without limitation, making, using, and/or offering for sale infringing semiconductor test systems and/or practicing infringing methods used to test/manufacture semiconductors used in at least Automotive Semiconductor applications, within the United States. Defendant's use of semiconductor

test equipment with incorporated technologies that facilitates compliance to the ISO / TS 16949:2009 Quality Management Systems, AEC Q100 Stress Test Qualification for Integrated Circuits which requires compliance to the subset of AEC standards Q004 Zero Defects Guideline and/or Q001 Guidelines For Part Average Testing ("Accused Products") directly infringes at least claim 1 of the '373 patent.

15. The Accused Products are test systems for semiconductor devices and include a computer that performs statistical analysis on the testing results generated by the test equipment. During the fabrication process for components, Defendant uses the Accused Products to test for manufacturing defects or anomalous behavior within the tested component. The analysis performed identifies and then reports components that fall within the control limits but that are statistical "outliers" from the other components that also fell within the control limits. All limitations of the asserted claim are present literally. To the extent that any specific limitation of the asserted claim is found to not be present literally of if there are any differences between the claim elements and the Accused Products, the differences are insubstantial and the products would therefore infringe under the doctrine of equivalents.

16. Defendant is thus liable for infringement of the '373 patent pursuant to 35 U.S.C. § 271(a).

PRAYER FOR RELIEF

WHEREFORE, In-Depth requests that this Court enter:

A. A judgment in favor of In-Depth that Defendant has directly infringed the '373 patent;

B. A judgment and order requiring Defendant to pay plaintiff damages, costs, expenses, prejudgment and post-judgment interest, and post-judgment royalties for Defendant's infringement of the '373 patent as provided under 35 U.S.C. § 284;

C. A judgment and order that this case is exceptional under 35 U.S.C. § 285 and requiring Defendant to pay plaintiff's reasonable attorney fees; and

D. Any and all other relief to which the Court may deem plaintiff is entitled.

DEMAND FOR JURY TRIAL

Plaintiff, under Rule 38 of the Federal Rules of Civil Procedure, request a trial by jury of any issues so triable by right.

Respectfully submitted,

s/ Brian E. Farnan
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Date: September 21, 2018