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Of Attorneys for Plaintiff

## IN THE UNITED STATES DISTRICT COURT

### FOR THE DISTRICT OF OREGON

FORMFACTOR, INC., a Delaware corporation,

Plaintiff,

VS.

PHICOM CORPORATION, a Korean corporation,

Defendant.

Case No. 05-6062-HO

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

DEMAND FOR JURY TRIAL

## Page 1 FIRST AMENDED COMPLAINT

Plaintiff FormFactor, Inc., by and through its attorneys, alleges as follows:

## JURISDICTION AND VENUE

1. This is a civil action for patent infringement, injunctive relief, and damages arising under the United States Patent Act, 35 U.S.C. §§ 1 *et seq*. This Court has jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

Venue is proper in this Judicial District ("District") pursuant to 28 U.S.C.
§§ 1391(b) and 1400(b). Defendant has engaged in complained of activities in this District.

#### THE PARTIES

3. Plaintiff FormFactor, Inc. ("FormFactor") is a Delaware corporation having a principal place of business at 7005 Southfront Road, Livermore, California. FormFactor is a leading manufacturer of wafer probe cards that are used by semiconductor manufacturers in the chip manufacturing process.

4. Defendant Phicom Corporation ("Phicom" or "Defendant") is a Korean corporation with a principal place of business at 60-29 Gasandong, Kumchongu, Seoul, 153-810 Korea.

5. FormFactor is informed and believes, and on that basis alleges, that Phicom has in this District and elsewhere: had ongoing and systematic contacts; committed acts of infringement by selling infringing products; placed the wafer probe card products accused of infringement herein into the stream of commerce knowing and expecting that such products would be used here; and imported into the United States and/or sold, offered to sell or used within the United States, wafer probe card products that are made by a process patented in the United States.

#### THE PATENTS-IN-SUIT

6. FormFactor is a leading innovator of novel and useful technologies to improve and advance the manufacture of semiconductor devices or chips. With the investment of millions of dollars in research & development, FormFactor has created and developed methods of manufacture and products to implement these technologies. To protect its substantial research

#### Page 2 FIRST AMENDED COMPLAINT

and development effort, FormFactor has obtained numerous patents covering many of the features of its methods, products, and technologies. Various of these patents are infringed by Phicom, including those alleged below.

7. United States Patent No. 5,974,662 ("the '662 Patent") entitled "Method of Planarizing Tips Of Probe Elements Of A Probe Card Assembly" was duly and legally issued on November 2, 1999. A true and correct copy of the '662 Patent is attached hereto as Exhibit 1. The '662 Patent is valid and subsisting and owned by FormFactor.

8. United States Patent No. 6,246,247 ("the '247 Patent") entitled "Probe Card Assembly Kit, And Methods Of Using Same" was duly and legally issued on June 12, 2001. A true and correct copy of the '247 Patent is attached hereto as Exhibit 2. The '247 Patent is valid and subsisting and owned by FormFactor.

9. United States Patent No. 6,624,648 ("the '648 Patent") entitled "Probe Card Assembly" was duly and legally issued on September 23, 2003. A true and correct copy of the '648 Patent is attached hereto as Exhibit 3. The '648 Patent is valid and subsisting and owned by FormFactor.

United States Patent No. 5,994,152 ("the '152 Patent") entitled "Fabricating
Interconnects and Tips Using Sacrificial Substrates" was duly and legally issued on November
30, 1999. A true and correct copy of the '152 Patent is attached hereto as Exhibit 4. The '152
Patent is valid and subsisting and owned by FormFactor.

 United States Patent No. 7,073,254 ("the '254 Patent") entitled "Method For Mounting A Plurality Of Spring Contact Elements" was duly and legally issued on July 11, 2006. A true and correct copy of the '254 Patent is attached hereto as Exhibit 5. The '254 Patent is valid and subsisting and owned by FormFactor.

12. United States Patent No. 6,615,485 ("the '485 Patent") entitled "Probe Card Assembly And Kit, And Methods Of Making Same" was duly and legally issued on September 9, 2003. A true and correct copy of the '485 Patent is attached hereto as Exhibit 6. The '485 Patent is valid and subsisting and owned by FormFactor.

#### Page 3 FIRST AMENDED COMPLAINT

13. The '662 Patent, the '247 Patent, the '648 Patent, the '152 Patent, the '254 Patent and the '485 Patent are referred to herein collectively as the "Patents-In-Suit."

14. The Patents-In-Suit address important but previously unmet needs in semiconductor manufacturing, including enabling manufacturers to lower their overall costs of semiconductor test. FormFactor's products that incorporate the Patents-In-Suit have, in addition to satisfying a long-felt need in the industry, realized significant commercial success. Further, and as explained below, the inventions embodied in the Patents-In-Suit have been copied by one or more third parties, including Defendant.

15. Figure 1 is a picture of a probe card assembly – a wafer probe card – product that FormFactor currently designs, manufactures and sells, and that is protected by the Patents-In-Suit. On information and belief, Figure 2 is a picture of an infringing product that Defendant currently manufactures and sells under the trade name "Phicom MEMS Card."

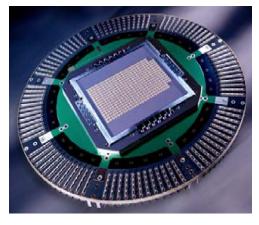


Figure 1 Form Factor Probe Card Assembly

# Page 4 FIRST AMENDED COMPLAINT

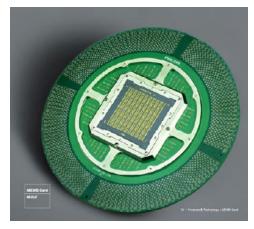


Figure 2 Defendant's MEMS Card

16. On information and belief, Figure 3 is an illustration of a sectional side view of the Defendant's Phicom MEMS Card, with its major components as labeled by Phicom. As shown in Figure 3, the Phicom MEMS Card includes a PCB (printed circuit board), "Micro Probe Head", "Micro Probes" and a planarization mechanism. On information and belief, these structures mimic and correspond on a one-to-one basis, to structures that are described and claimed in at least one of the Patents-In-Suit.

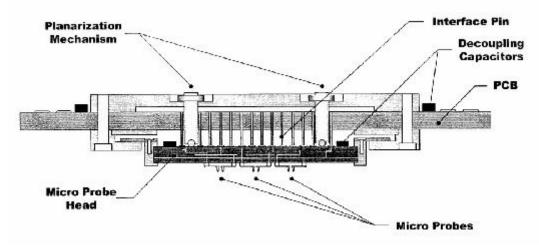


Figure 3

# Page 5 FIRST AMENDED COMPLAINT

17. On information and belief and by way of example, a comparison and mapping between claim 13 of the '662 Patent and the Defendant's infringing MEMS Card product as illustrated in Figure 3 is summarized in the following table.

Claim 13 of the '662 Patent	Defendant's product
In a probe card assembly, a method of	MEMS Card product
altering the orientation of probe	
elements for probing semiconductor	
devices, comprising	
providing a probe card	"PCB"
providing a support substrate with	"Micro Probe Head" is attached
plurality of free-standing resilient	to a plurality of free-standing
probe elements for probing	resilient "Micro Probes" for
semiconductor devices	probing semiconductor devices
mounting the support substrate on the	"Micro Probe Head" is mounted
probe card; and	on the "PCB"
altering the orientation of the support	"Planarization Mechanism" is
substrate relative to the probe card	provided for altering the
	orientation of the "Micro Probe
	Head" relative to the "PCB"

18. On information and belief, and as indicated in Defendant's own materials, Defendant developed the infringing MEMS Card product during 2001-2002, well after both the effective filing dates of the Patents-In-Suit and the date that FormFactor's wafer probe card products incorporating the inventions of the Patents-In-Suit already were commercially available.

# FIRST CLAIM FOR RELIEF: '662 PATENT

# <u>35 U.S.C. § 271</u>

19. FormFactor hereby incorporates by reference paragraphs 1 through 18, inclusive.

20. Defendant has infringed and continues to infringe the '662 Patent. Without limitation, Defendant directly or through agents has sold and offered to sell in, and imported into, the United States wafer probe card products made by a process that is patented under the '662 Patent. The full extent of Defendant's infringement in the United States is not known to FormFactor at this time, because Defendant has actively concealed and hidden from FormFactor,

Page 6 FIRST AMENDED COMPLAINT

despite demand, information and activities regarding Defendant's infringement of the '662 Patent.

21. FormFactor is informed and believes, and on that basis alleges, that Defendant copied FormFactor's protected technology as described in the '662 Patent to produce infringing wafer probe card products, including without limitation products that on information and belief are sold under the trade name "Phicom MEMS Card."

22. FormFactor has been damaged by Defendant's infringement of the '662 Patent in an amount to be determined in this litigation. Defendant's infringement is continuing, ant it is and will continue to irreparably injure FormFactor unless enjoined by this Court.

23. FormFactor is informed and believes, and on that basis alleges, that Defendant has had constructive notice and actual knowledge of the '662 Patent at all material times and prior to Defendant's first infringement. Defendant's infringement of the '662 Patent is willful and deliberate.

#### **SECOND CLAIM FOR RELIEF: '247 PATENT**

#### <u>35 U.S.C. § 271</u>

24. FormFactor hereby incorporates by reference paragraphs 1 through 18, inclusive.

25. Defendant has sold, offered to sell and imported, directly or through agents, in the United States wafer probe card products that infringe the '247 Patent. The full extent of Defendant's infringement in the United States is not known to FormFactor at this time, because Defendant has actively concealed and hidden from FormFactor, despite demand, information and activities regarding Defendant's infringement of the '247 Patent.

26. FormFactor is informed and believes, and on that basis alleges, that defendant copied FormFactor's protected technology as described in the '247 Patent to produce infringing wafer probe card products, including without limitation products that on information and belief are sold under the trade name "Phicom MEMS Card."

#### Page 7 FIRST AMENDED COMPLAINT

27. FormFactor has been damaged by Defendant's infringement of the '247 Patent in an amount to be determined in this litigation. Defendant's infringement is continuing, and it is and will continue to irreparably injure FormFactor unless enjoined by this Court.

28. FormFactor is informed and believes, and on that basis alleges, that Defendant has had constructive notice and actual knowledge of the '247 Patent at all material times and prior to Defendant's first infringement. Defendant's infringement of the '247 patent is willful and deliberate.

#### THIRD CLAIM FOR RELIEF: '648 PATENT

#### <u>35 U.S.C. § 271</u>

29. FormFactor hereby incorporates by reference paragraphs 1 through 18 inclusive.

30. Defendant has sold, offered to sell and imported, directly or through agents, in the united States wafer probe card products that infringe the '648 Patent. The full extent of Defendant's infringement in the United States is not known to FormFactor at this time, because Defendant has actively concealed and hidden from FormFactor, despite demand, information and activities regarding Defendant's infringement of the '648 Patent.

31. FormFactor is informed and believes, and on that basis alleges, that defendant copied FormFactor's protected technology as described in the '648 Patent to produce infringing wafer probe card products, including without limitation products that on information and belief are sold under the trade name "Phicom MEMS Card."

32. FormFactor has been damaged by Defendant's infringement of the '648 Patent in an amount to be determined in this litigation. Defendant's infringement is continuing, and it is and will continue to irreparably injure FormFactor unless enjoined by this Court.

33. FormFactor is informed and believes, and on that basis alleges, that Defendant has had constructive notice and actual knowledge of the '648 Patent at all material times and prior to Defendant's first infringement. Defendant's infringement of the '648 patent is willful and deliberate.

#### Page 8 FIRST AMENDED COMPLAINT

#### FOURTH CLAIM FOR RELIEF: '152 PATENT

#### <u>35 U.S.C. § 271</u>

34. FormFactor hereby incorporates by reference paragraphs 1 through 18, inclusive.

35. Defendant, directly or through agents, has imported into the United States and/or sold, offered to sell or used within the United States wafer probe card products that are made by a process covered by the '152 Patent and, thus, has infringed the '152 Patent. The full extent of Defendant's infringement in the United States is not known to FormFactor at this time, because Defendant has actively concealed and hidden from FormFactor, despite demand, information and activities regarding Defendant's infringement of the '152 Patent.

36. FormFactor is informed and believes, and on that basis alleges, that Defendant copied FormFactor's protected technology as described in the '152 Patent to produce wafer probe card products specifically designed for use in practicing methods that infringe the '152 Patent, including without limitation products that on information and belief are sold under the trade name "Phicom MEMS Card."

37. FormFactor has been damaged by Defendant's infringement of the '152 Patent in an amount to be determined in this litigation. Defendant's infringement is continuing, and it is and will continue to irreparably injure FormFactor unless enjoined by this Court.

38. FormFactor is informed and believes, and on that basis alleges, that Defendant has had constructive notice and actual knowledge of the '152 Patent at all material times and prior to Defendant's first infringement. Defendant's infringement of the '152 Patent is willful and deliberate.

# <u>FIFTH CAUSE OF ACTION: '254 PATENT</u> <u>35 U.S.C. § 271</u>

39. FormFactor hereby incorporates by reference paragraphs 1 through 18, inclusive.

40. Defendant, directly or through agents, has imported into the United States and/or sold, offered to sell or used within the United States wafer probe card products that are made by processes including those covered by the '254 Patent and, thus, has infringed the '254 Patent.

# Page 9 FIRST AMENDED COMPLAINT

The full extent of Defendant's infringement in the United States is not known to FormFactor at this time, because Defendant has actively concealed and hidden from FormFactor, despite demand, information and activities regarding Defendant's infringement of the '254 Patent.

41. FormFactor is informed and believes, and on that basis alleges, that Defendant copied FormFactor's protected technology as described in the '254 Patent to produce wafer probe card products specifically designed for use in practicing methods that infringe the '254 Patent, including without limitation products that on information and belief are sold under the trade name "Phicom MEMS Card."

42. FormFactor has been damaged by Defendant's infringement of the '254 Patent in an amount to be determined in this litigation. Defendant's infringement is continuing, and it is and will continue to irreparably injure FormFactor unless enjoined by this Court.

43. FormFactor is informed and believes, and on that basis alleges, that Defendant has had constructive notice and actual knowledge of the '254 Patent at all material times since its issuance and prior to Defendant's infringing activities. Defendant's infringement of the '254 Patent is willful and deliberate.

#### SIXTH CAUSE OF ACTION: '485 PATENT

#### <u>35 U.S.C. § 271</u>

44. FormFactor hereby incorporates by reference paragraphs 1 through 18, inclusive.

45. Defendant, directly or through agents, has induced or contributed to the infringement of the '485 patent and, thus, has infringed the '485 Patent. The full extent of Defendant's infringement in the United States is not known to FormFactor at this time, because Defendant has actively concealed and hidden from FormFactor, despite demand, information and activities regarding Defendant's infringement of the '485 Patent.

46. FormFactor is informed and believes, and on that basis alleges, that Defendant copied FormFactor's protected technology as described in the '485 Patent to produce wafer probe card products specifically designed for use in practicing methods that infringe the '485

#### Page 10 FIRST AMENDED COMPLAINT

Patent, including without limitation products that on information and belief are sold under the trade name "Phicom MEMS Card."

47. FormFactor has been damaged by Defendant's infringement of the '485 Patent in an amount to be determined in this litigation. Defendant's infringement is continuing, and it is and will continue to irreparably injure FormFactor unless enjoined by this Court.

48. FormFactor is informed and believes, and on that basis alleges, that Defendant has had constructive notice and actual knowledge of the '485 Patent at all material times since its issuance and prior to Defendant's infringing activities. Defendant's infringement of the '485 Patent is willful and deliberate.

#### PRAYER

WHEREFORE, FormFactor prays for a judgment and decree against Defendant as follows:

1. That each of the Patents-In-Suit is valid and enforceable;

2. That Defendant has infringed, and is infringing, each of the Patents-In-Suit;

3. That Defendant's infringement of each and all of the Patents-In-Suit is willful;

4. That Defendant, its subsidiaries, affiliates, parents, successors, assigns, officers, agents, servants, employees, attorneys, and all persons acting in concert or in participation with Defendant be temporarily, preliminarily, and permanently enjoined from infringing, contributing to the infringement of, and inducing infringement of each of the Patents-In-Suit, and specifically from directly or indirectly making, using, selling, offering for sale, or importing any products embodying the inventions of any of the Patents-In-Suit, during the life of the claims of the Patents-In-Suit, without the express written authority of FormFactor;

5. Awarding FormFactor damages sufficient to compensate fully FormFactor for Defendant's infringements;

6. That Defendant be ordered to deliver to FormFactor, for destruction at FormFactor's option, all products that infringe one or more of the Patents-In-Suit;

### Page 11 FIRST AMENDED COMPLAINT

- 7. That this case be deemed exceptional;
- 8. That all damages awarded to FormFactor be trebled;
- 9. That FormFactor be awarded its reasonable attorneys' fees;
- 10. That FormFactor be awarded its costs of suit and an assessment of interest,

including prejudgment interest; and

11. That FormFactor have such other, further, and different relief as the court deems proper under the circumstances.

## **DEMAND FOR JURY TRIAL**

Pursuant to Fed. R. Civ. P. 38(b), Plaintiff demands a trial by jury of all issues so triable.

Dated this  $22^{nd}$  day of December, 2006.

By: <u>/s/ David W. Axelrod</u> <u>Schwabe, Williamson & Wyatt, P.C.</u> David W. Axelrod, OSB #75023 <u>daxelrod@schwabe.com</u> Johnathan E. Mansfield, OSB #05539 <u>jmansfield@schwabe.com</u>

> Irell & Manella, LLP Morgan Chu, pro hac vice <u>mchu@irell.com</u> Gary N. Frischling, pro hac vice <u>gfrischling@irell.com</u> Brian D. Ledahl, pro hac vice <u>bledahl@irell.com</u>

Attorneys for Plaintiff FormFactor, Inc.

## Page 12 FIRST AMENDED COMPLAINT

## **CERTIFICATE OF SERVICE**

I hereby certify that on the 22nd day of December, 2006, I served the on the following FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT on the parties at the

following addresses:

Jeffery Matthews Susan D. Marmaduke Harrang Long Gary Rudnick 360 E. 10<sup>th</sup> Avenue, Suite 300 Eugene, OR 97401 George M. Borkowski Mitchell Silberberg & Knupp 11377 W. Olympic Blvd. Los Angeles, CA 90064

by mailing to them a true and correct copy thereof, certified by me as such, placed in a sealed envelope addressed to them at the addresses set forth above, and deposited in the U.S. Post Office at Portland, Oregon on said day with postage prepaid.

/s/ David W. Axelrod

# Page 1 CERTIFICATE OF SERVICE