

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF DELAWARE**

ADVANCED MICRO DEVICES, INC. and ATI TECHNOLOGIES ULC,	:	
	:	
Plaintiffs,	:	
	:	
v.	:	C. A. No. _____
	:	
SIGMA DESIGNS, INC.,	:	Jury Trial Demanded
	:	
Defendant.	:	
	:	

**COMPLAINT FOR PATENT INFRINGEMENT**

Advanced Micro Devices, Inc. and ATI Technologies ULC (“ATI Technologies”) (collectively “Plaintiffs”), bring this Complaint for patent infringement under 35 U.S.C. §271 against Sigma Designs, Inc. (“SDI”) or (“Defendant”), and allege as follows:

**THE PARTIES**

1. Plaintiff Advanced Micro Devices, Inc. is a corporation organized and existing under the law of the State of Delaware, and maintains its principal place of business at One AMD Place, Sunnyvale, California 94085.

2. ATI Technologies is incorporated in Canada and has a principal place of business at 1 Commerce Valley Drive East, Markham, Ontario L3T 7X6, Canada. ATI Technologies is a wholly-owned indirect subsidiary of Advanced Micro Devices, Inc.

3. Upon information and belief, SDI is a domestic corporation organized and existing under the laws of the state of California, with its principal place of business located at 47467 Fremont Boulevard, Fremont, California 94538. SDI manufactures, imports into the United States, sells and/or offers for sale in the United States graphics systems and components

thereof, such as graphics capable integrated circuits. In addition, SDI's graphics capable integrated circuits are marketed, offered for sale, and/or sold throughout the United States, including within this District.

4. SDI, either itself and/or through the activities of its subsidiaries, designs, manufactures, has manufactured, sells, imports, sells for importation, and/or sells within the United States after importation, graphics systems and components thereof, such as graphics capable integrated circuits. These graphics capable integrated circuits provided by SDI are incorporated into various consumer products sold by entities, such as VIZIO, Inc. ("VIZIO"). Such consumer products may include, but are not limited to, televisions and various other devices that include graphics processors. SDI also imports into the United States graphics capable integrated circuits, such as integrated circuits containing graphics processors, which have not yet been incorporated into consumer products.

#### **JURISDICTION AND VENUE**

5. This action arises under the Patent Act, 35 U.S.C. § 1 *et seq.*
6. Subject matter jurisdiction is proper in this Court under 28 U.S.C. §§ 1331 and 1338(a).
7. Venue in this District is proper under 28 U.S.C. §§ 1391(b) and (c) and 1400(b).
8. This Court has personal jurisdiction over Defendant. Defendant has conducted and does conduct business within the State of Delaware. Defendant, directly or through subsidiaries or intermediaries (including distributors, retailers, and others), ships, distributes, offers for sale, sells, and advertises its products and/or services in the United States and the District of Delaware. Defendant, directly and through subsidiaries or intermediaries (including distributors, retailers, and others), has purposefully and voluntarily placed one or more of its

infringing products and/or services, as described below, into the stream of commerce with the expectation that those products will be purchased and used by consumers in the District of Delaware. These infringing products and/or services have been and continue to be purchased and used by consumers in the District of Delaware. Thus, Defendant has committed acts of patent infringement within the District of Delaware.

### **THE PATENTS**

9. United States Patent No. 7,633,506 (“the ’506 Patent”) is entitled “Parallel pipeline graphics system” and issued on December 15, 2009 to inventors Mark M. Leather and Eric Demers. The ’506 Patent issued from United States Patent Application No. 10/724,384, filed on November 26, 2003. The ’506 Patent claims priority to U.S. provisional application serial number 60/429,976, filed on November 27, 2002. A copy of the ’506 Patent is attached hereto as Exhibit A.

10. United States Patent No. 7,796,133 (“the ’133 Patent”) is entitled “Unified shader,” and issued on September 14, 2010 to inventors Mark M. Leather and Eric Demers. The ’133 Patent issued from United States Patent Application No. 10/730,965 filed on December 8, 2003. The ’133 Patent is a continuation of U.S. application Ser. No. 10/716,946, filed Nov. 18, 2003, now abandoned, which claims priority to U.S. provisional application serial no. 60/427,338, filed November 18, 2002. A copy of the ’133 Patent is attached as Exhibit B.

11. ATI Technologies is the original assignee and owns all rights, title, and interest to the ’506 and ’133 Patents.

12. The ’506 and ’133 Patents are each valid and enforceable.

## **BACKGROUND**

13. Plaintiffs incorporate the allegations of all of the foregoing Paragraphs as if fully restated herein.

14. Advanced Micro Devices, Inc. is an American multinational semiconductor company and pioneer of cutting-edge computer graphics technology. Since at least as early as 1985, ATI Technologies has made substantial investments to research, develop, and have manufactured high quality graphics systems. The Asserted Patents stem from the research and design of innovative proprietary technology developed by ATI Technologies. Advanced Micro Devices, Inc. acquired ATI Technologies in 2006, and has continued to make substantial investments to research, develop, and have manufactured high quality graphics systems that practice the Asserted Patents. Advanced Micro Devices, Inc. has invested substantial resources collectively researching, developing, testing, launching, supporting, and maintaining groundbreaking graphics technology that practices the Asserted Patents.

15. The Asserted Patents cover inventions relating to important aspects of Advanced Micro Devices, Inc.'s graphics processing units ("GPUs") and accelerated processing units ("APUs").

16. Defendant has imported into the United States, marketed, offered for sale and/or sold in the United States graphics systems and components thereof, such as graphics capable integrated circuits that infringe the Asserted Patents.

17. Defendant has, and continues to, directly infringe the Asserted Patents by engaging in acts constituting infringement under 35 U.S.C. § 271, including but not necessarily limited to one or more of making, using, selling and/or offering to sell, in this District and elsewhere in the United States, and importing into this District and elsewhere in the United

States, certain infringing graphics systems and components thereof including but not limited to graphics capable integrated circuits which incorporate the functionalities and compositions described in detail in Counts I-II (collectively, “SDI Accused Products”).

18. The infringing SDI Accused Products include, but are not limited to the integrated circuits supplied to VIZIO, including, without limitation, the V6 and V8 integrated circuits. For example, without limitation, the V6 integrated circuit (“Exemplary SDI Integrated Circuit”), incorporated into the VIZIO Television model number E43U-D2, is an SDI Accused Product.

19. Defendant’s acts of infringement have caused damage to Plaintiffs. Plaintiffs are entitled to recover from Defendant the damages sustained by Plaintiffs as a result of Defendant’s wrongful acts.

**COUNT I**  
**(Defendant’s Infringement of the ’506 Patent)**

20. Plaintiffs incorporate the allegations of all of the foregoing Paragraphs as if fully restated herein.

21. Defendant has directly infringed and continues to directly infringe the ’506 Patent by making, using, selling, offering for sale, or importing into the United States products and/or methods covered by one or more claims of the ’506 Patent including, but not limited to, graphics systems and components thereof including but not limited to graphics capable integrated circuits. The accused graphics systems that infringe one or more claims of the ’506 Patent include, but are not limited to, at least the SDI Accused Products. Further discovery may reveal additional infringing products and/or models.

22. For example, and without limitation, operation and use of the Exemplary SDI Integrated Circuit infringes one or more claims of the ’506 Patent, including but not limited to Claim 1.

23. Attached hereto as Exhibit C, and incorporated into this Complaint, is a claim chart showing where in the Exemplary SDI Integrated Circuit each limitation of Claim 1 is met.

24. Defendant has had knowledge of the '506 Patent since at least as of the filing of this Complaint.

25. Defendant's continued infringement of the '506 Patent has damaged and will continue to damage Plaintiffs.

26. Plaintiffs are entitled to recover damages adequate to compensate for Defendant's infringement.

27. ATI Technologies is the assignee and lawful owner of all right, title and interest in and to the '506 Patent. The '506 Patent is valid and enforceable.

**COUNT II**  
**(Defendant's Infringement of the '133 Patent)**

28. Plaintiffs incorporate the allegations of all of the foregoing Paragraphs as if fully restated herein.

29. Defendant has directly infringed and continues to directly infringe the '133 Patent by making, using, selling, offering for sale, or importing into the United States products and/or methods covered by one or more claims of the '133 Patent including, but not limited to, graphics systems and components thereof including but not limited to graphics capable integrated circuits. The accused graphics systems that infringe one or more claims of the '133 Patent include, but are not limited to, at least the SDI Accused Products. Further discovery may reveal additional infringing products and/or models.

30. For example, and without limitation, operation and use of the Exemplary SDI Integrated Circuit infringes one or more claims of the '133 Patent, including but not limited to Claim 1 and Claim 40.

31. Attached hereto as Exhibit D, and incorporated into this Complaint, is a claim chart showing where in the Exemplary SDI Integrated Circuit each limitation of Claim 1 and Claim 40 are met.

32. Defendant has had knowledge of the '133 Patent since at least as of the filing of this Complaint.

33. Defendant's continued infringement of the '133 Patent has damaged and will continue to damage Plaintiffs.

34. Plaintiffs are entitled to recover damages adequate to compensate for Defendant's infringement.

35. ATI Technologies is the assignee and lawful owner of all right, title and interest in and to the '133 Patent. The '133 Patent is valid and enforceable.

#### **PRAYER FOR RELIEF**

WHEREFORE, Plaintiffs respectfully request the following relief:

- a) A judgment that the '506 Patent and the '133 Patent are valid and enforceable.
- b) A judgment that Defendant has infringed, either literally or under the Doctrine of Equivalents, one or more claims of the '506 Patent;
- c) A judgment that Defendant has infringed, either literally or under the Doctrine of Equivalents, one or more claims of the '133 Patent;
- d) A judgment that awards Plaintiffs all appropriate damages under 35 U.S.C. § 284 for Defendant's past infringement, and any continuing or future infringement of the Asserted Patents, up until the date such judgment is entered, including pre or post judgment interest, costs, and disbursements as justified under 35 U.S.C. § 284 and, if necessary, to adequately compensate Plaintiffs for Defendant's infringement, an accounting:

- i. that this case be declared exceptional within the meaning of 35 U.S.C. § 285 and that Plaintiffs be awarded their reasonable attorneys' fees against Defendant that they incur in prosecuting this action; and
- ii. that Plaintiffs be awarded costs, and expenses that they incur in prosecuting this action; and
- f) A judgment that Plaintiffs be awarded such further relief at law or in equity as the Court deems just and proper.

**DEMAND FOR JURY TRIAL**

Plaintiffs hereby demand trial by jury on all claims and issues so triable.

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Dated: January 23, 2017