

**IN THE UNITED STATES DISTRICT COURT
FOR THE WESTERN DISTRICT OF TEXAS
AUSTIN DIVISION**

ERIDANUS TECHNOLOGIES, INC.,

Plaintiff,

v.

ADVANCED MICRO DEVICES, INC.,

Defendant.

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CIVIL ACTION NO. 1:23-CV-1036

JURY TRIAL DEMANDED

PLAINTIFF’S COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Eridanus Technologies, Inc. files this Complaint against Defendant Advanced Micro Devices, Inc. for infringement of U.S. Patent No. 7,372,764 (the “764 patent”) and U.S. Patent No. 7,671,623 (the “623 patent”), collectively, the “Asserted Patents.”

THE PARTIES

1. Eridanus Technologies, Inc. (“ETI,” “Eridanus,” or “Plaintiff”) is a Delaware corporation having a principal place of business in Ottawa, Ontario.
2. On information and belief, Advanced Micro Devices, Inc. (“AMD” or “Defendant”) is a Delaware corporation doing business in Texas with offices in Austin, Texas. AMD may be served in Texas via its registered agent CT Corporation System, 1999 Bryan St., Ste. 900, Dallas, TX 75201. AMD conducts business in Texas and, particularly, the Western District of Texas, directly or through intermediaries (including subsidiaries, distributors, affiliates, retailers, suppliers, integrators, customers, or others).

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.* This Court has jurisdiction over this action pursuant to 28 U.S.C. §§ 1331 and 1338(a) and 1367.

4. This Court has specific and personal jurisdiction over AMD consistent with the requirements of the Due Process Clause of the United States Constitution and the Texas Long Arm Statute (*see* Tex. Civ. Prac. & Rem. Code §§17.041 *et seq.*) because, among other things, (i) AMD has done and continues to do business in Texas and this District, and (ii) AMD has committed and continues to commit, directly or through intermediaries (including subsidiaries, distributors, affiliates, retailers, suppliers, integrators, customers, and others), acts of patent infringement in this State and this District. Such acts of infringement include making, using, offering to sell, and/or selling Accused Products (as more particularly identified and described throughout this Complaint) in this State and this District and/or importing Accused Products into this State and District and/or inducing others to commit acts of patent infringement in this State and District. Indeed, AMD has purposefully and voluntarily placed, and is continuing to place, one or more Accused Products into the stream of commerce through established distribution channels (including the Internet) with the expectation and intent that such products will be sold to and purchased by consumers in the United States, this State, and this District; and with the knowledge and expectation that such products (whether in standalone form or as integrated in downstream products) will be imported into the United States, this State, and this District.

5. AMD has derived substantial revenues from its infringing acts occurring within this State and this District. It has substantial business in this State and this District, including: (i) at least part of its infringing activities alleged herein; and (ii) regularly doing or soliciting business,

engaging in other persistent conduct, and/or deriving substantial revenue from infringing goods offered for sale, sold, and imported, and services provided to Texas residents vicariously through and/or in concert with its alter egos, intermediaries, agents, distributors, importers, customers, subsidiaries, and/or consumers.

6. This Court has personal jurisdiction over AMD, AMD regularly conducts business and has committed acts of patent infringement and/or has induced acts of patent infringement by others in this District and/or has contributed to patent infringement by others in this District, the State of Texas, and elsewhere in the United States. Further, this Court has personal jurisdiction over AMD through intermediaries (including subsidiaries, distributors, affiliates, retailers, suppliers, integrators, customers, and others). Through direction and control of such intermediaries, AMD has committed acts of direct and/or indirect patent infringement within this State and elsewhere within the United States giving rise to this action and/or has established minimum contacts with this forum such that the exercise of personal jurisdiction over AMD would not offend traditional notions of fair play and substantial justice.

7. In addition, AMD has knowingly induced, and continues to knowingly induce, infringement within this District by advertising, marketing, offering for sale and/or selling Accused Products (such as processors and SoCs) that incorporate the fundamental technologies covered by the Asserted Patents. Such advertising, marketing, offering for sale and/or selling of Accused Products is directed to consumers, customers, manufacturers, integrators, suppliers, distributors, resellers, partners, and/or end users, and this includes providing instructions, user manuals, advertising, and/or marketing materials facilitating, directing and/or encouraging use of infringing functionality with AMD's knowledge thereof.

8. AMD has, thus, in the multitude of ways described above, availed itself of the benefits and privileges of conducting business in this State and willingly subjected itself to the exercise of this Court's personal jurisdiction over it. Indeed, AMD has sufficient minimum contacts with this forum through its transaction of substantial business in this State and this District and its commission of acts of patent infringement as alleged in this Complaint that are purposefully directed towards this State and District.

9. Venue is proper in this district for AMD pursuant to 28 U.S.C. § 1400(b). On information and belief, AMD has committed and continues to commit acts of patent infringement in this District, including making, using, offering to sell, and/or selling accused products in this District, and/or importing accused products into this District, including by Internet sales and sales via retail and wholesale stores, inducing others to commit acts of patent infringement in Texas, and/or committing at least a portion of any other infringements alleged herein in this District. AMD has one or more regular and established places of business in this District, including at least at 7171 Southwest Pkwy, Austin, TX 78735 (the "Austin Office"). The Austin Office is one of the largest AMD campuses and hosts thousands of employees.

THE PATENTS-IN-SUIT

10. ETI is the sole and exclusive owner of all right, title, and interest in the '764 patent and the '623 patent and holds the exclusive right to take all actions necessary to enforce its rights in, and to, the Asserted Patents, including the filing of this patent infringement lawsuit. ETI also has the right to recover all damages for past, present, and future infringements of the Asserted Patents and to seek injunctive relief as appropriate under the law.

11. The '764 patent is titled, "Logic device with reduced leakage current." The '764 patent lawfully issued on May 13, 2008, and stems from U.S. Patent Application No. 11/200,867,

which was filed on August 10, 2005, and claims priority to an Indian application filed on August 11, 2004.

12. The '623 patent is titled, "Device for managing the consumption peak of a domain on each powering-up." The '623 patent lawfully issued on March 2, 2010, and stems from U.S. Patent Application No. 11/701,973, which was filed on February 2, 2007, and claims priority to a French application filed on February 3, 2006.

13. ETI and its predecessors complied with the requirements of 35 U.S.C. § 287, to the extent necessary, such that ETI may recover pre-suit damages.

14. The claims of the patents-in-suit are directed to patent eligible subject matter under 35 U.S.C. § 101. They are not directed to an abstract idea, and the technologies covered by the claims comprise systems and/or consist of ordered combinations of features and functions that, at the time of invention, were not, alone or in combination, well-understood, routine, or conventional.

DEFENDANT'S PRE-SUIT KNOWLEDGE OF ITS INFRINGEMENT

15. Prior to the filing of the Complaint, ETI repeatedly attempted to engage AMD and/or its agents in licensing discussions related to its portfolio including the Asserted Patents. At least as of May 2021, ETI presented AMD with charts detailing its infringement of the Asserted Patents. Despite ETI's efforts, AMD ignored its infringement, leaving ETI with no other choice but to seek relief through patent enforcement litigation and filing suit in this district.

16. The Accused Products addressed in the Counts below include, but are not limited to, the exemplary products identified in the charts presented to AMD. AMD's past and continuing sales of the Accused Products (i) willfully infringe the Asserted Patents, and (ii) impermissibly usurp the significant benefits of ETI's patented technologies without fairly compensating ETI.

COUNT I

(INFRINGEMENT OF U.S. PATENT NO. 7,372,764)

17. Plaintiff incorporates the preceding paragraphs herein by reference.

18. This cause of action arises under the patent laws of the United States, and, in particular, 35 U.S.C. §§ 271, *et seq.*

19. ETI is the owner of all substantial rights, title, and interest in and to the '764 patent including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

20. The '764 patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on May 13, 2008, after full and fair examination.

21. AMD has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '764 patent in this District and elsewhere in Texas and the United States by making, using, selling, offering to sell, and/or importing, and by actively inducing others to make, use, sell, offer to sell, and/or import, AMD products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '764 patent, including, but not limited to, Ryzen 1000 Series CPUs; Ryzen 2000 Series CPUs and APUs; Ryzen 3000 and Pro 3000 Series APUs; Ryzen Threadripper 2000 Series CPUs; Ryzen Embedded R1000 Series CPUs and APUs; Ryzen Embedded V1000 Series CPUs and APUs; Ryzen Embedded R2000 Series APUs; Ryzen Embedded 2000 AM4 Series APUs; EPYC 7001 Series CPUs; EPYC Embedded 3000 Series CPUs; and EPYC Embedded 7001 Series CPUs, and any current and future generations of AMD products employing on die LDO regulation (collectively, the "'764 Accused Products").

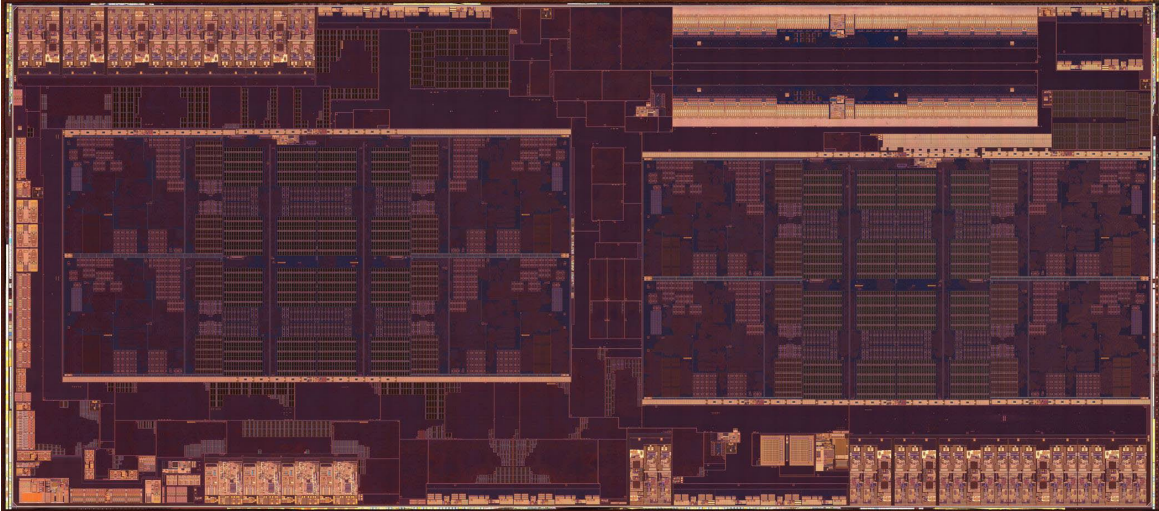
Direct Infringement (35 U.S.C. § 271(a))

22. AMD has directly infringed and continues to directly infringe one or more claims of the '764 patent in this District and elsewhere in Texas and the United States.

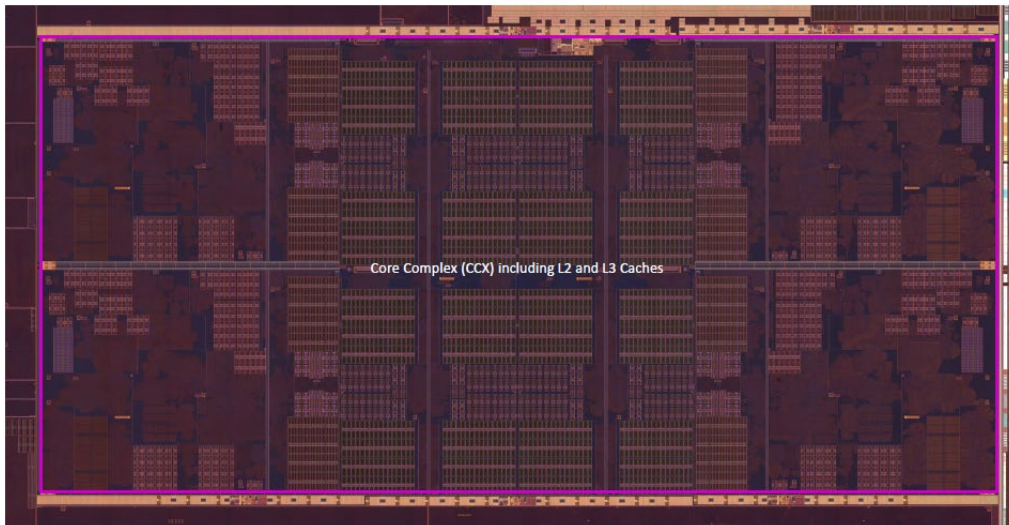
23. AMD has directly infringed and continues to directly infringe, either by itself or via its agent(s), at least Claims 1, 2, and 3 of the '764 patent¹ as set forth under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing the '764 Accused Products. Furthermore, AMD makes and sells the '764 Accused Products outside of the United States and either delivers those products to its customers, distributors, and/or subsidiaries in the United States, or, in the case that it delivers the '764 Accused Products outside of the United States, it does so intending and/or knowing that those products are destined for the United States and/or designed and designated for sale in the United States, thereby directly infringing the '764 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013).

24. By way of illustration only, the '764 Accused Products satisfy each and every element of claim 1 of the '764 patent. As shown below, the '764 Accused Products comprise a “[a] logic device with reduced leakage current.” For example, the below image of a '764 Accused Product is a logic device with reduced leakage current:

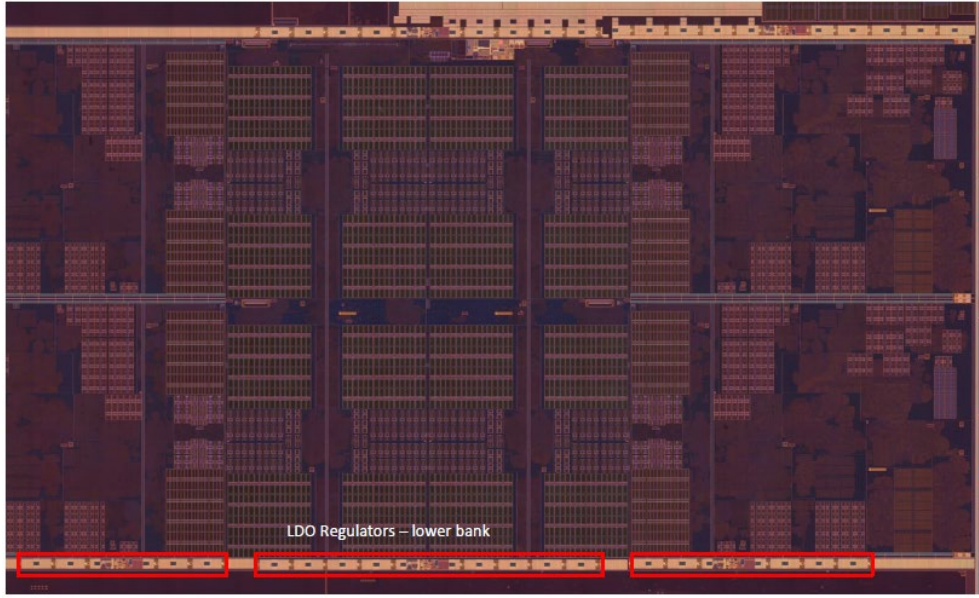
¹ Throughout this Complaint, wherever ETI identifies specific claims of the Asserted Patents infringed by AMD, ETI expressly reserves the right to identify additional claims and products in its infringement contentions in accordance with applicable local rules and the Court’s case management order. Specifically identified claims throughout this Complaint are provided for notice pleading only.



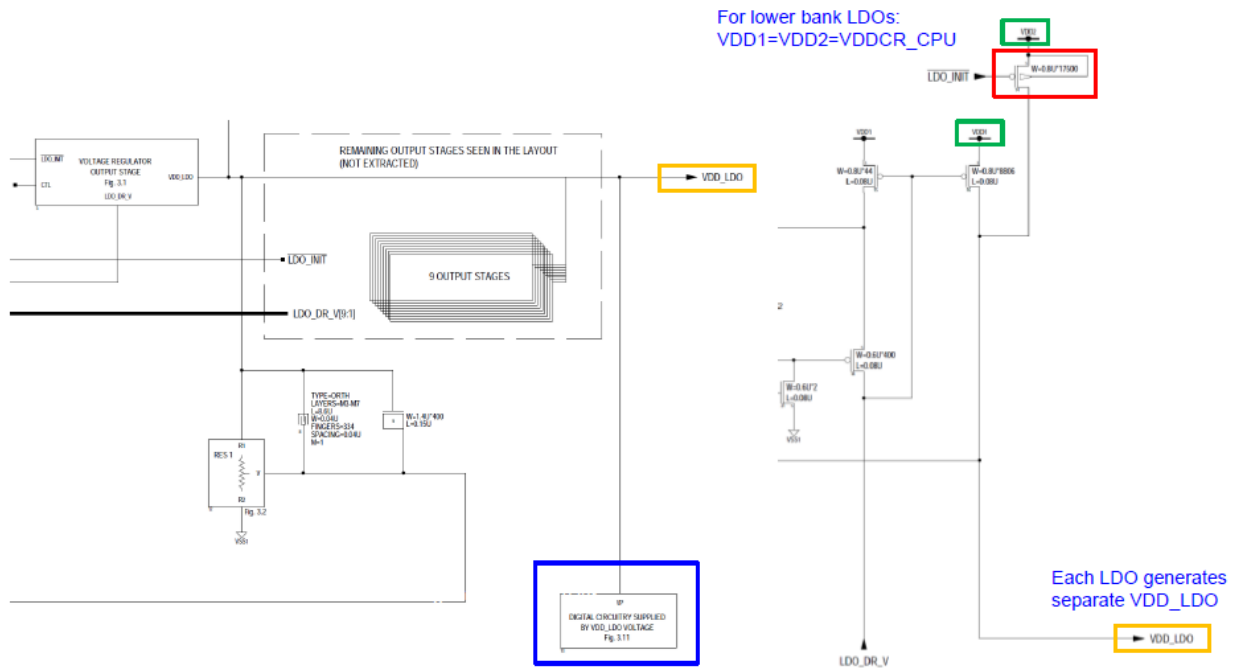
25. As outlined and annotated below, the '764 Accused Product comprise “an array of logic devices.” For example, the '764 Accused Products comprise a core complex (CCX) that includes the L2 and L3 caches, shown in purple below:



26. As outlined and annotated below, the '764 Accused Product comprise “a switch connected between each supply terminal and each virtual supply terminal of said logic devices for sourcing/sinking current to/from said logic devices.” For example, the '764 Accused Products comprise LDO Regulators in a lower bank that constitute a switch connected between each supply terminal and each virtual supply terminal, shown in red below:

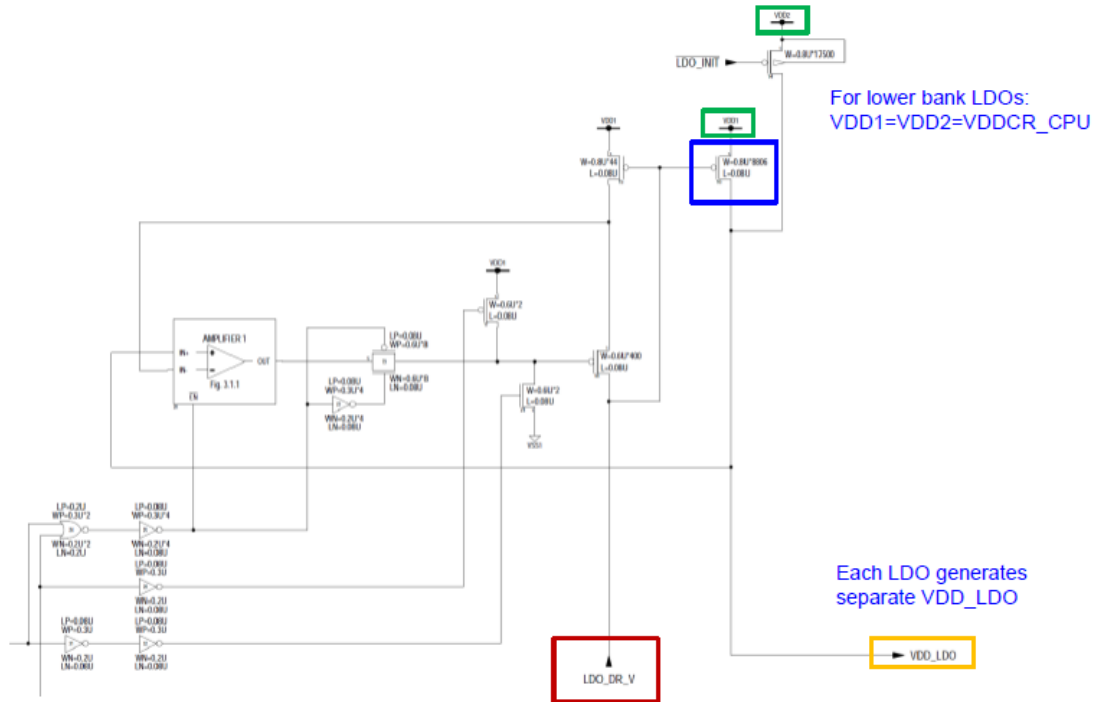


Further, the switch (red) is connected between each supply terminal (green) and each virtual supply terminal (yellow) of said logic devices for sourcing/sinking current to/from said logic devices (blue):

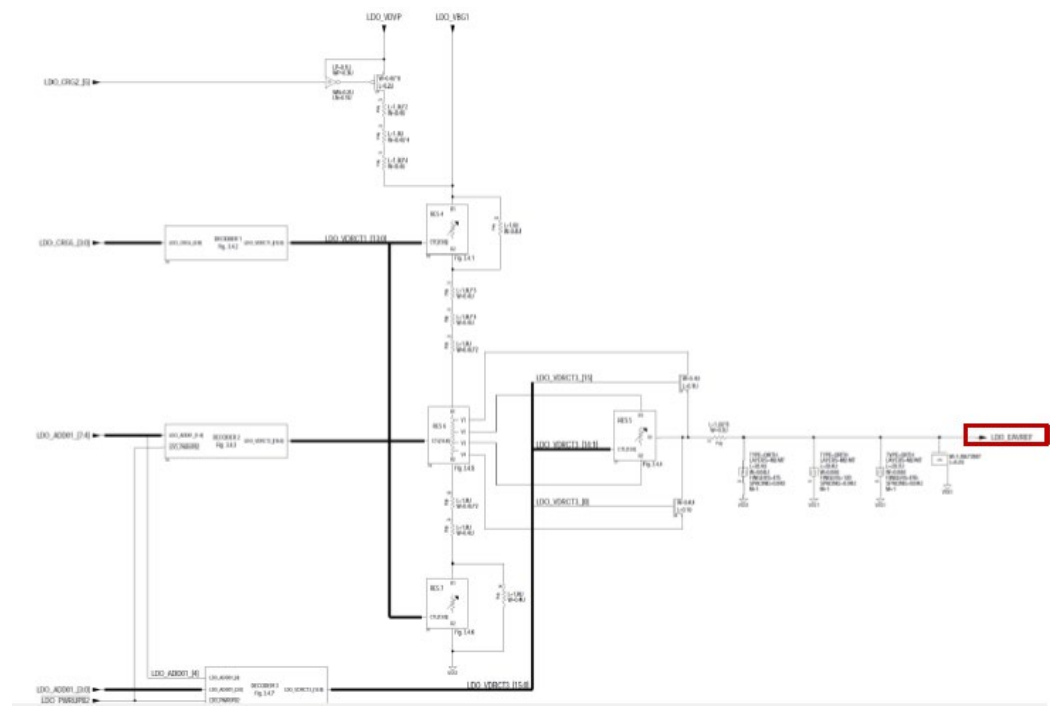
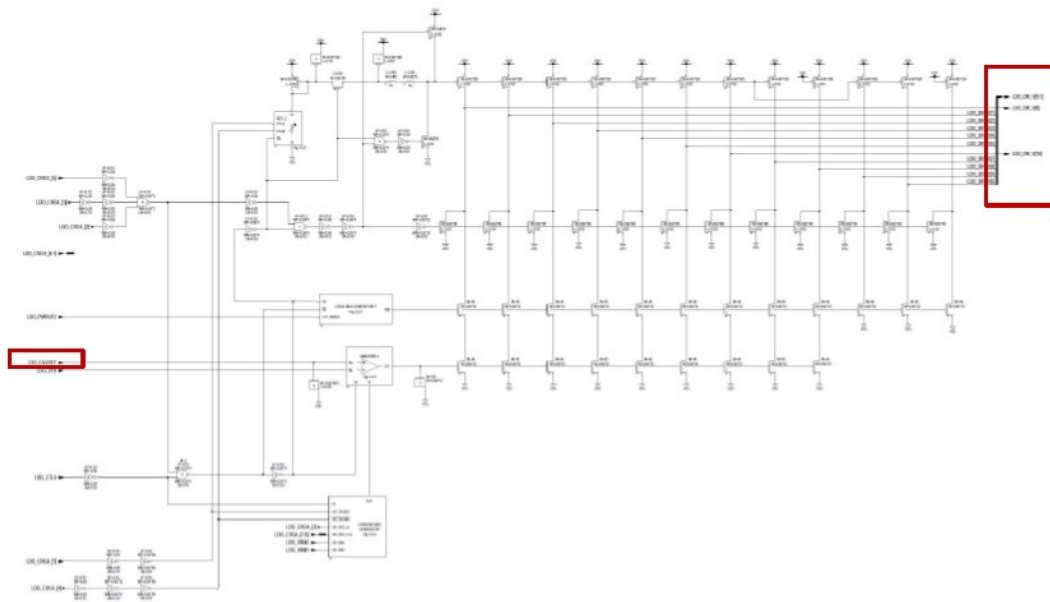


27. As outlined and annotated below, the '764 Accused Product comprise “voltage controlled constriction devices connected between (blue) said supply terminals (green) and said

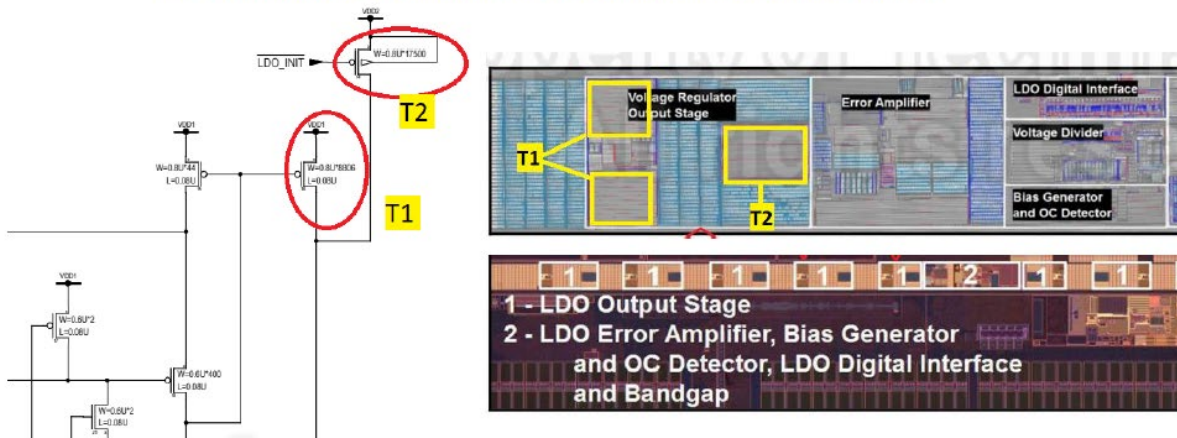
virtual supply terminals (yellow), said voltage controlled constriction devices being biased by reference voltages between less than a supply voltage and more than a ground voltage (red) to reduce the leakage current in an area efficient manner.”



Further, the voltage controlled constriction devices are biased by reference voltages between less than a supply voltage and more than a ground voltage to reduce the leakage current in an area efficient manner (red):



The "constriction devices" T1 size and layout "reduce the leakage current in an area efficient manner"



Indirect Infringement (Inducement – 35 U.S.C. § 271(b))

28. In addition and/or in the alternative to its direct infringements, AMD has indirectly infringed and continues to indirectly infringe one or more claims of the '764 patent by knowingly and intentionally inducing others, including its subsidiaries, distributors, affiliates, retailers, suppliers, integrators, importers, customers, and/or consumers, to directly infringe by making, using, offering to sell, selling and/or importing into the United States the '764 Accused Products.

29. At a minimum, AMD has knowledge of the '764 patent since being served with this Complaint. AMD also has knowledge of the '764 patent since receiving detailed correspondence from ETI prior to the filing of the Complaint, alerting AMD to its infringements. Since receiving notice of its infringements, AMD has actively induced the direct infringements of its subsidiaries, distributors, affiliates, retailers, suppliers, integrators, importers, customers, and/or consumers as set forth under U.S.C. § 271(b). Such inducements have been committed with the knowledge, or with willful blindness to the fact, that the acts induced constitute infringement of the '764 patent. Indeed, AMD has intended to cause, continues to intend to cause, and has taken, and continues to take affirmative steps to induce infringement by, among other things, creating and disseminating advertisements and instructive materials that promote the infringing use of the '764 Accused

Products; creating and/or maintaining established distribution channels for the '764 Accused Products into and within the United States; manufacturing the '764 Accused Products in conformity with U.S. laws and regulations; providing technical documentation and tools for the '764 Accused Products², and promoting the incorporation of the '764 Accused Products into end-user products.

Damages

30. On information and belief, despite having knowledge of the '764 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '764 patent, AMD has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. AMD's infringing activities relative to the '764 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that ETI is entitled to enhanced damages under 35 U.S.C. § 284 up to three times the amount found or assessed.

31. ETI has been damaged as a result of AMD's infringing conduct described in this Count. AMD is, thus, liable to ETI in an amount that adequately compensates ETI for AMD's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

COUNT II

(INFRINGEMENT OF U.S. PATENT NO. 7,671,623)

32. Plaintiff incorporates the preceding paragraphs herein by reference.

² See, e.g., <https://www.amd.com/en/support/tech-docs>.

33. This cause of action arises under the patent laws of the United States, and, in particular, 35 U.S.C. §§ 271, *et seq.*

34. ETI is the owner of all substantial rights, title, and interest in and to the '623 patent including the right to exclude others and to enforce, sue, and recover damages for past and future infringements.

35. The '623 patent is valid, enforceable, and was duly and legally issued by the United States Patent and Trademark Office on March 2, 2010, after full and fair examination.

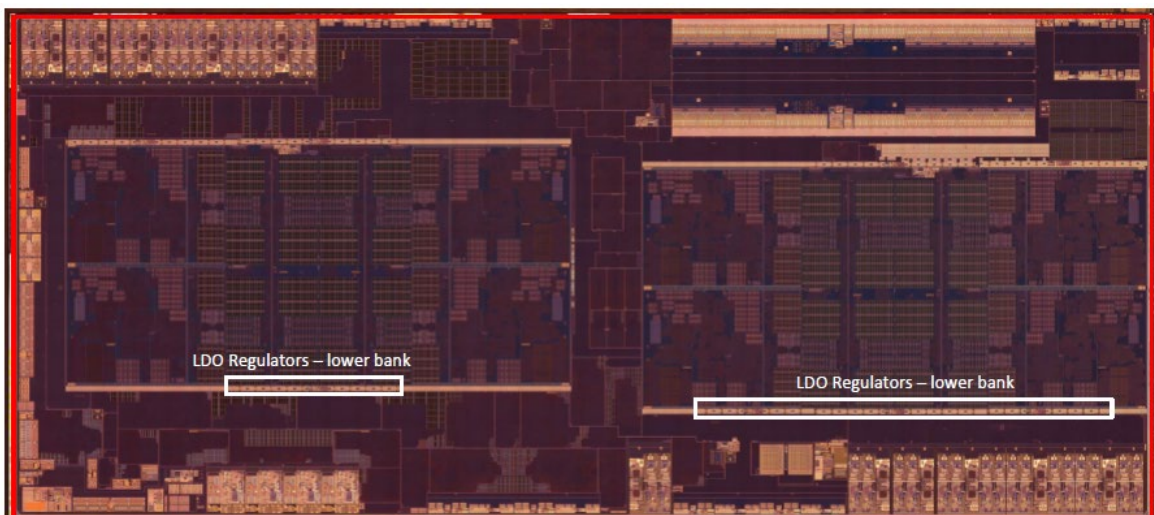
36. AMD has and continues to directly and/or indirectly infringe (by inducing infringement) one or more claims of the '623 patent in this District and elsewhere in Texas and the United States by making, using, selling, offering to sell, and/or importing, and by actively inducing others to make, use, sell, offer to sell, and/or import, AMD products, their components and processes, and/or products containing the same that incorporate the fundamental technologies covered by the '623 patent, including, but not limited to, but not limited to, Ryzen 1000 Series CPUs; Ryzen 2000 Series CPUs and APUs; Ryzen 3000 and Pro 3000 Series APUs; Ryzen Threadripper 2000 Series CPUs; Ryzen Embedded R1000 Series CPUs and APUs; Ryzen Embedded V1000 Series CPUs and APUs; Ryzen Embedded R2000 Series APUs; Ryzen Embedded 2000 AM4 Series APUs; EPYC 7001 Series CPUs; EPYC Embedded 3000 Series CPUs; and EPYC Embedded 7001 Series CPUs, and any current and future generations of AMD products employing on die LDO regulation (collectively, the "'623 Accused Products").

Direct Infringement (35 U.S.C. § 271(a))

37. AMD has directly infringed and continues to directly infringe one or more claims of the '623 patent in this District and elsewhere in Texas and the United States.

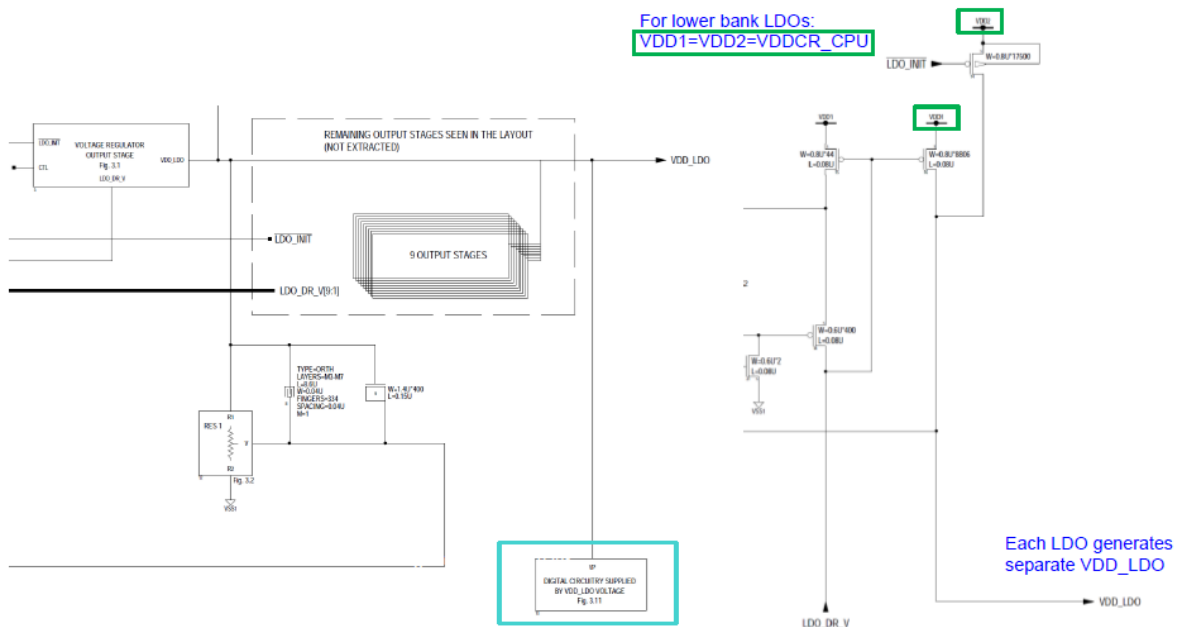
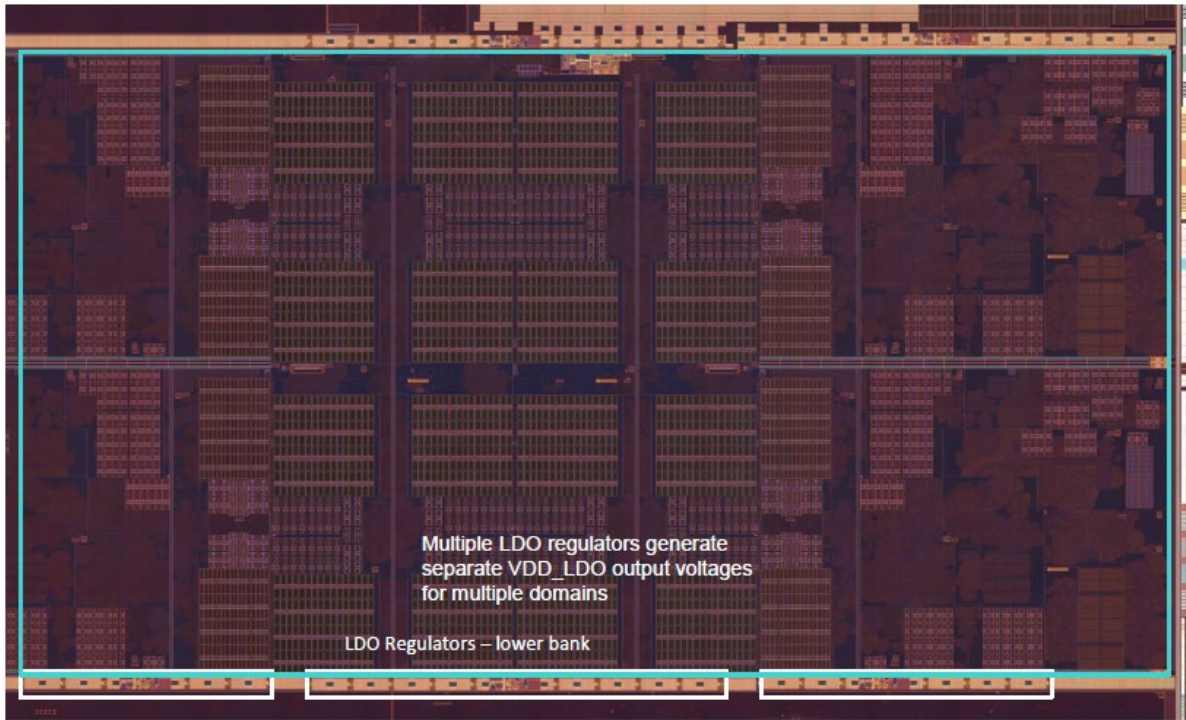
38. AMD has directly infringed and continues to directly infringe, either by itself or via its agent(s), at least Claims 1, 2, 3, 5, and 6 of the '623 patent as set forth under 35 U.S.C. § 271(a) by making, offering for sale, selling, and/or importing the '623 Accused Products. Furthermore, AMD makes and sells the '623 Accused Products outside of the United States and either, delivers those products to its customers, distributors, and/or subsidiaries in the United States, or, in the case that it delivers the '623 Accused Products outside of the United States, it does so intending and/or knowing that those products are destined for the United States and/or designed and designated for sale in the United States, thereby directly infringing the '623 patent. *See, e.g., Lake Cherokee Hard Drive Techs., L.L.C. v. Marvell Semiconductor, Inc.*, 964 F. Supp. 2d 653, 658 (E.D. Tex. 2013).

39. By way of illustration only, the '623 Accused Products satisfy each and every element of claim 1 of the '623 patent. As shown below, the '623 Accused Products comprise “[a] device for managing the current consumption peak on each powering-up of a domain.” Further, the device comprises “a System-On-Chip (SOC) system which includes a plurality of domains and a global power supply grid (red)”:



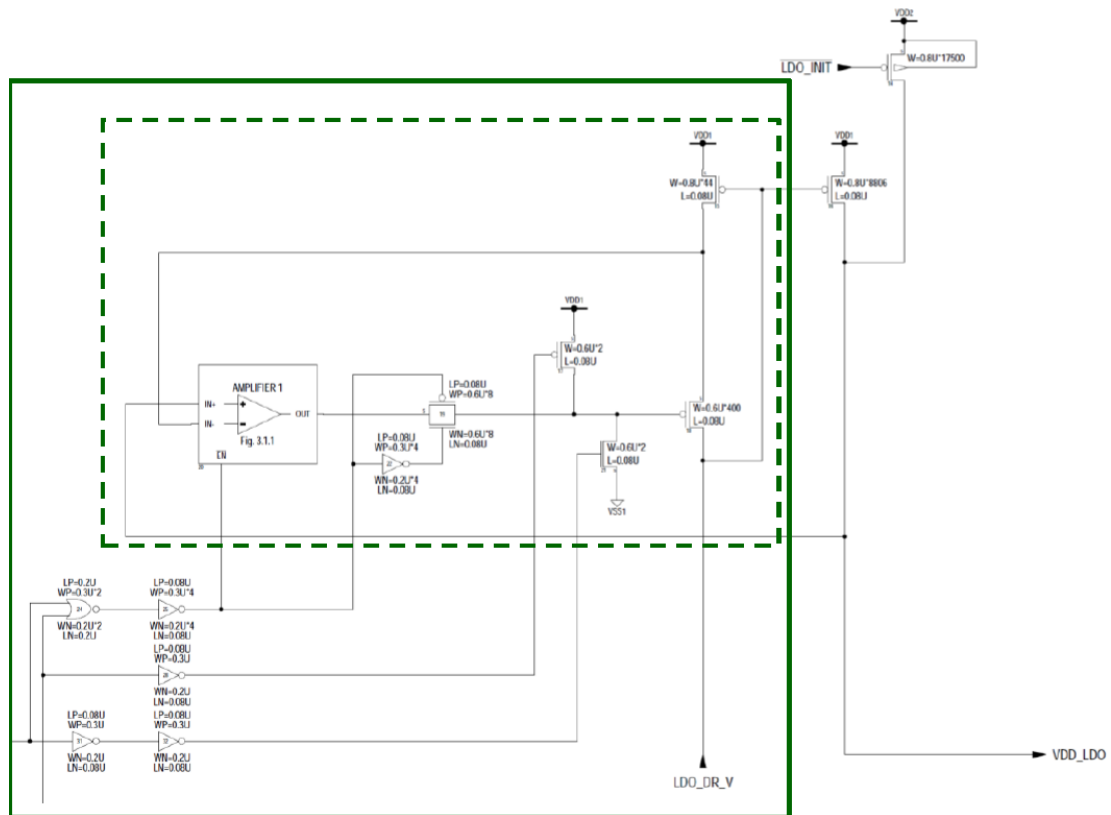
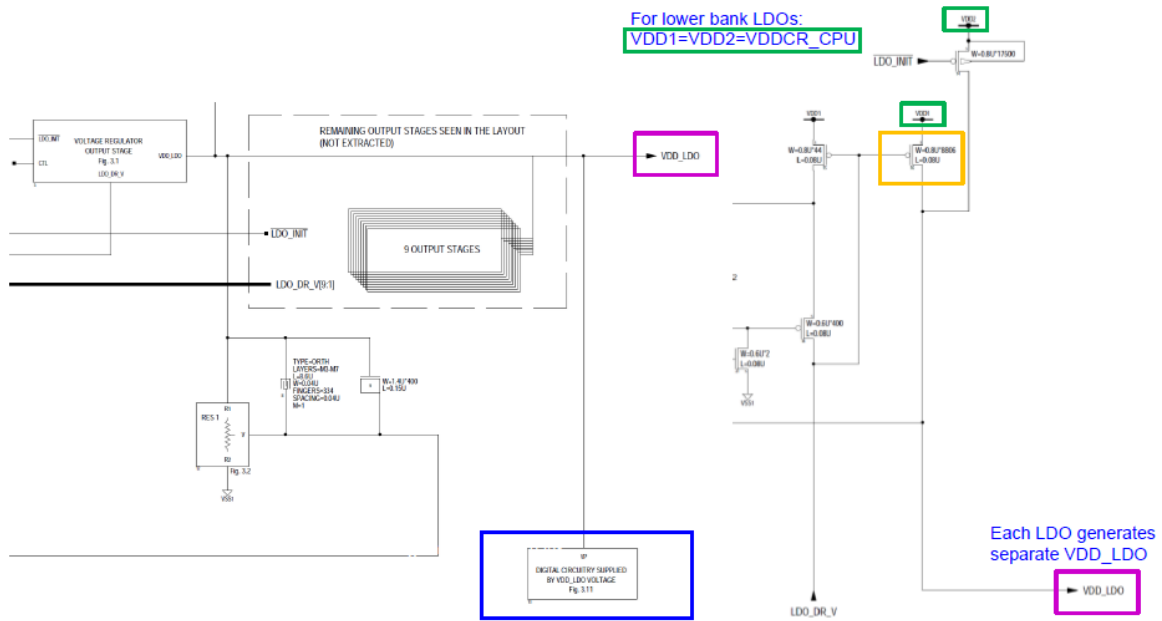
Multiple LDO regulators generate separate VDD_LDO voltages for multiple domains. Lower bank LDOs are supplied from VDDCR_CPU.

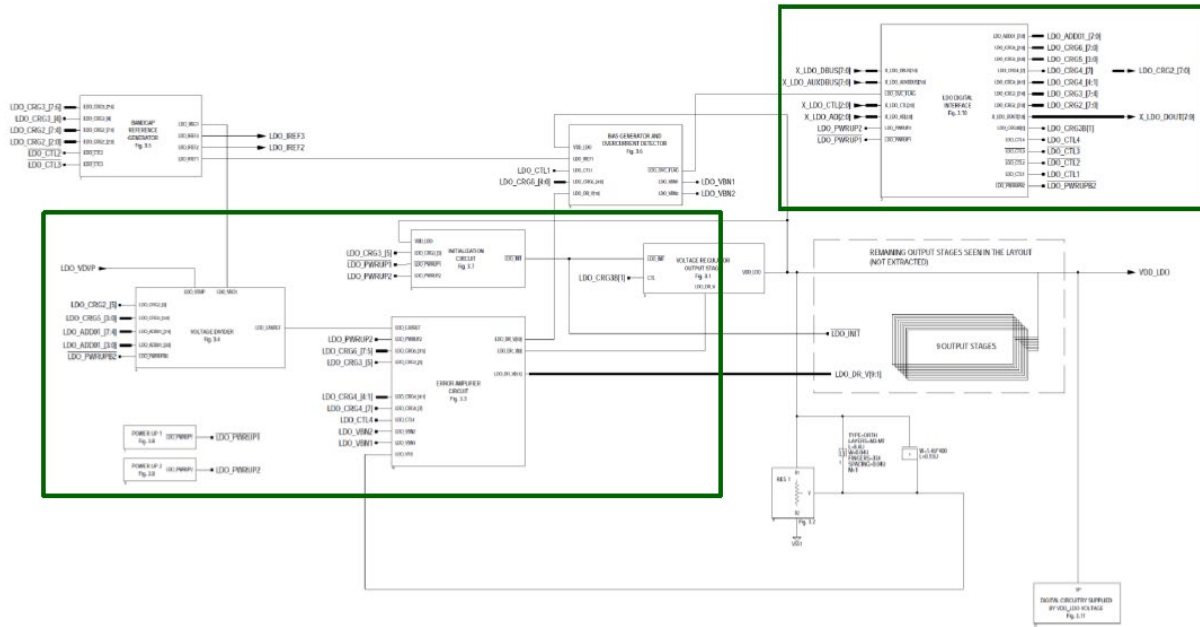
Further, the SOC includes a plurality of domains (turquoise) and a global power supply grid (green):



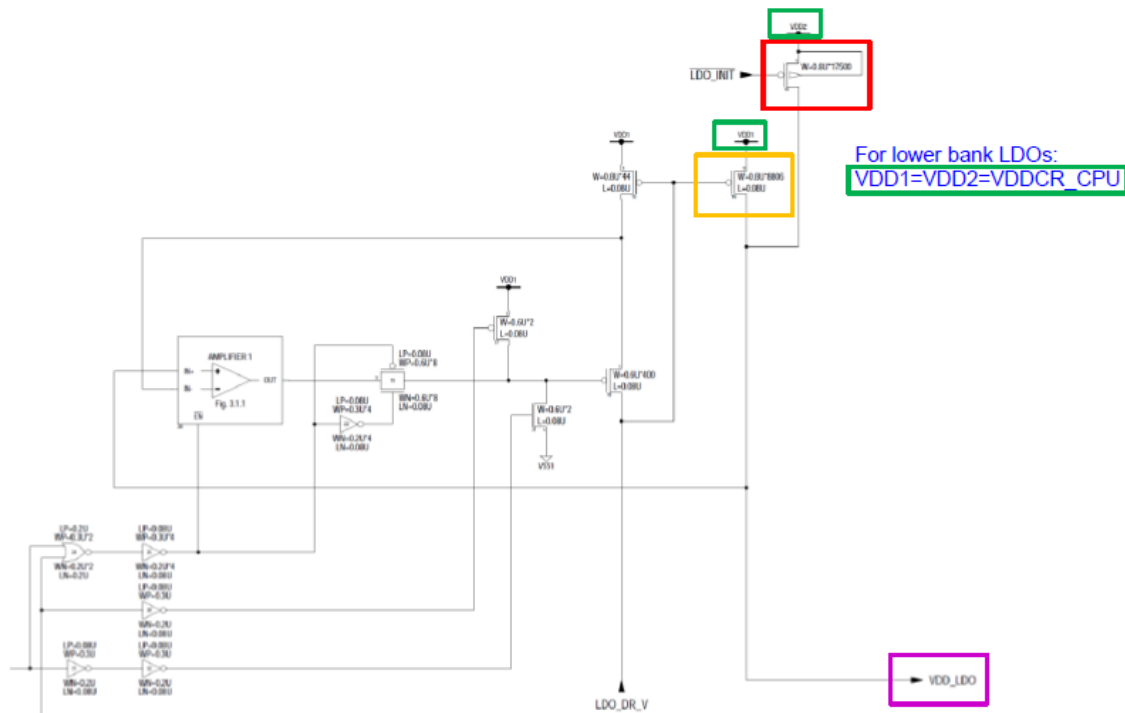
40. As outlined and annotated below, the '623 Accused Products are configured such that “each domain being selectively supplied by (blue) a local power supply grid (purple)

connected to the global supply grid (light green) via a power switch (yellow) commanded by a control circuit (dashed dark green) integrated in a control-command device (dark green).”

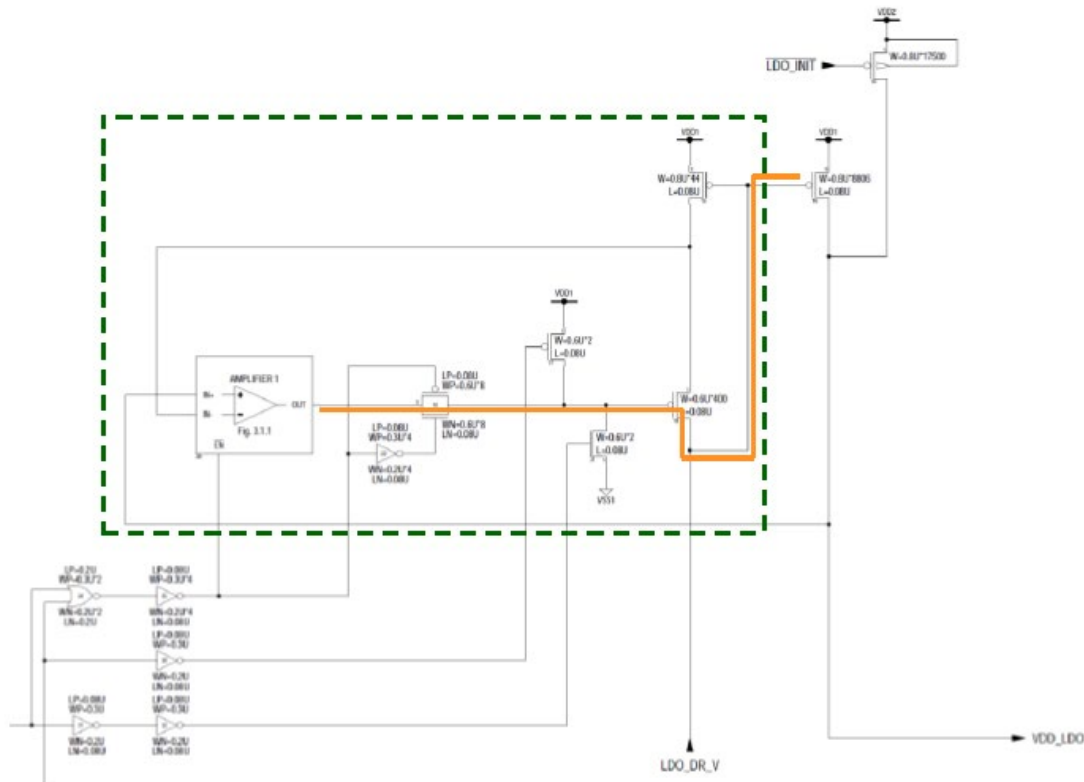




41. As outlined and annotated below, the '623 Accused Products comprise “at least one pre-charge transistor connected in parallel (red) with the power switch (yellow) between the global supply grid (green) and the local power supply grid (purple).”



42. As outlined and annotated below, the '623 Accused Products are configured such that “the control circuit (dashed dark green) for the power switch is configured to generate an analog command signal whose slew-rate is controlled (yellow).”



Indirect Infringement (Inducement – 35 U.S.C. § 271(b))

43. In addition and/or in the alternative to its direct infringements, AMD has indirectly infringed and continues to indirectly infringe one or more claims of the '623 patent by knowingly and intentionally inducing others, including its subsidiaries, distributors, affiliates, retailers, suppliers, integrators, importers, customers, and/or consumers, to directly infringe by making, using, offering to sell, selling and/or importing into the United States the '623 Accused Products.

44. At a minimum, AMD has knowledge of the '623 patent since being served with this Complaint. AMD also has knowledge of the '623 patent since receiving detailed correspondence from ETI prior to the filing of the Complaint, alerting AMD to its infringements. Since receiving

notice of its infringements, AMD has actively induced the direct infringements of its subsidiaries, distributors, affiliates, retailers, suppliers, integrators, importers, customers, and/or consumers as set forth under U.S.C. § 271(b). Indeed, AMD has intended to cause, continues to intend to cause, and has taken, and continues to take affirmative steps to induce infringement by, among other things, creating and disseminating advertisements and instructive materials that promote the infringing use of the '623 Accused Products; creating and/or maintaining established distribution channels for the '623 Accused Products into and within the United States; manufacturing the '623 Accused Products in conformity with U.S. laws and regulations; distributing or making available videos, training, tools and resources supporting use of the '623 Accused Products that promote their features, specifications, and applications; providing technical documentation and tools for the '623 Accused Products³, and promoting the incorporation of the '623 Accused Products into end-user products; and by providing technical support and/or related services for these products to purchasers in the United States.

Damages

45. On information and belief, despite having knowledge of the '623 patent and knowledge that it is directly and/or indirectly infringing one or more claims of the '623 patent, AMD has nevertheless continued its infringing conduct and disregarded an objectively high likelihood of infringement. AMD's infringing activities relative to the '623 patent have been, and continue to be, willful, wanton, malicious, in bad-faith, deliberate, consciously wrongful, flagrant, characteristic of a pirate, and an egregious case of misconduct beyond typical infringement such that ETI is entitled to enhanced damages under 35 U.S.C. § 284 up to three times the amount found or assessed.

³ See, e.g., <https://www.amd.com/en/support/tech-docs>.

46. ETI has been damaged as a result of AMD's infringing conduct described in this Count. AMD is, thus, liable to ETI in an amount that adequately compensates ETI for AMD's infringements, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court under 35 U.S.C. § 284.

CONCLUSION

47. ETI is entitled to recover from AMD the damages sustained by ETI as a result of AMD's wrongful acts, and willful infringements, in an amount subject to proof at trial, which, by law, cannot be less than a reasonable royalty, together with interest and costs as fixed by this Court.

48. ETI has incurred and will incur attorneys' fees, costs, and expenses in the prosecution of this action. The circumstances of this dispute may give rise to an exceptional case within the meaning of 35 U.S.C. § 285, and ETI is entitled to recover its reasonable and necessary attorneys' fees, costs, and expenses.

JURY DEMAND

49. ETI hereby requests a trial by jury pursuant to Rule 38 of the Federal Rules of Civil Procedure.

PRAYER FOR RELIEF

50. ETI respectfully requests that the Court find in its favor and against AMD, and that the Court grant ETI the following relief:

- (i) A judgment that one or more claims of the Asserted Patents have been infringed, either literally and/or under the doctrine of equivalents, by ETI;
- (ii) A judgment that one or more claims of the Asserted Patents have been willfully infringed, either literally and/or under the doctrine of equivalents, by AMD;

- (iii) A judgment that AMD account for and pay to ETI all damages and costs incurred by Plaintiff because of AMD's infringing activities and other conduct complained of herein, including an accounting for any sales or damages not presented at trial;
- (iv) A judgment that AMD account for and pay to ETI a reasonable, ongoing, post judgment royalty because of AMD's infringing activities, including continuing infringing activities, and other conduct complained of herein;
- (v) A judgment that ETI be granted pre-judgment and post judgment interest on the damages caused by AMD's infringing activities and other conduct complained of herein;
- (vi) A judgment that this case is exceptional under the provisions of 35 U.S.C. § 285 and award enhanced damages; and
- (vii) Such other and further relief as the Court deems just and equitable.

Dated: September 1, 2023

Respectfully submitted,

/s/ Edward R. Nelson III

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Robert A. Delafield II

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