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10	POWER DENSITY SOLUTIONS LLC			
11				
12	UNITED STATES DISTRICT COURT			
13	NORTHERN DISTRICT OF CALIFORNIA			
14				
15	POWER DENSITY SOLUTIONS LLC, a	CASE NO.:		
	Delaware limited liability company,			
16		COMPLAINT FOR PATENT INFRINGEMENT		
17	Plaintiff,	INTRINGEMENT		
18	V.			
19	IBM CORPORATION, a New York			
20	corporation, and DOES 1-10, inclusive,	DEMAND FOR JURY TRIAL		
21	Defendants			
22	Defendants.			
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Plaintiff Power Density Solutions LLC ("PDS" or "Plaintiff") hereby complains of Defendant IBM Corporation ("IBM" or "Defendant") and alleges as follows:

NATURE OF ACTION

This is an action for patent infringement under the patent laws of the United 1. States, 35 U.S.C. § 271, et seq.

THE PARTIES

- 2. PDS is a Delaware limited liability company with its principal place of business located at 10 Lilac Drive, Hatfield, Pennsylvania 19440.
- IBM is a New York corporation with its global headquarters located at 1 3. New Orchard Rd, Armonk, New York 10504.
- 4. IBM has numerous regular and established places of business in this district. IBM has a location at 425 Market Street, San Francisco, California 94105. In addition, IBM Research – Almaden, located at 650 Harry Road, San Jose, California 95120, is a research lab branch of IBM's research and development division, known as IBM Research. IBM resides in this District.
- 5. PDS is ignorant of the true names and capacities of the parties sued herein as DOES 1 through 10, inclusive, whether individual, corporate or otherwise, and therefore sues these defendants by such fictitious names. PDS will seek leave to amend the complaint to assert their true names and capacities when they have been ascertained. PDS is informed and believes and based thereon alleges that all defendants sued herein as DOES 1 through 10 are in some manner responsible for the acts and omissions alleged herein.

JURISDICTION AND VENUE

- 6. This Court has original and exclusive subject matter jurisdiction over this action under 28 U.S.C. §§ 1331 and 1338(a) because PDS's claims for patent infringement arise under the laws of the United States, 35 U.S.C. § 271, et seq.
- This Court has personal jurisdiction over IBM because it resides in this 7. District and has a continuous, systematic, and substantial presence in this District,

8. Venue is proper in this District under 28 U.S.C. § 1400(b) because IBM has a regular and established place of business in this District and has committed and continues to commit acts of patent infringement in this District.

GENERAL ALLEGATIONS

- 9. PDS has been working in the field of evaporative cooling for nearly two decades and has developed novel cooling solutions for electronic systems and components. On November 6, 2001, the United States Patent and Trademark Office ("PTO") duly and lawfully issued United States Patent No. 6,313,992, entitled "Method and Apparatus for Increasing the Power Density of Integrated Circuit Boards and Their Components" ("the '992 patent"). PDS is the owner of the '992 patent, a copy of which is attached hereto as **Exhibit 1** and is fully incorporated herein.
- 10. IBM is and has been making, using, selling, offering for sale, importing, and/or exporting products that infringe the '992 patent including without limitation computer chips and other computer components utilizing IBM's so-called intra-chip enhanced cooling ("ICECool") technology (the "Accused Products"). IBM represents on its website that the Accused Products "could reduce the cooling energy for a traditional

air-cooled data center by more than 90 percent." IBM also represents that the Accused Products "could reduce the computational energy up to 14% compared to the traditional refrigerated air-cooled data centers."

- 11. IBM also actively induces infringement of the '992 patent by its customers, when it sells the Accused Products to customers who then use the Accused Products without permission from PDS.
- 12. On information and belief, IBM has been aware of the '992 patent for over six years.

FIRST CLAIM FOR RELIEF

(Patent Infringement of the '992 Patent)

(35 U.S.C. § 271)

- 13. PDS repeats, realleges, and incorporates by reference the preceding allegations above as though set forth fully herein.
- 14. IBM has been and is currently infringing the '992 patent by making, using, selling, offering for sale, importing, and/or exporting into the United States, the Accused Products that embody one or more claims set forth in the '992 patent.
- 15. For example, the Accused Products meet all the limitations set forth in claim 21 of the '992 patent. A chart identifying specifically where each limitation of claim 21 is found in the Accused Products is attached hereto as **Exhibit 2**. This infringement chart is based on PDS's current understanding of the Accused Products, which only considers public literature available at the time of this filing. The chart does not set forth all of PDS's infringement theories the Accused Products embody other claims set forth in the '992 patent. Pursuant to Patent L.R. 3-1 and/or this Court's case management schedule,

¹ Timothy Chainer *et al.*, IBM Research Blog, *Beat the Heat in 3D Chip Stacks with ICECool* (2017), https://www.ibm.com/blogs/research/2017/08/beat-heat-3d-chip-stacks-icecool (last visited Jun. 12, 2019).

² Timothy J. Chainer, *et al.*, IEEE Transactions on Components, Packaging and Manufacturing Technology, *Improving Data Center Energy Efficiency With Advanced Thermal Management* (2017), https://ieeexplore.ieee.org/document/7876756 (last visited Jun. 12, 2019).

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PDS will serve a Disclosure of Asserted Claims and Infringement Contentions that may
alter and/or supplement the infringement charts submitted herewith. PDS reserves the
right to amend or supplement its infringement theories upon more information becoming
available through formal discovery and/or this Court completing its claim construction
proceedings.

- 16. IBM actively induces its customers to directly infringe the '992 patent. IBM sells the Accused Products to its customers, who then use the Accused Products without authorization from PDS. IBM knew or should have known that these actions would result in its customer's infringement.
- 17. IBM's acts of infringement were undertaken without permission or license from PDS.
- 18. PDS is informed and believes and based thereon alleges that IBM's infringement of the '992 patent will continue unless enjoined by this Court.
- By reason of the foregoing infringing acts, PDS has been damaged, 19. continues to be damaged, and is entitled to no less than a reasonable royalty in accordance with 35 U.S.C. § 284 in an amount to be determined at trial. In addition, pursuant to 35 U.S.C. § 284, PDS is entitled to enhanced and treble damages against IBM together with interest at the maximum legal rate and costs as fixed by the Court.
- In addition, PDS is entitled to reasonable attorneys' fees incurred in this 20. action under 35 U.S.C. § 285.
- Because of the aforesaid infringing acts, PDS has suffered and continues to 21. suffer great and irreparable injury for which there is no adequate remedy at law.

PRAYER FOR RELIEF

WHEREFORE, PDS prays for judgment against IBM as follows:

- an Order adjudging IBM to have infringed the '992 patent under 35 U.S.C. (a) § 271;
- an Order adjudging IBM to have willfully infringed the '992 patent under 35 (b) U.S.C. § 271;

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	(c)	a preliminary and permanent injunction under 35 U.S.C. § 283 enjoining
IBM,	its off	cers, directors, agents, servants, resellers, retailers, employees and attorneys
and those persons acting in concert or participation with them, from infringing the '992		
paten	t in vic	lation of 35 U.S.C. § 271;

- an accounting of all gains, profits, and advantages IBM derived by their (d) infringement of the '992 patent, and for damages adequate to compensate PDS for such infringement of the '992 patent;
- (e) an award to PDS no less than a reasonable royalty for IBM's manufacture, sale, use, importation, and/or exportation of the Accused Products, subject to proof at trial;
- (f) an Order for a trebling of damages and/or enhanced damages due to IBM's willful infringement under 35 U.S.C. § 284;
- (g) an award to PDS of all attorneys' fees and costs incurred by PDS in connection with this action under 35 U.S.C. § 285;
- an award of pre-judgment and post-judgment interest and costs of this action (h) against IBM; and
 - for such other and further relief as the Court deems just and proper. (i)

	Case 3:19-cv-03710 [Document 1 Filed 06/26/19 Page 7 of 9
1	Dated: June 26, 2019	SAN DIEGO IP LAW GROUP
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9		Attorneys for Plaintiff,
		POWER DENSITY SOLUTIONS LLC
10		
11		
12	DEMAND FOR JURY TRIAL	
TAW.CO	Pursuant to Rule 38(b) of the Federal Rules of Civil Procedure, Power Density	
SAN DIEGO IP LAW GROUP SAN DIEGO – CARLSBAD (442) 325-1024 sandiegoiplaw.com	Solutions hereby demands a trial by jury of all issues so triable.	
GO IP 754 SAN 15	Dated: June 26, 2019	SAN DIEGO IP LAW GROUP
San 19		By: /s/Cody R. LeJeune
S (24)		Trevor Q. Coddington, Ph.D.
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COMPLAINT FOR PATENT INFRINGEMENT

SAN DIEGO IP LAW GROUP