

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

GREENTHREAD, LLC

Plaintiff,

vs.

TEXAS INSTRUMENTS INCORPORATED

Defendants.

Civil Action No. 2:23-cv-157

JURY TRIAL DEMANDED

ORIGINAL COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Greenthread, LLC (“Greenthread” or “Plaintiff”) files this Original Complaint against Texas Instruments Incorporated (“Texas Instruments” or “Defendant”) and hereby alleges as follows:

THE NATURE OF THE ACTION

1. Greenthread owns a family of patents related to transistors and other components of integrated semiconductor devices. Greenthread’s patented inventions describe semiconductor devices that employ graded dopants and well regions for creating electric fields for aiding and/or limiting the movement of carriers to (or from) the semiconductor surface to (or from) the semiconductor substrate. These inventions improve semiconductor devices by (1) creating faster, more efficient, and more reliable processors, logic devices, DRAM and NAND flash, and image sensors and (2) allowing manufacturers to scale down the feature size of their semiconductor products.

2. Defendant has infringed and continue to infringe six Greenthread patents: U.S. Patent Nos. 8,421,195 (the “195 Patent”), 9,190,502 (the “502 Patent”), 10,510,842 (the “842

Patent”), 10,734,481 (the “481 Patent”), 11,121,222 (the “222 Patent”), and 11,316,014 (the “014 Patent”), (collectively “the Greenthread Patents”), copies of which are attached hereto as Exhibits 1-6, respectively. Defendant has infringed and continue to infringe the Greenthread Patents by making, using, selling, offering for sale, and/or importing into the United States, semiconductor devices with infringing graded dopant regions and/or electronic products containing the same.

THE PARTIES

3. Plaintiff Greenthread, LLC (“Greenthread”) is a limited liability company organized and existing under the laws of Texas, having its principal place of business at 7424 Mason Dells Drive, Dallas, Texas 75230-3244.

4. Defendant Texas Instruments Incorporated is a corporation organized and existing under the laws of the State of Delaware with its principal place of business at 12500 TI Boulevard, Dallas, Texas 75243.

5. Texas Instruments is “a global semiconductor company that designs, manufactures, tests, and sells analog and embedded processing chips.”¹ Texas Instruments designs, manufactures, tests, and sells semiconductor devices to approximately 100,000 customers from a portfolio of about 80,000 products with 14 manufacturing sites worldwide.²

6. Texas Instruments maintains at least three offices in this District, including, but not limited to, at 300 W Renner Road, Richardson, Texas, 75080, 6412 S. U.S. 75, Sherman, TX, 75090, and 2501 TX-121 Bus, Lewisville, TX 75067. At two of these locations, Richardson and

¹ <https://www.ti.com/about-ti/company/overview.html>

² <https://www.ti.com/about-ti/company/what-we-do.html>

Sherman, Texas Instruments manufactures semiconductor devices, including, on information and belief, products which infringe the Greenthread Patents.³

SUBJECT MATTER JURISDICTION

7. This action arises under the patent laws of the United States, namely 35 U.S.C. §§ 271, 281, and 284-285, among others.

8. This court has subject matter jurisdiction over the patent infringement claims asserted in this case under 28 U.S.C. §§ 1331 and 1338(a).

PERSONAL JURISDICTION AND VENUE

9. This Court has personal jurisdiction over Texas Instruments in accordance with the Texas Long Arm Statute, Tex. Civ. Prac. & Rem. Code § 17.041, *et seq.*, and constitutional due process, because, among other things, Texas Instruments does business in this State and maintains offices in this District. Specifically, Texas instruments has engaged, and continues to engage, in continuous, systematic, and substantial activities within this State, including the substantial marketing, making, using, manufacturing, and sale of products and services within this State and this District. Further, Texas Instruments has derived substantial revenue from its goods and services provided to individuals in this State and this District, and maintains regular and established places of business in this District, including the locations referenced in the preceding section.

10. Venue is proper under 28 U.S.C. §§ 1391(b) and 1400(b) because Texas Instruments has regular and established places of business in this District and has committed acts

³ <https://www.ti.com/about-ti/company/ti-at-a-glance/manufacturing/richardson.html>; *see also* <https://news.ti.com/texas-instruments-breaks-ground-on-new-300-mm-semiconductor-wafer-fabrication-plants-in-sherman-texas>

of infringement in this District, including, on information and belief, by manufacturing accused products at its facilities in 6412 U.S. Highway 75, Sherman, Texas 75090; 300 W. Renner Road, Richardson, Texas 75080; and 2501 S. State Highway 121 Bus., Lewisville, Texas 75067.

11. “Texas Instruments Accused Products” are products accused of meeting the claim limitations of a Greenthread Patent in this suit. Specifically, Texas Instruments designs and manufactures semiconductor products, including, but not limited to, amplifiers, audio processors, digital-to-analog converters, analog-to-digital converters, digital clocks, interface ICs, isolation ICs, microcontrollers and processors, digital signal processors, digital light processors, motor drivers, power management, switches & multiplexers, radio frequency and microwave ICs, wireless connectivity ICs, logic & voltage translation, sensors, and other ICs (“Texas Instruments Accused Products”). An exemplary, non-exhaustive, list of the various types or categories of Texas Instruments Accused Products is identified in Exhibit 8 and is herein incorporated by reference.

12. Exhibit 8 demonstrates how exemplary TI Accused Products meet the claim limitations of Greenthread Patents and is herein incorporated by reference. The exemplary products identified therein meet each and every element of at least one claim of the Greenthread Patents.

THE GREENTHREAD PATENTS

13. On April 16, 2013, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 8,421,195 (“the ’195 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed January 12, 2007. The ’195 Patent claims priority from U.S. Patent Application No. 10/934,915,⁴ filed on

⁴ Pub. No. US 2006/0049464.

September 3, 2004. A true and correct copy of the '195 Patent is attached hereto as Exhibit 1 and incorporated herein by reference.

14. On November 17, 2015, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 9,190,502 (“the '502 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed October 16, 2014. The '502 Patent claims priority from U.S. Patent Application No. 10/934,915,⁵ filed on September 3, 2004. A true and correct copy of the '502 Patent is attached hereto as Exhibit 2 and incorporated herein by reference.

15. On December 17, 2019, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 10,510,842 (“the '842 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed on May 9, 2017. The '842 Patent claims priority from U.S. Patent Application No. 10/934,915,⁶ filed on September 3, 2004. A true and correct copy of the '842 Patent is attached hereto as Exhibit 3 and incorporated herein by reference.

16. On August 4, 2020, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 10,734,481 (“the '481 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed on December 17, 2019. The '481 Patent claims priority from U.S. Patent Application No. 10/934,915,⁷ filed on September 3, 2004. A true and correct copy of the '481 Patent is attached hereto as Exhibit 4 and incorporated herein by reference.

17. On September 14, 2021, the U.S. Patent and Trademark Office duly and legally

⁵ Pub. No. US 2006/0049464.

⁶ Pub. No. US 2006/0049464.

⁷ Pub. No. US 2006/0049464.

issued U.S. Patent No. 11,121,222 (“the ’222 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed on July 27, 2020. The ’222 Patent claims priority from U.S. Patent Application No. 10/934,915,⁸ filed on September 3, 2004. A true and correct copy of the ’222 Patent is attached hereto as Exhibit 5 and incorporated herein by reference.

18. On April 26, 2022, the U.S. Patent and Trademark Office duly and legally issued U.S. Patent No. 11,316,014 (“the ’014 Patent”), entitled “Semiconductor Devices with Graded Dopant Regions,” listing Dr. Mohan Rao as the inventor, from a patent application filed on July 9, 2021. The ’014 Patent claims priority from U.S. Patent Application No. 10/934,915,⁹ filed on September 3, 2004. A true and correct copy of the ’014 Patent is attached hereto as Exhibit 6 and incorporated herein by reference.

19. The ’195, ’502, ’842, ’481, ’222, and ’014 Patents are collectively referred to as the “Greenthread Patents.”

20. Greenthread exclusively owns all rights, title, and interest in the Greenthread Patents necessary to bring this action, including the right to recover past and future damages. Certain of the Greenthread Patents were previously owned by Dr. G.R. Mohan Rao (“Dr. Rao”). On April 27, 2015, Dr. Rao assigned to Greenthread the then-issued Greenthread Patents and all related “continuations, continuations-in-part and extensions of said Applications and Patents and any pending applications or issued patents that directly claim or are amended to claim priority to any of the Applications or Patents.” Dr. Rao’s assignment was recorded with the U.S. Patent and Trademark Office on May 13, 2015, and again on July 22, 2021, and is attached hereto as Exhibit

⁸ Pub. No. US 2006/0049464.

⁹ Pub. No. US 2006/0049464.

7. Greenthread has therefore owned all rights to the Greenthread Patents necessary to bring this action throughout the period of Texas Instrument's infringement and still owns those rights to the Greenthread Patents.

21. Defendant is not currently licensed to practice the Greenthread Patents.

22. The Greenthread Patents are valid and enforceable.

FACTUAL BACKGROUND

23. Dr. G.R. Mohan Rao ("Dr. Rao"), the sole inventor of the Greenthread Patents, has been an innovator in the semiconductor industry since the 1960s. He is a named inventor on more than 100 Patents worldwide and authored numerous technical publications over the last 50 years.

24. In September 1968, Dr. Rao received a Ph.D. in physics with a specialization in electronics from Andhra University in Waltair, India. He then traveled to the United States to attend a graduate program in physics at the University of Cincinnati.

25. After learning of an opportunity to work with Professor William Carr of Southern Methodist University ("SMU"), Dr. Rao transferred to SMU where he earned a Ph.D. in Electrical Engineering. While there, he worked in the SMU laboratory with Jack Kilby of Texas Instruments (a pioneering electrical engineer who would later receive a Nobel Prize for his work), on metal-oxide-silicon transistors ("MOS devices"), which are used for switching and amplifying electronic signals in electronic devices. MOS devices form the basis of modern electronics and are the most widely used semiconductor devices in the world. The U.S. Patent and Trademark Office has called this device a "groundbreaking invention that transformed life and culture around the world."¹⁰ Dr. Rao built these devices from scratch while a graduate student at SMU.

26. Through his mentor, Jack Kilby, Dr. Rao interviewed with—and was ultimately

¹⁰ <https://www.uspto.gov/about-us/news-updates/remarks-director-iancu-2019-international-lectual-property-conference>

hired by—Texas Instruments to continue his work on MOS devices in 1972. Dr. Rao worked at Texas Instruments for the next twenty-two years, rising from an engineer to a Senior Fellow. At that time, Texas Instruments had only 12 Senior Fellows out of approximately 20,000 engineers. Eventually, Dr. Rao moved into a management position at Texas Instruments, ultimately becoming a Senior Vice President in 1985.

27. At Texas Instruments, Dr. Rao received his first patent while working in a process and product engineering capacity to solve a production problem with Texas Instruments' 4-kilobit RAM product. That patent was merely the beginning of Dr. Rao's long inventive career. Indeed, from the late 1970s through the mid-1980s, Dr. Rao worked on or managed projects relating to Texas Instruments' 64kb RAM, 256Kb RAM, 1Mb RAM, 4 Mb RAM, EEPROM, SRAM, and microcontrollers. For that work, Dr. Rao received numerous additional U.S. Patents.

28. The USPTO was not the only organization to recognize Dr. Rao's achievements. Some of Dr. Rao's work at Texas Instruments was so remarkable that it has been credited in multiple exhibits in the National Museum of American History at the Smithsonian Institution.¹¹ For example, the Smithsonian has displayed Texas Instruments' experimental 1-megabit CMOS DRAM, produced in April 1985 under Dr. Rao's leadership, and credited Dr. Rao for the achievement.¹²

¹¹ <http://smithsonianchips.si.edu/texas/wafer.htm>

¹² http://smithsonianchips.si.edu/texas/t_360.htm



29. In 1994, Dr. Rao left Texas Instruments for Cirrus Logic. During his two-year tenure at Cirrus Logic, he received more U.S. Patents relating to his work on integrated graphics controllers and memory.

30. In 1996, Dr. Rao started a company called Silicon Aquarius. Through a relationship between Silicon Aquarius and Matsushita, Dr. Rao led a design team in working on a 256Mb DRAM chip. After Silicon Aquarius ceased operations, Dr. Rao did consulting work for a number of different consulting companies and devoted much of his free time to thinking about various challenges and problems with which the semiconductor industry had struggled for years.

31. In 2003, Dr. Rao and Philip John founded Greenthread to continue Dr. Rao's pioneering work. A focal point of Dr. Rao's research was poor refresh time and the related problem of how to deal with and control the movement of both wanted and unwanted carriers in semiconductor devices, including memory and logic devices. Dr. Rao realized that graded dopants

could be used to create a “drift layer” and other structures to facilitate the movement—in an upward or downward direction, as appropriate—of carriers from the semiconductor surfaces down into the substrate and vice versa. It was Dr. Rao’s work on this problem that culminated in the Greenthread Patents.

TEXAS INSTRUMENT’S INFRINGEMENT

32. Texas Instruments has directly infringed, and continues to infringe, one or more claims of each of the Greenthread Patents through making, using, offering to sell, selling within the United States, and/or importing into the United States semiconductor products, including, but not limited to, amplifiers, audio processors, digital-to-analog converters, analog-to-digital converters, digital clocks, interface ICs, isolation ICs, microcontrollers and processors, digital signal processors, digital light processors, motor drivers, power management, switches & multiplexers, radio frequency and microwave ICs, wireless connectivity ICs, logic & voltage translation, sensors, and other ICs, that practice the claimed inventions (*i.e.*, the Texas Instruments Accused Products). A non-exhaustive, exemplary list of the types or categories of products or devices that infringe are further identified in Exhibit 8.

33. As shown in Exhibit 8, an exemplary Texas Instrument Accused Product, BQ25123, meets each and every element of at least one claim of the Greenthread Patents.

34. Upon information and belief, Texas Instruments fabricates and designs the Texas Instruments Accused Products using similar designs according to a limited number of processes, many or all of which utilize substantially similar process steps, including process steps for creating regions with graded dopant concentrations, because the invention would have application in those categories of products, for example by improving switching time in transistors in the Texas Instruments Accused Products. Upon information and belief, the Texas Instruments Accused

Products are in relevant part substantially similar to the exemplary BQ25123 shown in Exhibit 8, particularly with regard to the manner in which the exemplary BQ25123 includes and utilizes regions with graded dopant concentrations. Exhibit 8 is thus illustrative of the manner in which the Texas Instruments Accused Products meet the claim limitations of the Greenthread Patents.¹³

35. Texas Instruments' infringement is willful. Texas Instruments had knowledge of the Greenthread Patents at least through the USPTO's citation of Greenthread's application as prior art during prosecution of Texas Instrument's U.S. Patent No. 8,278,683, entitled "Lateral Insulated Gate Bipolar Transistor," filed on August 6, 2009.

COUNT I: INFRINGEMENT OF U.S. PATENT NO. 8,421,195

36. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

¹³ Multiple courts have upheld Greenthread's construction of the Greenthread Patents in related matters. In *Greenthread, LLC v. Samsung Electronics Co., Ltd. et al.*, Case No. 2:19-cv-00147-JRG (E.D. Tex.), the Eastern District of Texas Court adopted Greenthread's claim construction. See Dkt. 67. In *Greenthread, LLC v. Intel Corp., et al.*, Case No. 6:22-cv-00105-ADA (W.D. Tex.), the Western District of Texas similarly issued a preliminary claim construction order adopting Greenthread's construction. See Dkt. 36-21 in *Greenthread, LLC v. Intel Corp.*, Case No. 3:22-cv-02001-JR (attaching as an exhibit the Western District of Texas's preliminary claim construction order in a status update before the District of Oregon). The claims in this matter against Intel were ultimately severed and transferred to Oregon, and the District of Oregon adopted the Western District of Texas' preliminary claim construction. See Dkt. 44 ("The Court also finds that the WDTX's preliminary constructions and summary judgment rulings are neither legally incorrect nor factually distinguishable. As a result, the Court adopts the WDTX's preliminary constructions and summary judgment rulings as its own. . ."). The Western District of Texas also denied Defendants' motions to dismiss and for summary judgment on similar grounds. See Dkt. 36-22 in *Greenthread, LLC v. Intel Corp.*, Case no. 3:22-cv-02001-JR (attaching as an exhibit the Western District of Texas' denial of Defendants' motion for summary judgment); Dkt. 110 in *Greenthread LLC v. Intel Corp.*, Case No. 6:22-cv-00105-ADA (W.D. Tex). The District of Oregon similarly adopted these rulings. See Dkt. 44 in *Greenthread, LLC v. Intel Corp.*, Case no. 3:22-cv-02001-JR.

37. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Texas Instruments Accused Products. Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Texas Instruments Accused Products that it obtains during discovery.

38. Defendant's infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

39. As alleged above and in Exhibit 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '195 Patent.

40. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Texas Instruments Accused Products.

41. As alleged above, Defendant has infringed and continue to infringe at least one claim of the '195 Patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Texas Instruments Accused Products. As alleged above, Defendant has and continues to infringe at least one claim of the '195 Patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Texas Instruments Accused Products. Defendant's infringement is and continues to be willful.

42. Defendant's infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

COUNT II: INFRINGEMENT OF U.S. PATENT NO. 9,190,502

43. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

44. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Texas Instruments Accused Products.

Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Texas Instruments Accused Products that it obtains during discovery.

45. As alleged above and in Exhibit 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '502 Patent.

46. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Texas Instruments Accused Products.

47. As alleged above, Defendant has infringed and continues to infringe at least one claim of the '502 Patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Texas Instruments Accused Products. Defendant's infringement is and continues to be willful.

48. Defendant's infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

COUNT III: INFRINGEMENT OF U.S. PATENT NO. 10,510,842

49. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

50. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Texas Instruments Accused Products. Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Texas Instruments Accused Products that it obtains during discovery.

51. As alleged above and in Exhibits 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '842 Patent.

52. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Texas Instruments Accused Products.

53. As alleged above, Defendants have infringed and continue to infringe at least one claim of the '842 Patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Texas Instruments Accused Products. Defendant's infringement is and continues to be willful.

54. Defendants' infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

COUNT IV: INFRINGEMENT OF U.S. PATENT NO. 10,734,481

55. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

56. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Texas Instruments Accused Products. Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Texas Instruments Accused Products that it obtains during discovery.

57. As alleged above and in Exhibits 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '481 Patent.

58. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Texas Instruments Accused Products.

59. As alleged above, Defendant has infringed and continue to infringe at least one claim of the '481 Patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Texas Instruments Accused Products. Defendant's infringement is and continues to be willful.

60. Defendant's infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

COUNT V: INFRINGEMENT OF U.S. PATENT NO. 11,121,222

61. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

62. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Texas Instruments Accused Products. Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Texas Instruments Accused Products that it obtains during discovery.

63. As alleged above and in Exhibit 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '222 Patent.

64. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Texas Instruments Accused Products.

65. As alleged above, Defendant has infringed and continues to infringe at least one claim of the '222 Patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Texas Instruments Accused Products.

66. Defendant's infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

COUNT VI: INFRINGEMENT OF U.S. PATENT NO. 11,316,014

67. Greenthread incorporates by reference and re-alleges all of the foregoing paragraphs of this Complaint and exhibits attached hereto as if fully set forth herein.

68. The following allegations are based on publicly available information and a reasonable investigation of the structure and operation of the Texas Instruments Accused Products. Greenthread reserves the right to modify this description, including, for example, on the basis of information about the Texas Instruments Accused Products that it obtains during discovery.

69. As alleged above and in Exhibits 8, the products analyzed in Exhibit 8 meet each and every one of the claim limitations of at least one claim of the '014 Patent.

70. As alleged above, the products analyzed in Exhibit 8 are exemplary of the Texas Instruments Accused Products.

71. As alleged above, Defendant has infringed and continue to infringe at least one claim of the '014 Patent by making, using, offering to sell, selling within the United States, and/or importing into the United States Texas Instruments Accused Products. Defendant's infringement is and continues to be willful.

72. Defendant's infringement has damaged and continues to damage Greenthread in an amount yet to be determined, of at least a reasonable royalty.

DAMAGES

73. As a result of Defendant's acts of infringement, Greenthread has suffered and continues to suffer actual and consequential damages. However, Greenthread does not yet know the full extent of the infringement and the amount of damages cannot be ascertained except through discovery and special accounting. To the fullest extent permitted by law, Greenthread seeks recovery of damages at least for reasonable royalties, unjust enrichment, and benefits received by Defendant as a result of using the patented technology. Greenthread further seeks any other damages to which Greenthread is entitled under law or in equity.

DEMAND FOR JURY TRIAL

74. Greenthread hereby demands a jury trial for all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Greenthread respectfully requests that this Court enter judgment in its

favor as follows:

A. That Judgment be entered that Defendant has infringed one or more claims of the Greenthread Patents, literally and under the doctrine of equivalents;

B. That, in accordance with 35 U.S.C. § 283, Defendant and all its affiliates, employees, agents, officers, directors, attorneys, successors, and assigns and all those acting on behalf of or in active concert or participation with any of them, be preliminarily and permanently enjoined from (1) infringing the Greenthread Patents and (2) making, using, selling, and offering for sale, or importing into the United States, the Texas Instruments Accused Products;

C. An award of damages sufficient to compensate Greenthread for Defendant's infringement under 35 U.S.C. § 284;

D. That the case be found exceptional under 35 U.S.C. § 285 and that Greenthread be awarded its reasonable attorneys' fees;

E. Costs and expenses in this action;

F. Damages for pre-issuance infringement under 35 U.S.C. § 154(d);

G. An award of prejudgment and post-judgment interest; and

H. Such other and further relief as the Court may deem just and proper.

Dated: April 6, 2023.

MCKOOL SMITH, P.C.

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