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EFFICIENT POWER CONVERSION
6 CORPORATION

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9 **UNITED STATES DISTRICT COURT**
10 **CENTRAL DISTRICT OF CALIFORNIA**
11 **WESTERN DIVISION**

12
13 EFFICIENT POWER CONVERSION
CORPORATION, a Delaware corporation,

14 Plaintiff,

15 vs.

16 INNOSCIENCE (ZHUHAI)
17 TECHNOLOGY COMPANY, LTD., a
Chinese company, INNOSCIENCE, INC., a
18 Delaware corporation, and INNOSCIENCE
AMERICA, INC., a California corporation.

19
20 Defendants.

Case No.

**COMPLAINT FOR PATENT
INFRINGEMENT**

JURY TRIAL DEMANDED

1 **COMPLAINT FOR PATENT INFRINGEMENT**

2 Plaintiff Efficient Power Conversion Corporation (“EPC” or “Plaintiff”) hereby
3 asserts the following claims for patent infringement against Defendants Innoscience
4 (Zhuhai) Technology Company, Inc. (“Innoscience Zhuhai”), Innoscience, Inc., and
5 Innoscience America, Inc. (“Innoscience America”) (collectively, “Innoscience” or
6 the “Defendants”), and alleges as follows:

7 **NATURE OF THE ACTION**

8 1. This is a civil action for patent infringement under the patent laws of the United
9 States, 35 U.S.C. § 1 *et seq.*

10 2. EPC has protected its technological innovations resulting from its investments,
11 including through seeking patent protection. EPC owns United States Patent Nos.
12 8,350,294 (“the ’294 Patent”); U.S. Patent 8,404,508 (“the ’508 Patent”) U.S. Patent
13 No. 9,748,347 (“the ’347 Patent”); and U.S. Patent No. 10,312,335 (“the ’335 Patent”)
14 (collectively, the “Asserted Patents”).

15 3. Defendants have infringed and continue to infringe and have induced and
16 continue to induce infringement of EPC’s Asserted Patents by unlawfully and without
17 authorization engaging in and continuing to engage in making, using, selling, offering
18 for sale, and/or importing for sale semiconductor devices and products that infringe
19 EPC’s Asserted Patents (the “Accused Products”) within Chinesethe United States
20 and in this judicial district.

21 4. EPC is the legal owner by assignment of the entire right, title, and interest in
22 and to the Asserted Patents, which were duly and legally issued by the United States
23 Patent and Trademark Office (“USPTO”).

24 **THE PARTIES**

25 5. Efficient Power Conversion Corporation is a Delaware corporation with its
26 headquarters and principal place of business located at 909 N. Pacific Coast Highway,
27 Suite 230, El Segundo, CA 90245.

1 6. Upon information and belief, Innoscience (Zhuhai) Technology Company, Ltd.
2 has its principal place of business and headquarters at No. 39, Jinyuan 2nd Road,
3 High-Tech Zone, Zhuhai, Guangdong, 519099 China. *See, e.g.*, Exhibit 1, ¶ 9.
4 Innoscience Zhuhai has engaged and continues to engage in making, using, selling,
5 offering for sale, and/or importing for sale the Accused Products within the United
6 States and in this judicial district. *Id.*, ¶¶5-11. Innoscience Zhuhai has also engaged
7 in and continues to engage in inducing or instructing others to sell, offer for sale,
8 and/or import for sale the Accused Products within the United States and in this
9 judicial district. *Id.*, ¶¶12-18.

10 7. Upon information and belief, Innoscience America, Inc. is a California
11 corporation that has its principal place of business at 5451 Great America Parkway,
12 Suite 125, Santa Clara, CA 95054. Exhibit 2. Innoscience America has engaged and
13 continues to engage in making, using, selling, offering for sale, and/or importing for
14 sale the Accused Products within the United States and in this judicial district. *See,*
15 *e.g.*, Exhibit 1, ¶¶5-18. Innoscience America has also engaged and continues to
16 engage in inducing or instructing others to sell, offer for sale, and/or import for sale
17 the Accused Products within the United States and in this judicial district. *See id.*

18 8. Upon information and belief, Innoscience, Inc. is a Delaware corporation that is
19 an affiliate of Innoscience Zhuhai, and its registered agent is located at 8 The Green,
20 Suite A, Dover, DE 19901. Exhibit 3. Upon information and belief, Innoscience, Inc.
21 has engaged and continues to engage in making, using, selling, offering for sale,
22 and/or importing for sale the Accused Products within the United States and in this
23 judicial district. Upon information and belief, Innoscience, Inc. has also engaged and
24 continues to engage in inducing or instructing others to sell, offer for sale, and/or
25 import for sale the Accused Products within the United States and in this judicial
26 district.

27 9. EPC is informed and believes, and based thereon alleges, that at the time of the
28 acts, conditions, and events alleged in this Complaint, each of the defendants was

1 acting as the agent, servant, employee, officer, director, partner, joint venturer,
2 principal, master, employer, and/or alter ego of each of the other defendants and is
3 liable, directly and/or vicariously, for the wrongful acts and omissions of each of the
4 defendants that are the subject of this Complaint.

5 **JURISDICTION AND VENUE**

6 10. This is a civil action for patent infringement arising under the patent laws of the
7 United States, 35 U.S.C. § 1 *et seq.*

8 11. This Court has subject matter jurisdiction over the matters asserted herein under
9 28 U.S.C. §§ 1331 and 1338(a) and 35 U.S.C. §§271 *et seq.*

10 12. This Court has personal jurisdiction over Innoscience Zhuhai, Innoscience
11 America and Innoscience Inc. because, upon information and belief, Innoscience does
12 continuous and systematic business in the State of California, including by providing
13 infringing products to the residents of the Central District of California, including its
14 affiliate Innoscience America, that Innoscience knew would be used within this State,
15 and by soliciting business from the residents of the State. Innoscience has placed
16 products that practice the claims of the Asserted Patents into the stream of commerce
17 with the reasonable expectation and/or knowledge that actual or potential users of
18 such products would be located within this State, including this judicial district.

19 13. For example, upon information and belief, Innoscience directly and through
20 agents regularly solicits and transacts business in the State of California and this
21 District through its website at <https://www.innoscience.com>. Buyers contact an
22 Innoscience America representative who, upon information and belief, resides in the
23 State of California, who then facilitates shipment of the Accused Products from an
24 Innoscience Zhuhai warehouse in China. *See* Exhibit 4. The sale, offer for sale,
25 and/or importation of the Accused Products is a direct infringement of EPC's Asserted
26 Patents.

27 14. Furthermore, upon information and belief, Defendants also induce direct
28 infringement by others that sell, offer for sale and/or import the Accused Products into

1 this State. Defendants have one or more authorized resellers and/or distributors that
2 commit direct infringement of EPC’s Asserted Patents by selling, offering for sale,
3 and/or importing the Accused Products in the United States with the reasonable
4 expectation and/or knowledge that such products would be sold within this State
5 and/or this judicial district, and that such actions were induced by Innocence by at
6 least some form of distribution agreement between Innocence and their authorized
7 distributor. *See, e.g.*, Exhibit 4 at 2 (identifying Richardson RFPD as an “Authorized
8 Distributor”).

9 15. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(c) as to
10 Innocence Zhuhai because it is a foreign corporation and may be sued in any judicial
11 district.

12 16. Venue is proper in this Court pursuant to 28 U.S.C. §§ 1391(b), (c) and (d) and
13 1400(b) as to Innocence America and Innocence, Inc. because each have an
14 established place of business in this State.

15 **FACTUAL BACKGROUND**

16 **Efficient Power Conversion Corporation**

17 **Pioneers in Gallium Nitride Technology**

18 17. EPC has been a leader in innovation in the development and design of new
19 transistors, integrated circuits, and other devices based on Gallium Nitride (“GaN”)
20 technology. Since its inception in 2007, EPC has been an innovator in GaN
21 technology, developing and then delivering the first commercial enhancement-mode
22 GaN transistors in 2009. EPC is headquartered in El Segundo, California, and has
23 additional offices in Aliso Viejo and San Jose. Throughout its history, EPC has
24 demonstrated a commitment to innovation and has marketed its innovations across the
25 industry.

26 18. EPC’s innovations with GaN field-effect transistors (“FETs”) achieve
27 improved efficiency at lower costs. The person who has led EPC’s innovative efforts
28 is its Chief Executive Officer, Dr. Alexander Lidow, who has over thirty years of

1 experience in the semiconductor industry. Dr. Lidow began his career at a leading
2 semiconductor manufacturer, International Rectifier, during which time, he was
3 instrumental in the invention of the hexagonal power metal–oxide–semiconductor
4 field-effect transistor (“HEXFET power MOSFET”), which revolutionized the
5 industry. A stand-out engineer, Dr. Lidow rose to the position of CEO at International
6 Rectifier, leaving in 2007 to co-found EPC, which focused on the development and
7 design of innovative new transistors, integrated circuits, and other devices based on
8 GaN technology. Dr. Lidow is a prolific inventor named on dozens of patents, a
9 pioneer in the field of GaN semiconductor technology, holding several U.S. patents
10 covering fundamental GaN technology.

11 19. Transistors and integrated circuits form the basis of semiconductor technology.
12 Future advances in semiconductor technology depend on the development of smaller
13 transistors and integrated circuits that can carry higher voltages at a lower resistance.
14 GaN exhibits superior crystalline qualities and allows for superior conductivity and
15 faster transistor switching speeds than silicon. As a result, the GaN transistors and
16 integrated circuits developed by EPC demonstrate substantial performance advantages
17 over their silicon counterparts. As such, GaN devices are crucial to the development
18 of next-generation products such as smartphones, wireless charging, solar arrays, LED
19 lighting, medical equipment, computers, automobiles, aeronautics, satellites, and
20 servers that demand the improved performance.

21 20. GaN semiconductor devices represent a technological leap over the previous
22 generation of silicon power metal-oxide-semiconductor field-effect transistors
23 (“MOSFETs”). Silicon power MOSFETs had been reaching their theoretical limits
24 for power management efficiency and cost – an innovative technology was thus
25 necessary to maintain pace with evolving energy management demands.

26 21. GaN-based technology in FETs provide for higher efficiency at lower cost than
27 silicon designs. GaN FETs allow for improved efficiency through lower conductance
28 losses, faster switching speeds, reduced power requirement to drive the circuit, and

1 smaller footprint on the intended printed circuit board. The improved efficiency is
2 achieved at lower cost because GaN FETs are formed on inexpensive silicon-based
3 substrates and can be made using existing (retrofitted) MOSFET manufacturing
4 facilities, thereby avoiding significant new investment costs. Moreover, the smaller
5 size and improved performance of EPC's enhancement mode GaN FETs over
6 depletion-mode GaN FETs, discussed below, lowers overall system cost while
7 improving system safety and reliability.

8 22. The first GaN FETs appeared in approximately 2004 as depletion-mode FETs.
9 Depletion-mode FETs are passive mode devices that are in the "on"-state at zero gate-
10 source voltage, i.e., the devices allow the flow of current without the external
11 application of voltage to the gate. Although depletion-mode FETs were a
12 technological improvement over silicon-based technology, they had a significant
13 drawback. Depletion-mode FETs require the application of a negative voltage to
14 switch to the "off"-state, e.g., active application of external power to turn off. In
15 many fields of use, this is a highly disadvantageous feature.

16 23. In 2009, EPC introduced the first commercially viable enhancement-mode GaN
17 on silicon FET. EPC's enhancement-mode GaN on silicon (eGaN[®]) FET was
18 specifically designed to improve upon and replace power MOSFETs. The eGaN[®]
19 devices were a notable improvement over depletion-mode GaN FETs because the
20 eGaN[®] devices are active and only require the application of voltage (i.e., power) to
21 switch to the "on"-state. This prevents short circuits and, unlike depletion-mode
22 devices, does not require the application of voltage to switch to the "off" state.
23 Enhancement-mode GaN FETs are more reliable and provide better controllability,
24 among other things, than depletion-mode GaN FETs.

25 24. EPC has protected its technological innovations through various means,
26 including through seeking patent protection. EPC owns United States Patent Nos.
27 8,350,294; U.S. Patent 8,404,508; U.S. Patent No. 9,748,347; and U.S. Patent No.
28 10,312,335.

1 25. EPC sells its GaN devices, covered by its Asserted Patents, throughout the
2 United States to industry leaders in, for example, automotives, space exploration, and
3 electronics.

4 **Innoscience Zhuhai and Its Companies Later Develop Competing GaN Devices**
5 **that Infringe EPC's Protected Technology**

6 26. EPC employs, and has employed essentially since its inception, numerous
7 engineers that are deeply involved in research and development and have access to
8 highly valuable proprietary information related to the research and testing of EPC
9 products. In those roles, engineers have access to substantial amounts of proprietary
10 research and testing data, including, but not limited to, raw material sourcing, designs,
11 specifications, functionality, failure analysis results, proprietary know-how, and
12 proprietary methods of manufacture.

13 27. One such engineer, Mr. Chunhua Zhou, was hired in 2012 in a research and
14 development role that required and allowed him access to EPC's proprietary
15 information. Mr. Zhou also worked closely with EPC's testing facilities to assess the
16 reliability and failure modes of the EPC products and develop design improvements
17 that were incorporated into subsequent generations of EPC devices, giving him unique
18 access to EPC's most confidential technical data.

19 28. Mr. Zhou resigned from EPC in 2017. Prior to his resignation, Mr. Zhou
20 managed crucial analytical tasks such as reliability qualification and failure analysis of
21 EPC's GaN devices. Mr. Zhou also had access to proprietary EPC customer and
22 supplier lists.

23 29. Following his resignation from EPC, Mr. Zhou immediately joined Innoscience
24 Zhuhai as its Chief Technological Officer in 2017. Soon after Mr. Zhou started
25 working at Innoscience Zhuhai, Innoscience reported the development of
26 enhancement mode GaN FETs closely mirroring EPC's enhancement mode GaN
27 FETs in design and performance.

28

1 30. Innoscience’s pursuit of EPC employees with access to EPC confidential
2 information was not limited, however, to Mr. Zhou. Larry Chen, a Chinese national
3 who started at EPC in Shenzhen, China as a Field Applications Engineer in 2011, was
4 similarly privy to EPC’s research and testing data. Like Mr. Zhou, Mr. Chen had
5 access to EPC’s supplier lists, customer lists, and visibility to customer demands and
6 requirements for GaN devices. Following his departure from EPC, Innoscience hired
7 Mr. Chen as its Head of Sales, in direct competition for EPC’s customers.

8 31. Recently, at the 2023 Applied Power Electronics Conference, the largest annual
9 conference on power electronics, held in Orlando, Florida from March 19, 2023 to
10 March 23, 2023, Innoscience presented its GaN device technology to several U.S.
11 industry actors, including EPC representatives. The Innoscience presentation
12 highlights Innoscience’s GaN device architecture, which incorporates EPC’s patented
13 GaN FET technology. In its presentation, Innoscience also touts its unequivocal
14 intention to expand its presence in the U.S. Exhibit 5. Innoscience specifically
15 identifies the smartphone and data center industries – among the same applications for
16 which EPC’s products are designed – as offering a massive opportunity for
17 Innoscience GaN devices. *Id.* at 5, 13. Innoscience also highlights its interest in
18 addressing cost and mass manufacturing issues, along with its goal to standardize GaN
19 devices among suppliers. *Id.* at 18. Innoscience even announces that its products
20 have “pin-to-pin compatibility with existing products,” i.e., EPC’s existing patented
21 products. *See id.* at 15.

22 32. Thus, Defendants have used EPC’s intellectual property to compete with EPC
23 in the semiconductor industry. EPC seeks redress for the harm caused by Defendants’
24 unlawful use of EPC’s intellectual property.

25 **Efficient Power Conversion Corporation’s Asserted Patented Technology**

26 **The ’294 Patent**

27 33. On January 8, 2013, the USPTO issued the ’294 Patent, entitled *Compensated*
28 *Gate MOSFET and Method for Fabricating the Same*. The ’294 Patent names

1 Alexander Lidow, Robert Beach, Jianjun Cao, Alana Nakata, and Guang Yuan Zhao
2 as inventors. The '294 Patent issued from U.S. Patent Application Serial No.
3 12/756,906, filed on April 8, 2010, and claims priority to U.S. Provisional Patent
4 Application Serial No. 61/167,792, filed on April 8, 2009. A true and correct copy of
5 the '294 Patent is attached hereto as Exhibit 6.

6 34. EPC is the assignee and owner of all right, title, and interest in and to the '294
7 Patent, which is valid, enforceable, and is currently in full force and effect.

8 35. The '294 Patent generally describes the design and configuration of field effect
9 transistors (FET) with reduced gate leakage. FETs regulate current flow using a gate
10 which, when activated with voltage, creates an electric field to allow or prevent
11 current to flow through the transistor, such that the FET can be used as an on/off
12 switch.

13 36. The '294 Patent relates specifically to GaN FET transistors which include a
14 gate formed of GaN. Ideally, in the absence of a voltage applied to the gate, no
15 current flows through the gate – the voltage applied to the gate simply switches the
16 transistor on or off, i.e., the voltage applied to the gate allows or blocks current flow
17 from the drain to the source of the transistor. However, there is always some
18 undesirable “leakage” of current through the gate and into main current flow between
19 the drain and source of the transistor. In accordance with the '294 Patent, this
20 undesirable gate leakage is reduced by making the GaN gate less conductive of
21 electricity (i.e., more insulating), which is termed a “compensated” GaN gate layer.

22 37. The '294 Patent has four independent claims and eight dependent claims. EPC
23 asserts that at least claims 1-3 are infringed by the Accused Products, directly or
24 indirectly, either literally or under the doctrine of equivalents.

25 The '508 Patent

26 38. On March 3, 2015, the USPTO issued the '508 Patent, entitled *Enhancement*
27 *Mode GaN HEMT Device and Method for Fabricating the Same*. The '508 Patent
28 names Alexander Lidow, Robert Beach, Alana Nakata, Jianjun Cao, and Guang Yuan

1 Zhao as inventors. The '508 Patent issued from U.S. Patent Application Serial No.
2 12/756,960, filed on April 8, 2010. The '508 Patent further claims priority to U.S.
3 Provisional Patent Application Serial No. 61/167,777, filed on April 8, 2009. A true
4 and correct copy of the '508 Patent is attached hereto as Exhibit 7.

5 39. EPC is the assignee and owner of all right, title, and interest in and to the '508
6 Patent, which is valid, enforceable, and is currently in full force and effect.

7 40. The '508 Patent generally describes a method of forming an enhancement-mode
8 GaN transistor with a self-aligned gate, i.e., the gate metal and the GaN material of the
9 transistor gate are etched with a photolithography technique using a single photo
10 mask. Prior to the invention of the '508 patent, the gate metal and the GaN material
11 of the transistor gate of conventional enhancement mode GaN transistors were formed
12 using two separate photo masks. The two-mask process disadvantageously leads to
13 misalignment of the gate metal with respect to the GaN material of the gate, resulting
14 in a wider gate length than the photo/etch minimum CD (cell dimension). This causes
15 high gate charge, wider cell pitch, higher "on resistance" and higher manufacturing
16 costs. Thus, the self-aligned (single mask) process of the '508 Patent results in
17 enhancement mode GaN transistors with significantly improved performance and
18 lower cost as compared to GaN transistors formed with the traditional multi-mask
19 process.

20 41. The '508 has three independent claims and two dependent claims. EPC asserts
21 that at least claim 1 is infringed by the Accused Products, directly or indirectly, either
22 literally or under the doctrine of equivalents.

23 The '347 Patent

24 42. On August 29, 2017, the USPTO issued the '347 Patent, entitled *Gate with*
25 *Self-Aligned Ledged for Enhancement Mode GaN Transistors*. The '347 Patent names
26 Jianjun Cao, Alexander Lidow, and Alana Nakata as inventors. The '347 Patent
27 issued from U.S. Patent Application Serial No. 14/447,069, filed on July 30, 2014,
28 which is a continuation-in-part of U.S. Patent Application Serial No. 13/838,792, filed

1 on March 15, 2013, now U.S. Patent 8,890,168, which is a division of U.S. Patent
2 Application Serial No. 12/756,960, filed on April 8, 2010. The '347 Patent further
3 claims priority to U.S. Provisional Patent Application Serial No. 61/167,777, filed on
4 April 8, 2009, and U.S. Provisional Patent Application Serial No. 61/860,976, filed on
5 August 1, 2013. A true and correct copy of the '347 Patent is attached hereto as
6 Exhibit 8.

7 43. EPC is the assignee and owner of all right, title, and interest in and to the '347
8 Patent, which is valid, enforceable, and is currently in full force and effect.

9 44. The '347 Patent relates to methods of manufacturing GaN FETs with reduced
10 gate leakage current. In FET transistors, a gate metal is positioned on a gate
11 semiconductor structure. Undesirable gate current leakage can flow along a first path
12 that begins from the gate metal and travels through the gate semiconductor structure
13 below the gate contact. Alternatively, or in addition, gate leakage current can flow
14 along a second path from the gate metal along the periphery, i.e., the edge or sidewall,
15 of the gate structure. To reduce this undesirable gate current leakage along the second
16 path, the inventors of the '347 Patent developed a novel and non-obvious self-aligned
17 manufacturing process that results in a gate structure with a pair of ledges on the
18 upper surface of the gate structure.

19 45. The '347 Patent has one independent claim and two dependent claims. EPC
20 asserts that at least claim 1 is infringed by the Accused Products, directly or indirectly,
21 either literally or under the doctrine of equivalents.

22 The '335 Patent

23 46. On June 4, 2019, the USPTO issued the '335 Patent, entitled *Gate with Self-*
24 *Aligned Ledge for Enhancement Mode GaN Transistors*. The '335 Patent names
25 Jianjun Cao, Alexander Lidow, and Alana Nakata as inventors. The '335 Patent
26 issued from U.S. Patent Application Serial No. 15/655,438, filed on July 20, 2017,
27 which is a division of U.S. Patent Application Serial No. 14/477,069, filed on July 30,
28 2014, now the '347 Patent, which is a continuation-in-part of U.S. Patent Application

1 Serial No. 13/838,792, filed on March 15, 2013, now U.S. Patent 8,890,168, which is
2 a division of U.S. Patent Application Serial No. 12/756,960, filed on April 8, 2010.
3 The '335 Patent further claims priority to U.S. Provisional Patent Application Serial
4 No. 61/167,777, filed on April 8, 2009, and U.S. Provisional Patent Application Serial
5 No. 61/860,976, filed on August 1, 2013. A true and correct copy of the '335 Patent
6 is attached hereto as Exhibit 9.

7 47. EPC is the assignee and owner of all right, title, and interest in and to the '335
8 Patent, which is valid, enforceable, and is currently in full force and effect.

9 48. The '335 Patent relates to a GaN FET with reduced gate leakage current. In
10 GaN FET transistors, gate metal is disposed on a gate semiconductor structure.
11 Undesirable gate current leakage can flow along a first path that begins from the gate
12 metal and travels through the gate semiconductor structure below the gate contact.
13 Alternatively, or in addition, gate leakage current can flow along a second path from
14 the gate metal along the periphery, e.g., the edge or sidewall, of the gate structure. To
15 reduce this undesirable gate current leakage along the second path, the inventors of the
16 '335 Patent developed a novel and non-obvious GaN FET having a gate structure with
17 a pair of self-aligned ledges of substantially equal widths on the upper surface of the
18 gate material.

19 49. The '335 Patent has two independent claims and five dependent claims. EPC
20 asserts that at least claim 1 is infringed by the Asserted Products, directly or indirectly,
21 either literally or under the doctrine of equivalents.

22 **Defendants' Use of EPC's Patented Technologies**

23 50. Innoscience has engaged and continues to engage in making, using, selling,
24 offering for sale, and/or importing for sale the Accused Products within the United
25 States, the State of California, and in this judicial district that infringe or are made by
26 a process that is covered by one or more claims of the Asserted Patents literally or by
27 the doctrine of equivalents.

1 51. Upon information and belief, the representative Accused Products identified
2 herein are exemplary of a number of other Accused Products made, used, sold, offered
3 for sale, and/or imported for sale within the United States and in this judicial district
4 by the Defendants because they incorporate the same or substantially similar
5 infringing design and/or functionality and/or are manufactured by similar infringing
6 processes. For example, Innoscience describes its “8-inch GaN-on-Si Device
7 Technology,” which upon information and belief, underlies all of its Gallium Nitride-
8 on-Silicone products. Exhibit 10 at 2.

9 52. Defendants therefore made, used, sold, offered for sale, and/or imported the
10 Accused Products within the United States.

11 **COUNT I: DIRECT INFRINGEMENT OF U.S. PATENT NO. 8,350,294**

12 **(Against All Defendants)**

13 53. EPC incorporates by reference and re-alleges all of the foregoing paragraphs of
14 this Complaint as if fully set forth herein.

15 54. Defendants have engaged and continue to engage in making, using, selling,
16 offering for sale, and/or importing for sale the Accused Products that directly infringe
17 the '294 Patent, literally or under the doctrine of equivalents.

18 55. A chart that applies claims 1-3 of the '294 Patent to an exemplary Accused
19 Product is attached as Exhibit 11, demonstrating that Defendants have infringed
20 claims 1-3 of the '294 Patent in this district and elsewhere by making, using,
21 importing, offering for sale, or selling semiconductor products, all in violation of 35
22 U.S.C. § 271(a).

23 56. As a direct and proximate result of Defendants' acts of infringing at least claims
24 1-3 of the '294 Patent, EPC has suffered injury and monetary damages for which EPC
25 is entitled to relief in the form of damages for lost profits and in no event less than a
26 reasonable royalty to compensate for Defendants' infringement.

27 57. Defendants will continue to directly infringe at least claims 1-3 of the '294
28 Patent, causing immediate and irreparable harm to EPC unless this Court enjoins and

1 restrains its activities, specifically the acts of making, using, selling, offering for sale,
2 and importing for sale, as previously outlined. There are inadequate remedies
3 available at law to compensate for this harm.

4 58. Upon information and belief, the direct infringement of at least claims 1-3 of
5 the '294 Patent by Defendants has deprived, and will deprive, EPC of sales proceeds,
6 licensing fees, royalties and other related revenue which EPC would have made or
7 would enjoy in the future; has injured EPC in other respects; and will cause EPC
8 added injury and damage unless Defendants are enjoined from infringing the claims of
9 the '294 Patent on all Accused Products that Defendants will make, use, sell, offer for
10 sale, import for sale, distribute, market, or advertise until the expiration of the '294
11 Patent.

12 59. Defendants were aware of the '294 Patent at least as of the date they were
13 served with this Complaint. Moreover, on or about November 12, 2018, EPC's
14 representative emailed Innoscience to specifically inform Defendants of its
15 infringement of certain EPC patents in the family of the Asserted Patents. Upon
16 information and belief, Defendants have knowingly, willfully, and deliberately
17 infringed at least claims 1-3 of the '294 Patent in conscious disregard of EPC's rights,
18 making this case exceptional within the meaning of 35 U.S.C. § 285 and justifying
19 treble damages pursuant to 35 U.S.C. § 284.

20 **COUNT II: INDIRECT INFRINGEMENT OF U.S. PATENT NO. 8,350,294**

21 **(Against All Defendants)**

22 60. EPC incorporates by reference and re-alleges all of the foregoing paragraphs of
23 this Complaint as if fully set forth herein.

24 61. Upon information and belief, Defendants indirectly infringe the '294 Patent
25 pursuant to 35 U.S.C. § 271(b) by knowingly and intentionally inducing the
26 infringement of the '294 Patent by selling the Accused Products to direct infringers
27 that include, without limitation, resellers that sell, offer for sale, and/or import for sale
28

1 the Accused Products and distributors of the Accused Products that sell, offer for sale,
2 and/or import for sale the Accused Products.

3 62. For example, Defendants induce direct infringement by authorizing distributors
4 of Defendants' transistors to sell and import the Accused Products into the United
5 States. Exhibit 4 at 2 (identifying Richardson RFPD as an "Authorized Distributor").
6 Upon information and belief, Richardson's direct infringement of importing the
7 Accused Products into the United States was induced by Innoscience at least by a
8 distribution agreement between Innoscience and Richardson.

9 63. Defendants were aware of the '294 Patent at least as of the date they were
10 served with this Complaint. Moreover, on or about November 12, 2018, EPC's
11 representative emailed Innoscience to specifically inform Defendants of its
12 infringement of certain EPC patents in the family of the Asserted Patents.

13 64. Upon information and belief, Innoscience has constructive knowledge of the
14 '294 Patent. Defendants specifically encourage and direct others to sell, offer for sale,
15 and/or import the Accused Products in a manner that Defendants know constitutes
16 infringement of at least claims 1-3 of the '294 Patent.

17 65. As a direct and proximate result of Defendants' acts of infringing at least claims
18 1-3 of the '294 Patent, EPC has suffered injury and monetary damages for which EPC
19 is entitled to relief in the form of damages for lost profits and in no event less than a
20 reasonable royalty to compensate for Defendants' infringement.

21 66. Defendants will continue to induce infringement of at least claims 1-3 of the
22 '294 Patent, causing immediate and irreparable harm to EPC unless this Court enjoins
23 and restrains its activities, specifically the acts of making, using, selling, offering
24 for sale, and importing for sale, as outlined above. There are inadequate remedies
25 available at law to compensate for this harm.

26 67. Upon information and belief, the induced infringement of at least claims 1-3 of
27 the '294 Patent by Defendants has deprived, and will deprive, EPC of sales, licensing
28 fees, royalties, and other related revenue which EPC would have made or would enjoy

1 in the future; has injured EPC in other respects; and will cause EPC added injury and
2 damage unless Defendants are enjoined from inducing infringement the claims of the
3 '294 Patent for all semiconductor products Defendants will make, use, sell, offer for
4 sale, import for sale, distribute, market, or advertise until the expiration of the '294
5 Patent.

6 68. Upon information and belief, Defendants have knowingly, willfully, and
7 deliberately induced infringement of the '294 Patent in conscious disregard of EPC's
8 rights, making this case exceptional within the meaning of 35 U.S.C. § 285 and
9 justifying treble damages pursuant to 35 U.S.C. § 284.

10 **COUNT III: DIRECT INFRINGEMENT OF U.S. PATENT NO. 8,404,508**

11 **(Against All Defendants)**

12 69. EPC incorporates by reference and re-alleges paragraphs 1-52 as if fully set
13 forth herein.

14 70. Defendants have engaged and continue to engage in selling, offering for sale,
15 and/or importing for sale the Accused Products that are made by a process that is
16 covered by at least claim 1 of the '508 Patent, literally or under the doctrine of
17 equivalents.

18 71. A chart that applies independent claim 1 of the '508 Patent to an exemplary
19 Accused Product made by the patented process is attached as Exhibit 12,
20 demonstrating that Defendants have infringed independent claim 1 of the '508 Patent
21 in this district and elsewhere by making and importing the Accused Products in
22 violation of 35 U.S.C. § 271(g).

23 72. As a direct and proximate result of Defendants' acts of infringing at least claim
24 1 of the '508 Patent, EPC has suffered injury and monetary damages for which EPC is
25 entitled to relief in the form of damages for lost profits and in no event less than a
26 reasonable royalty to compensate for Defendants' infringement.

27 73. Defendants will continue to directly infringe at least claim 1 of the '508 Patent,
28 causing immediate and irreparable harm to EPC unless this Court enjoins and restrains

1 its activities, specifically the acts of making selling, offering for sale, and importing
2 the Accused Products. There are inadequate remedies available at law to compensate
3 for this harm.

4 74. Upon information and belief, the direct infringement of independent claim 1 of
5 the '508 Patent by Defendants has deprived, and will deprive, EPC of sales proceeds,
6 licensing fees, royalties and other related revenue which EPC would have made or
7 would enjoy in the future; has injured EPC in other respects; and will cause EPC
8 added injury and damage unless Defendants are enjoined from infringing at least
9 claim 1 of the '508 Patent on all Accused Products that Defendants will make, use,
10 sell, offer for sale, import for sale, distribute, market, or advertise until the expiration
11 of the '508 Patent.

12 75. Defendants were aware of the '508 Patent at least as of the date they were
13 served with this Complaint. Moreover, on or about November 12, 2018, EPC's
14 representative emailed Innoscience to specifically inform Defendants of its
15 infringement of the '508 patent. Defendants have knowingly, willfully, and
16 deliberately infringed at least claim 1 of the '508 Patent in conscious disregard of
17 EPC's rights, making this case exceptional within the meaning of 35 U.S.C. § 285 and
18 justifying treble damages pursuant to 35 U.S.C. § 284.

19 **COUNT IV: INDIRECT INFRINGEMENT OF U.S. PATENT NO. 8,404,508**

20 **(Against All Defendants)**

21 76. EPC incorporates by reference and re-alleges paragraphs 1-52 and 69-75 as if
22 fully set forth herein.

23 77. Upon information and belief, Defendants indirectly infringe the '508 Patent
24 pursuant to 35 U.S.C. § 271(b) by knowingly and intentionally inducing the
25 infringement of the '508 Patent by selling the Accused Products made by the patented
26 process to direct infringers that include, without limitation, resellers that sell, offer for
27 sale, and/or import for sale the Accused Products and distributors of the Accused
28

1 Products that offer for sale, and/or import for sale the Accused Products into the
2 United States.

3 78. For example, Defendants induce direct infringement by authorizing others to
4 sell, offer for sale, and import the Accused Products made by the patented process into
5 United States. Exhibit 4 at 2 (identifying Richardson RFPD as an “Authorized
6 Distributor”). Upon information and belief, Richardson’s direct infringement of
7 importing the Accused Products into the United States was induced by Innoscience at
8 least by a distribution agreement between Innoscience and Richardson.

9 79. Defendants were aware of the ’508 Patent at least as of the date they were
10 served with this Complaint. Moreover, on or about November 12, 2018, EPC’s
11 representative emailed Innoscience to specifically inform Defendants of its
12 infringement of the ’508 patent.

13 80. Defendants specifically encourage and instruct its distributor to sell, offer for
14 sale, and/or import the Accused Products in a manner that Defendants know
15 constitutes infringement of at least claim 1 of the ’508 Patent.

16 81. As a direct and proximate result of Defendants’ acts of infringing at least claim
17 1 of the ’508 Patent, EPC has suffered injury and monetary damages for which EPC is
18 entitled to relief in the form of damages for lost profits and in no event less than a
19 reasonable royalty to compensate for Defendants’ infringement.

20 82. Defendants will continue to induce infringement of at least claim 1 of the ’508
21 Patent, causing immediate and irreparable harm to EPC unless this Court enjoins and
22 restrains its activities, specifically the acts of making, using, selling, offering for sale,
23 and importing for sale, as outlined above. There are inadequate remedies available at
24 law to compensate for this harm.

25 83. Upon information and belief, the induced infringement of at least claim 1 of the
26 ’508 Patent by Defendants has deprived, and will deprive, EPC of sales, licensing
27 fees, royalties, and other related revenue which EPC would have made or would enjoy
28 in the future; has injured EPC in other respects; and will cause EPC added injury and

1 damage unless Defendants are enjoined from inducing infringement of at least claim 1
2 of the '508 Patent for all semiconductor products Defendants make, use, sell, offer for
3 sale, import for sale, distribute, market, or advertise until the expiration of the '508
4 Patent.

5 84. Upon information and belief, Defendants have knowingly, willfully, and
6 deliberately induced infringement of the '508 Patent in conscious disregard of EPC's
7 rights, making this case exceptional within the meaning of 35 U.S.C. § 285 and
8 justifying treble damages pursuant to 35 U.S.C. § 284.

9 **COUNT V: DIRECT INFRINGEMENT OF U.S. PATENT NO. 9,748,347**

10 **(Against All Defendants)**

11 85. EPC incorporates by reference and re-alleges paragraphs 1-52 as if fully set
12 forth herein.

13 86. Defendants have engaged and continue to engage in making, using, selling,
14 offering for sale, and/or importing for sale the Accused Products that are made by a
15 process that is covered by at least claim 1 of the '347 Patent, literally or under the
16 doctrine of equivalents.

17 87. A chart that applies claim 1 of the '347 Patent to an exemplary Accused
18 Product is attached as Exhibit 13, demonstrating that Defendants have infringed at
19 least claim 1 of the '347 Patent in this district and elsewhere by making and importing
20 the Accused Products in violation of 35 U.S.C. § 271(g).

21 88. As a direct and proximate result of Defendants' acts of infringing at least claim
22 1 of the '347 Patent, EPC has suffered injury and monetary damages for which EPC is
23 entitled to relief in the form of damages for lost profits and in no event less than a
24 reasonable royalty to compensate for Defendants' infringement.

25 89. Defendants will continue to directly infringe at least claim 1 of the '347 Patent,
26 causing immediate and irreparable harm to EPC unless this Court enjoins and restrains
27 its activities, specifically the acts of making, using, selling, offering for sale, and
28

1 importing for sale, as previously outlined. There are inadequate remedies available at
2 law to compensate for this harm.

3 90. Upon information and belief, the direct infringement of at least claim 1 of the
4 '347 Patent by Defendants has deprived, and will deprive, EPC of sales proceeds,
5 licensing fees, royalties and other related revenue which EPC would have made or
6 would enjoy in the future; has injured EPC in other respects; and will cause EPC
7 added injury and damage unless Defendants are enjoined from infringing the claims of
8 the '347 Patent on all Accused Products that Defendants will make, use, sell, offer for
9 sale, import for sale, distribute, market, or advertise until the expiration of the
10 '347 Patent.

11 91. Defendants were aware of the '347 Patent at least as of the date they were
12 served with this Complaint. Moreover, on or about November 12, 2018, EPC's
13 representative emailed Innoscience to specifically inform Defendants of its
14 infringement of certain EPC patents in the family of the Asserted Patents. Upon
15 information and belief, Defendants have knowingly, willfully, and deliberately
16 infringed at least claim 1 of the '347 Patent in conscious disregard of EPC's rights,
17 making this case exceptional within the meaning of 35 U.S.C. § 285 and justifying
18 treble damages pursuant to 35 U.S.C. § 284.

19 **COUNT VI: INDIRECT INFRINGEMENT OF U.S. PATENT NO. 9,748,347**

20 **(Against All Defendants)**

21 92. EPC incorporates by reference and re-alleges paragraphs 1-52 and 85-91 as if
22 fully set forth herein.

23 93. Upon information and belief, Defendants indirectly infringe the '347 Patent
24 pursuant to 35 U.S.C. § 271(b) by knowingly and intentionally inducing the
25 infringement of the '347 Patent by selling the Accused Products made by a process
26 that practices at least claim 1 of the '347 Patent to direct infringers that include,
27 without limitation, resellers that sell, offer for sale, and/or import the Accused
28

1 Products; and distributors of the Accused Products that sell, offer for sale, and/or
2 import the Accused Products in the United States.

3 94. For example, Defendants induce direct infringement by authorizing distributors
4 of Defendants' transistors to sell and import the Accused Products made by the
5 patented process into United States. Exhibit 4 at 2 (identifying Richardson RFPD as
6 an "Authorized Distributor"). Upon information and belief, Richardson's direct
7 infringement of importing the Accused Products made by a process covered by at least
8 claim 1 of the '347 patent into the United States was induced by Innoscience at least
9 by a distribution agreement between Innoscience and Richardson.

10 95. Defendants were aware of the '347 Patent at least as of the date they were
11 served with this Complaint. Moreover, on or about November 12, 2018, EPC's
12 representative emailed Innoscience to specifically inform Defendants of its
13 infringement of certain EPC patents in the family of the Asserted Patents.

14 96. Upon information and belief, Innoscience has constructive knowledge of the
15 '347 Patent. Defendants specifically encourage and instruct its distributors to sell,
16 offer for sale, and/or import the Accused Products in a manner that Defendants know
17 constitutes infringement of at least claim 1 of the '347 Patent.

18 97. As a direct and proximate result of Defendants' acts of infringing at least claim
19 1 of the '347 Patent, EPC has suffered injury and monetary damages for which EPC is
20 entitled to relief in the form of damages for lost profits and in no event less than a
21 reasonable royalty to compensate for Defendants' infringement.

22 98. Defendants will continue to induce infringement of at least claim 1 of the '347
23 Patent, causing immediate and irreparable harm to EPC unless this Court enjoins and
24 restrains its activities, specifically the acts of making, using, selling, offering for sale,
25 and importing for sale, as outlined above. There are inadequate remedies available at
26 law to compensate for this harm.

27 99. Upon information and belief, the induced infringement of at least claim 1 of the
28 '347 Patent by Defendants has deprived, and will deprive, EPC of sales, licensing

1 fees, royalties, and other related revenue which EPC would have made or would enjoy
2 in the future; has injured EPC in other respects; and will cause EPC added injury and
3 damage unless Defendants are enjoined from inducing infringement of claim 1 of the
4 '347 Patent for all semiconductor products Defendants make, use, sell, offer for sale,
5 import for sale, distribute, market, or advertise until the expiration of the '347 Patent.

6 100. Upon information and belief, Defendants have knowingly, willfully, and
7 deliberately induced infringement of the '347 Patent in conscious disregard of EPC's
8 rights, making this case exceptional within the meaning of 35 U.S.C. § 285 and
9 justifying treble damages pursuant to 35 U.S.C. § 284.

10 **COUNT VII: DIRECT INFRINGEMENT OF U.S. PATENT NO. 10,312,335**

11 **(Against All Defendants)**

12 101. EPC incorporates by reference and re-alleges paragraphs 1-52 as if fully set
13 forth herein.

14 102. Defendants have engaged and continue to engage in using, selling, offering for
15 sale, and/or importing for sale the Accused Products that directly infringe the '335
16 Patent, literally or under the doctrine of equivalents.

17 103. A chart that applies claim 1 of the '335 Patent to an exemplary Accused
18 Product is attached as Exhibit 14, demonstrating that Defendants have infringed at
19 least claim 1 of the '335 Patent in this district and elsewhere by making, using,
20 importing, offering for sale, or selling semiconductor products, all in violation of 35
21 U.S.C. § 271(a).

22 104. As a direct and proximate result of Defendants' acts of infringing at least claim
23 1 of the '335 Patent, EPC has suffered injury and monetary damages for which EPC is
24 entitled to relief in the form of damages for lost profits and in no event less than a
25 reasonable royalty to compensate for Defendants' infringement.

26 105. Defendants will continue to directly infringe at least claim 1 of the '335 Patent,
27 causing immediate and irreparable harm to EPC unless this Court enjoins and restrains
28 its activities, specifically the acts of making, using, selling, offering for sale, and

1 importing for sale, as previously outlined. There are inadequate remedies available at
2 law to compensate for this harm.

3 106. Upon information and belief, the direct infringement of at least claim 1 of the
4 '335 Patent by Defendants has deprived, and will deprive, EPC of sales proceeds,
5 licensing fees, royalties and other related revenue which EPC would have made or
6 would enjoy in the future; has injured EPC in other respects; and will cause EPC
7 added injury and damage unless Defendants are enjoined from infringing at least
8 claim 1 of the '335 Patent on all Accused Products that Defendants will make, use,
9 sell, offer for sale, import for sale, distribute, market, or advertise until the expiration
10 of the '335 Patent.

11 107. Defendants were aware of the '335 Patent at least as of the date they were
12 served with this Complaint. Moreover, on or about November 12, 2018, EPC's
13 representative emailed Innoscience to specifically inform Defendants of its
14 infringement of certain EPC patents in the family of the Asserted Patents. Upon
15 information and belief, Defendants have knowingly, willfully, and deliberately
16 infringed at least claim 1 of the '335 Patent in conscious disregard of EPC's rights,
17 making this case exceptional within the meaning of 35 U.S.C. § 285 and justifying
18 treble damages pursuant to 35 U.S.C. § 284.

19 **COUNT VIII: INDIRECT INFRINGEMENT OF U.S. PATENT NO. 10,312,335**

20 **(Against All Defendants)**

21 108. EPC incorporates by reference and re-alleges paragraphs 1-52 and 101-107 as if
22 fully set forth herein.

23 109. Upon information and belief, Defendants indirectly infringe the '335 Patent
24 pursuant to 35 U.S.C. § 271(b) by knowingly and intentionally inducing the
25 infringement of the '335 Patent by selling the Accused Products to direct infringers
26 that include, without limitation, resellers that make, use, sell, offer for sale, and/or
27 import for sale the Accused Products and distributors of the Accused Products that
28 use, sell, offer for sale, and/or import for sale the Accused Products.

1 110. For example, Defendants induce direct infringement by authorizing distributors
2 of Defendants' transistors to sell and import the Accused Products into United States.
3 Exhibit 4 at 2 (identifying Richardson RFPD as an "Authorized Distributor"). Upon
4 information and belief, Richardson's direct infringement of importing the Accused
5 Products into the United States was induced by Innoscience at least by a distribution
6 agreement between Innoscience and Richardson.

7 111. Defendants were aware of the '335 Patent at least as of the date they were
8 served with this Complaint. Moreover, on or about November 12, 2018, EPC's
9 representative emailed Innoscience to specifically inform Defendants of its
10 infringement of certain EPC patents in the family of the Asserted Patents.

11 112. Upon information and belief, Innoscience has constructive knowledge of the
12 '335 Patent. Defendants specifically encourage and instruct its distributor to sell,
13 offer for sale, and/or import the Accused Products in a manner that Defendants know
14 constitutes infringement of at least claim 1 of the '335 Patent.

15 113. As a direct and proximate result of Defendants' acts of infringing at least claim
16 1 of the '335 Patent, EPC has suffered injury and monetary damages for which EPC is
17 entitled to relief in the form of damages for lost profits and in no event less than a
18 reasonable royalty to compensate for Defendants' infringement.

19 114. Defendants will continue to induce infringement of at least claim 1 of the '335
20 Patent, causing immediate and irreparable harm to EPC unless this Court enjoins and
21 restrains its activities, specifically the acts of making, using, selling, offering for sale,
22 and importing for sale, as outlined above. There are inadequate remedies available at
23 law to compensate for this harm.

24 115. Upon information and belief, the induced infringement of at least claim 1 of the
25 '335 Patent by Defendants has deprived, and will deprive EPC of sales, licensing fees,
26 royalties, and other related revenue which EPC would have made or would enjoy in
27 the future; has injured EPC in other respects; and will cause EPC added injury and
28 damage unless Defendants are enjoined from inducing infringement of claims 1-7 of

1 the '335 Patent for all semiconductor products Defendants will make, use, sell, offer
2 for sale, import for sale, distribute, market, or advertise until the expiration of the '335
3 Patent.

4 116. Upon information and belief, Defendants have knowingly, willfully, and
5 deliberately induced infringement of the '335 Patent in conscious disregard of EPC's
6 rights, making this case exceptional within the meaning of 35 U.S.C. § 285 and
7 justifying treble damages pursuant to 35 U.S.C. § 284.

8 **PRAYER FOR RELIEF**

9 WHEREFORE, EPC respectfully requests:

10 A. That Judgment be entered that Defendants have infringed one or more
11 claims of the Asserted Patents, directly and indirectly, literally and/or under the
12 doctrine of equivalents;

13 B. That, in accordance with 35 U.S.C. § 283, Innoscience Zhuhai,
14 Innoscience America, and Innoscience, Inc., and all their affiliates, employees, agents,
15 officers, directors, attorneys, successors, and assigns and all those acting on behalf of
16 or in active concert or participation with any of them, be preliminarily and
17 permanently enjoined from (1) infringing the Asserted Patents and (2) making, using,
18 selling, offering for sale, and importing for sale the Accused Products;

19 C. An order directing Defendants to file with the Court and serve upon
20 EPC's counsel within thirty (30) days after entry of the order of injunction, a report
21 setting forth the manner and form in which Defendants have complied with the
22 injunction, including the provision relating to destruction and recall of infringing
23 products and materials;

24 D. An award of damages sufficient to compensate EPC for Defendants'
25 infringement under 35 U.S.C. § 284, including but not limited to, damages for lost
26 profits and in no event less than a reasonable royalty, together with interest and costs,
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1 including an enhancement of damages on account of Defendants' willful
2 infringement;

3 E. That the case be found exceptional under 35 U.S.C. § 285 and that EPC
4 be awarded its reasonable attorneys' fees;

5 F. Costs and expenses in this action;

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

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

8
9 DATED: May 24, 2023

BLANK ROME LLP

11 By: /s/ Cheryl S. Chang

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