UNITED STATES DISTRICT COURT EASTERN DISTRICT OF TEXAS MARSHALL DIVISION

ARIGNA TECHNOLOGY LIMITED,

Case No. 2:21-cv-00172

Plaintiff,

VS.

JURY TRIAL DEMANDED

Bayerische Motoren Werke AG and BMW of North America, LLC,

Defendants.

COMPLAINT FOR PATENT INFRINGEMENT

This is an action for patent infringement in which Arigna Technology Limited makes the following allegations against Defendants Bayerische Motoren Werke AG and BMW of North America, LLC, each of whom is a manufacturer and/or distributor who, without authority, imports, makes, offers for sales and/or sells in the United States automobiles and components thereof that infringe the Asserted Patent:

PARTIES

<u>Arigna</u>

1. Plaintiff Arigna Technology Limited ("Plaintiff" or "Arigna") is an Irish company conducting business at The Hyde Building, Carrickmines, Suite 23, Dublin 18, Ireland. Arigna owns a portfolio of patents that cover power semiconductors for applications in the automotive, industrial automation, and energy industries, and radio frequency amplifiers and circuits with applications in a wide variety of automobiles and consumer electronics products, including smartphones and laptops. Arigna is the owner of all rights, title, and interest in and to U.S. Patent No. 7,049,850 (the "850 Patent" or "Asserted Patent").

BMW

- 2. Upon information and belief, Bayerische Motoren Werke AG ("BMW AG") is a foreign corporation organized and existing under the laws of Germany with its headquarters at Petuelring 130, D-80788, Munich, Germany. On information and belief, BMW AG does business itself, or through its subsidiaries, affiliates, and agents, in the State of Texas and the Eastern District of Texas.
- 3. Upon information and belief, BMW of North America, LLC ("BMW NA") is a limited liability company organized under the laws of Delaware. On information and belief, BMW NA is a wholly owned subsidiary of BMW AG and is responsible for importing, marketing, distributing, and selling automotive vehicles and components from BMW-managed brands (e.g., BMW, Rolls-Royce, etc.) in the United States. On information and belief, BMW NA has hundreds of employees based in and does business across the State of Texas, including at the Vehicle Distribution Center in Galveston and the Parts Distribution Center in Lancaster.
- 4. The Complaint refers to Defendants BMW AG and BMW NA collectively as "BMW". On information and belief, BMW designs, manufactures, distributes, imports, offers for sale, and/or sells in the State of Texas and the Eastern District of Texas automotive vehicles and components thereof that infringe the '850 Patent, and/or induces others to commit acts of patent infringement in the State of Texas and the Eastern District of Texas.
- 5. BMW has regular and established places of business, at which it has committed acts of infringement and placed the accused products into the stream of commerce, throughout the State of Texas and in the Eastern District of Texas, including at, e.g., BMW of Tyler, Classic BMW, and BMW of Beaumont.
 - 6. Upon information and belief, each of these authorized BMW dealers in this District

are regular, continuous, and established physical places of business of Defendants BMW, being established, ratified, and/or controlled by BMW as authorized dealers, which are the exclusive places of business at which BMW offers for sale, sells, and provides authorized maintenance, warranty, and recall services for the BMW automotive vehicles and components that infringe the '850 Patent.

- 7. Upon information and belief, BMW granted each of these authorized BMW dealers in this District the exclusive right to offer for sale, sell, and service the infringing BMW vehicles in this District, at these particular geographical locations, and has further conditioned these authorized dealers' continued offering for sale, sale, and service of the infringing BMW vehicles in this District on these authorized dealers' continued presence in this District, at these particular geographical locations, so that the infringing BMW automobiles and components are offered for sale, sold, and/or distributed in this District.
- 8. BMW ratifies and holds these authorized BMW dealers out as the regular and established places of business of BMW in this District by listing each of them in BMW's sales directories and on BMW's website(s), including, e.g., as shown below:

| Contract | Contract

FIGURE 1

9. BMW further ratifies and holds these authorized BMW dealers out as the regular and established places of business of BMW in this District by offering for sale on BMW's website(s) the infringing automobiles and components at the physical, geographical locations of these authorized BMW dealers, including, e.g., as shown below:

FIGURE 2

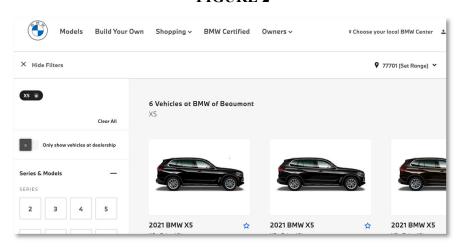
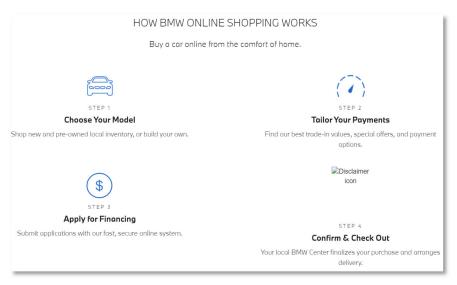


FIGURE 3



10. BMW further ratifies and holds these authorized BMW dealers out as the regular and established places of business of BMW in this District by requiring these authorized dealers to feature and use BMW names, branding, trademarks, and/or trade dress, in each of these

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authorized dealers' names, including BMW of Tyler, Classic BMW, and BMW of Beaumont, as well as in the marketing and advertising materials that these authorized dealers use and make to offer for sale and sell the infringing automobiles and components in this District, such as on each authorized dealer's website hosted and shown to consumers in this District.

11. BMW further ratifies and holds these authorized BMW dealers out as the regular and established places of business of BMW in this District by controlling in whole or in part the name, geographical location, layout, structure, marketing, branding, and overall look and feel of these exclusive places to test drive and purchase the infringing BMW automobiles and components, including, e.g., as shown below:



FIGURE 4

FIGURE 5



12. BMW further ratifies and holds these authorized BMW dealers out as the regular and established places of business of BMW in this District by requiring these businesses to store, display, distribute, and/or offer for sale marketing materials, brochures, product specifications, service information, warranty information, financing information, and various other literature, as well as BMW authorized service, parts, and accessories, for the infringing automobiles and components, including, e.g., as shown below:

FIGURE 6







- 13. BMW further ratifies and holds these authorized BMW dealers out as the regular and established places of business of BMW in this District by establishing, authorizing, and requiring these places of business to offer to consumers in this District, at the time of sale and/or distribution of the infringing automobiles and components, BMW financial services and products, BMW warranties, BMW service from BMW certified and/or trained technicians, BMW parts, and BMW accessories.
- 14. BMW further ratifies and holds these authorized BMW dealers out as the regular and established places of business of BMW in this District by establishing, authorizing, and requiring consumers in this District to visit and use these authorized dealers in order to obtain authorized BMW service, obtain scheduled maintenance under any BMW Ultimate Care plan or Ultimate Service program, make repairs pursuant to any BMW warranty, or obtain any recall/campaign work for all new BMW automobiles and components, including the infringing automobiles and components.
- 15. BMW further ratifies and holds these authorized BMW dealers out as the regular and established places of business of BMW in this District by recruiting, hiring, training, offering

compensation and benefits to, controlling, and/or labeling as authorized or certified BMW employees and agents some or all of the employees or agents employed in this District by these authorized dealers—including for example, BMW certified brand advisors, BMW certified geniuses or experts, BMW certified technicians, and BMW certified service advisors.

- 16. BMW further ratifies and holds these authorized BMW dealers out as the regular and established places of business of BMW by providing these dealers sales promotions, providing these dealers financing for dealership improvements directed by BMW, and sharing customer data with these dealers to provide customized BMW services.
- 17. BMW has established and ratified and holds these authorized BMW dealers out as the regular and established places of business of BMW by directing and controlling these authorized dealers' actions, sales, and services in the foregoing manner, and has consented to these authorized dealers acting on BMW's behalf and being the exclusive places of business whereby the infringing automobiles and components are distributed, offered for sale, sold, and serviced in order to place these infringing articles into the stream of commerce in this District, and these authorized dealers have consented to act on BMW's behalf pursuant to the foregoing terms of control and direction in order to be able to provide these BMW automobiles, components, and services to consumers in this District.

JURISDICTION AND VENUE

- 18. This is an action for patent infringement arising under the patent laws of the United States. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a).
- 19. This Court has personal jurisdiction over each Defendant because each Defendant conducts business in and has committed acts of patent infringement and/or induced others to commit acts of patent infringement in this District, the State of Texas, and elsewhere in the United

States and has established minimum contacts with this forum state such that the exercise of jurisdiction over each Defendant would not offend the traditional notions of fair play and substantial justice. Upon information and belief, each Defendant transacts substantial business with entities and individuals in the State of Texas and the Eastern District of Texas, by among other things, importing, offering to sell, distributing, and selling products that infringe the Asserted Patent, including the infringing automotive vehicles and components thereof that each Defendant purposefully directs into the State of Texas and this District as alleged herein, as well as by providing service and support to its customers in this District. Each Defendant places the accused automotive vehicles and components thereof into the stream of commerce via authorized and established distribution channels with the knowledge and expectation that they will be sold in the State of Texas, including this District, and do not otherwise permit the sale of the accused automotive vehicles and components thereof in the State of Texas, or in this District, outside of these established, authorized, and ratified distribution channels and dealer networks.

- 20. Venue is proper in this District pursuant to 28 U.S.C. §§ 1391(b)-(c) and 1400(b), because each and every Defendant either is a foreign corporation who is not a resident of the United States and is subject to personal jurisdiction in this District, and thus is subject to venue in any judicial district including this District, and/or has committed acts of infringement in this District and has a regular and established place of business in this District.
- 21. Each Defendant is subject to this Court's general and specific jurisdiction pursuant to due process and/or the Texas Long Arm Statute due at least to each Defendant's substantial business in the State of Texas and this District, including through its past infringing activities, because each Defendant regularly does and solicits business herein, and/or because each Defendant has engaged in persistent conduct and/or has derived substantial revenues from goods and services

provided to customers in the State of Texas and this District.

SINGLE ACTION

22. This suit is commenced against Defendants pursuant to 35 U.S.C. § 299 in a single action because (a) a right to relief is asserted against Defendants jointly, severally, or in the alternative with respect to or arising out of the same transaction, occurrence, or series of transactions or occurrences relating to the making, using, importing into the United States, offering for sale, and/or selling of the same accused products or processes and (b) questions of fact common to all Defendants will arise in the action.

THE ASSERTED PATENT

- 23. This action asserts causes of action for infringement of U.S. Patent No. 7,049,850. The Asserted Patent is a valid and enforceable United States Patent, the entire right, title, and interest to which Arigna owns by assignment.
- 24. The Asserted Patent relates to novel fault detection techniques for high-voltage switching devices.
- 25. On May 23, 2006, the U.S. Patent and Trademark Office duly and legally issued the '850 Patent, which is entitled "Semiconductor Device with a Voltage Detecting Device to Prevent Shoot-Through Phenomenon in First and Second Complementary Switching Devices." Plaintiff holds all rights and title to the '850 Patent, including the sole and exclusive right to bring a claim for its infringement. A true and correct copy of the '850 Patent is attached as **Exhibit A**.
- 26. The '850 Patent generally claims a semiconductor device that consists of a voltage detecting device configured to control the conduction and non-conduction of a high side switching device by detecting a potential and supplying a logic value based on that potential. This semiconductor device is used in, as one example, a vehicle's engine control module to control the

throttle plate of the engine. In a traditional gasoline engine, the throttle regulates the amount of air that flows into the engine. When a driver applies pressure to the accelerator (gas pedal), the throttle plate opens and allows air into the vehicle's engine. The semiconductor device protected by the '850 Patent is used in an engine's control module to control the throttle plate and ensure it can properly open and close.

27. Plaintiff owns all rights, title, and interest in and to the Asserted Patent and possesses all rights of recovery.

FACTUAL ALLEGATIONS

- 28. As referred to in this Complaint, and consistent with 35 U.S.C. § 100(c), the "United States" means "the United States of America, its territories and possessions."
- 29. None of the Defendants has any right to practice the intellectual property protected by the Asserted Patent.
- 30. BMW makes, uses, offers to sell, sells, and/or imports into the United States, products made in accordance with the '850 Patent, including but not limited to the BMW i3 and BMW X5, in addition to other vehicles, and/or induces others to commit acts of patent infringement in the United States.
- 31. Further, Plaintiff has not made, used, offered for sale, sold, and/or imported into the United States any product that practices the Asserted Patent.

COUNT 1 INFRINGEMENT OF U.S. PATENT NO. 7,049,850

- 32. Plaintiff repeats and incorporates by reference each preceding paragraph as if fully set forth herein and further states:
- 33. BMW has infringed and continues to infringe at least claim 7 of the '850 Patent in violation of 35 U.S.C. § 271, either literally or through the doctrine of equivalents, by making,

using, selling, or offering for sale in the United States, and/or importing into the United States, without authorization, products that practice at least claim 7 of the '850 Patent. BMW is liable for its infringement of the '850 Patent pursuant to 35 U.S.C. § 271(a), (b), and (c).

- 34. More specifically, BMW designs, manufactures, assembles, imports, offers for sale, and/or sells automotive vehicles and components thereof that incorporate the International Rectifier (Infineon) AUIR2085S that infringes at least independent claim 7 of the '850 Patent, and/or induces others to commit acts of infringement of at least independent claim 7 of the '850 Patent.
- 35. The Infineon AUIR2085S is an automotive-grade, self-oscillating half-bridge driver.

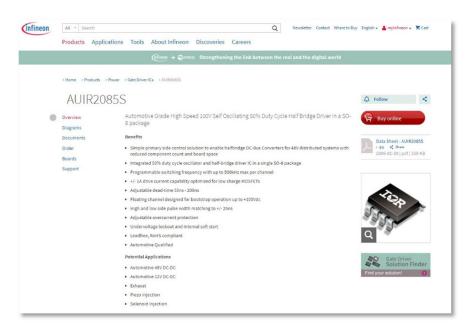


FIGURE 8

Source: https://www.infineon.com/cms/en/product/power/gate-driver-ics/auir2085s/#!diagrams

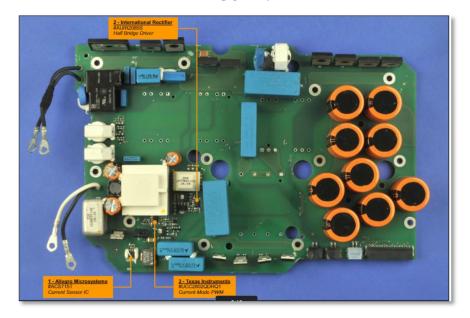
36. Claim 7 is illustrative of the '850 Patent. Claim 7 recites "[a] semiconductor device performing drive control of first and second switching devices connected in series and interposed between a high main power potential and a low main power potential, comprising: a high potential

part including a control part configured to control conduction/non-conduction of a high side switching device which is one of said first and second switching devices; a reverse level shift part configured to level-shift a signal from said high potential part to supply the level-shifted signal to a low side logic circuit operating on the basis of said low main power potential; and a voltage detecting device provided in said high potential part and configured to detect a potential at an output line of said reverse level shift part and to supply a logic value based on said potential for said control part, thereby causing said control part to control conduction/non-conduction of said high side switching device."

- 37. The Infineon AUIR2085S meets every element of this claim. The AUIR2085S is a semiconductor device that controls first and second switching devices connected in series and interposed between a high main power potential and a low main power potential.
- 38. Further, the Infineon AUIR2085S includes a high potential part that is configured to control the conduction/non-conduction of a high side switching device, and a reverse level shift part that is configured to level shift a signal from a high potential part to a low side logic circuit operating on the basis of said low main power potential. A voltage detecting device in the AUIR2085S is configured to detect a potential at an output of the reverse level shift part and to supply a logic value, based on the potential of the output, to the control part, thereby allowing the AUIR2085S to control the conduction/non-conduction of the high side switching device.
- 39. BMW makes, uses, imports, sells, and/or offers for sale in the United States automotive vehicles and components thereof that incorporate the infringing Infineon AUIR2085S.
- 40. For example, the inner power module of the BMW i3 incorporates the infringing Infineon AUIR2085S.

¹ This description of infringement is illustrative and not intended to be an exhaustive or limiting explanation of every manner in which BMW's products infringe the '850 Patent.





- 41. BMW has imported and sold, and continues to import, offer for sale, and sell, the BMW i3 and components thereof in the United States, including through, e.g., BMW authorized dealers in the Eastern District of Texas.
- 42. BMW also knowingly and intentionally induces infringement, literally and/or under the doctrine of equivalents, of at least claim 7 of the '850 Patent in violation of 35 U.S.C. § 271(b). No later than the filing and service of this Complaint, BMW has had knowledge of the '850 Patent and the infringing nature of the accused automotive vehicles and components thereof. Despite this knowledge of the '850 Patent, BMW continues to actively encourage and instruct its customers and end users (for example, through its marketing, user manuals, and online instruction materials) to use the accused automotive vehicles and components thereof in ways that directly infringe the '850 Patent literally and/or under the doctrine of equivalents. BMW does so knowing and intending that its customers and end users will commit these infringing acts. BMW also continues to make, use, import, offer for sale, and/or sell the accused automotive vehicles and components thereof, despite its knowledge of the '850 Patent, thereby specifically intending for and inducing its

customers to infringe the '850 Patent through the customers' normal and customary use of the accused automotive vehicles and components thereof.

43. As one non-limiting example, BMW, with knowledge that the accused automotive vehicles and components thereof infringe at least as of the date of this Complaint, knowingly and intentionally induced, and continue to knowingly and intentionally induce, direct infringement of the '850 Patent by providing product manuals that instruct end users how to use the BMW i3's accelerator pedal, including specifically how to initiate such function. BMW induced infringement by others, including end users, with the intent to cause infringing acts by others or, in the alternative, with the belief that there was a high probability that others, including end users, infringe the '850 Patent, but while remaining willfully blind to the infringement.

FIGURE 10

Electric driving: eDRIVE

The vehicle is powered exclusively by the electric motor. The accelerator pedal can be used not just for acceleration, but also for deceleration. In this case, the electric motor works like a generator and charges the high voltage battery. With a sensible driving style, this function can be used for especially efficient energy recovery and comfortable driving, using just the accelerator pedal.

44. BMW also contributorily infringes the '850 Patent in violation of 35 U.S.C. § 271(c) by making, using, selling or offering to sell within the United States or importing into the United States vehicles and components thereof that incorporate or constitute a material part of the inventions claimed by the '850 Patent, such as, for example, vehicles and components thereof that incorporate, for example, the Infineon AUIR2085S. BMW does so knowing that these components are especially made or especially adapted for uses that infringe the '850 Patent, and not staple

articles or commodities of commerce suitable for substantial non-infringing use.

- 45. BMW committed the foregoing infringing activities without license from Plaintiff. BMW's acts of infringement have damaged Arigna, as owner and assignee of the '850 Patent. Arigna is entitled to recover from BMW the damages it has sustained as a result of BMW's wrongful acts in an amount subject to proof at trial. BMW's infringement of Arigna's rights under the '850 Patent will continue to damage Arigna.
- 46. No later than the filing of this Complaint, BMW has had actual knowledge of the '850 Patent.

DEMAND FOR JURY TRIAL

47. Plaintiff Arigna hereby demands a jury trial for all issues so triable.

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Arigna requests entry of judgment in its favor and against Defendants as follows:

- A. Declaring that Defendants BMW have each infringed United States Patent No. 7,049,850.
- B. Declaring that BMW's infringement of United States Patent No. 7,049,850 has been willful and deliberate, at least from the filing of this Complaint;
- C. Awarding damages to Plaintiff in an amount no less than a reasonable royalty for each Defendant's infringement of United States Patent No. 7,049,850, together with prejudgment and post-judgment interest and without limitation under 35 U.S.C. § 287;
- D. Awarding attorney's fees pursuant to 35 U.S.C. § 285 or as otherwise permitted by law; and
- E. Awarding such other costs and further relief as the Court may deem just and proper.

Dated: May 20, 2021

By: /s/ Matthew R. Berry w/permission Claire Abernathy Henry

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