

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

ARIGNA TECHNOLOGY LIMITED,

Plaintiff,

vs.

LG ELECTRONICS INC. and LG
ELECTRONICS USA, INC.,

Defendants.

Case No. 2:21-cv-00377

JURY TRIAL DEMANDED

COMPLAINT FOR PATENT INFRINGEMENT

This is an action for patent infringement in which Arigna Technology Limited makes the following allegations against Defendants LG Electronics Inc. and LG Electronics USA, Inc. (collectively “Defendants” or “LG”), each of whom, without authority, imports, makes, offers for sale and/or sells in the United States mobile devices that infringe the Patents asserted in this matter.

PARTIES

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 radio frequency amplifiers and circuits with applications in a wide variety of consumer electronics products, including smartphones and laptops, as well as power semiconductors for applications in the communications, automotive, industrial automation, and energy industries. Arigna is the owner of all rights, title, and interest in and to United States Patent No. 6,603,343 (the “343 Patent”) and United States Patent No. 8,947,164 (the “164 Patent”).

2. Defendant LG Electronics Inc. (“LGE”) is a foreign corporation organized under the laws of the Republic of Korea with its principal place of business is at LG Twin Towers 20

Yoido-dong, Youngdungpo-gu, Seoul, South Korea. On information and belief, LGE does business itself, or through its subsidiaries, affiliates, and agents, in the State of Texas and the Eastern District of Texas.

3. Defendant LG Electronics USA, Inc. (“LG USA”) is a corporation organized under the laws of the State of Delaware with its principal place of business at 1000 Sylvan Avenue, Englewood Cliffs, New Jersey 07632. On information and belief, LG USA is a wholly owned subsidiary of LGE.

4. Defendant LG USA merged with LG Electronics MobileComm U.S.A., Inc. (“LGEM”), on August 1, 2018, and has stated that it assumed all of the rights and obligations of LGEM. *See 3G Licensing S.A., et al. v. LG Electronics, Inc., et al.*, No. 1:17-cv-00085-LPS (D. Del.) at Dkt. 144. On information and belief, prior to that merger, LGEM imported, distributed, offered for sale, and sold certain LG-branded wireless mobile communication devices in the United States for consumer use. On information and belief, LG USA has assumed all of the rights and obligations of LGEM, including with respect to any damages for patent infringement that took place before the merger.

JURISDICTION AND VENUE

5. This Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 and 1338(a) because this action arises under the patent laws of the United States, 35 U.S.C. §§ 1 *et seq.*

6. This Court has personal jurisdiction over Defendants because they have done and continue to do business in Texas and have committed and continue to commit acts of patent infringement in Texas, including making, using, offering to sell and/or selling accused products in Texas, importing accused products into Texas, and/or inducing others to commit acts of patent infringement in Texas. For example, Plaintiff is informed, and on that basis alleges, that

Defendants maintain established places of business in Texas and specifically the Eastern District of Texas, including facilities at 2151, 2153, and 2155 Eagle Parkway, Fort Worth, Texas 76177 and a distribution center at 14901 Beach Street, Fort Worth, Texas 76177.

FIGURE 1



LG's Distribution Center at 14901 Beach Street, Fort Worth, Texas.

7. Denton County property tax records reflect that LG USA owns property with a 2021 assessed value of \$120,737,035 at 14901 Beach Street, Fort Worth, Texas 76177. In connection with this property, LG USA has a 2021 tax payment of \$1,841,343.62 currently due.

FIGURE 2

OWNER
LG ELECTRONICS ATTN: TAX DEPT.
111 SYLVAN AVE
ENGLEWOOD CLIFFS, NJ 07632-3318

TYPE
Personal

LOCATION
0014901 BEACH ST

LEGAL
PERSONAL PROPERTY - ELECTRONICS WAREHOUSE
LOCATION: 14901 BEACH ST FORT WORTH

ACRES
0.000

YEAR BUILT
0

SQFT
0.000

UDI

2021 VALUES
Personal: 120,737,035

2021 EXEMPTIONS
Freeport: 0

LINKS
Tax Estimator

Property Tax Record

Sort year by: Descending

Show: Current / Due All Years

PAYMENT HISTORY / RECEIPTS

2021

DUE AMOUNT
\$1,841,343.62

LAST PAYMENT	LEVY AMOUNT	LEVY DUE	PENALTY	INTEREST	COL PENALTY
None	\$1,841,343.62	\$1,841,343.62	\$0.00	\$0.00	\$0.00

[VIEW BREAKDOWN](#)

Source: Denton County Tax Office (accessed Oct. 5, 2021), available at: <https://taxweb.dentoncounty.gov/Accounts/AccountDetails?taxAccountNumber=657779DEN>.

8. Denton County property tax records further reflect that “LG ELECTRONICS USA INC” owns property, including “retail parts,” with a 2021 assessed value of \$655,022 at 2153 Eagle Parkway, Fort Worth, Texas 76177.

9. As shown in Figures 1 and 3, LG’s name and corporate logo are prominently displayed at its places of business in this District, and an LG flag flies in front of LG’s facility at 2153 Eagle Parkway in Fort Worth. LG’s regular and ongoing presence in this District is further demonstrated by the “Now Hiring” sign posted in front of its Fort Worth Distribution Center. LG has established and ratified and holds these facilities out as the regular and established places of

business of LG by directing and controlling their actions and services, and LG has consented to these authorized facilities acting on LG's behalf.

FIGURE 3



LG's Facilities at 2153 and 2155 Eagle Parkway, Fort Worth, Texas.

10. LGE and LG USA have placed or contributed to placing infringing products, such as the LG V60 ThinQ 5G, into the stream of commerce via established distribution channels knowing or understanding that such products would be sold and used in the United States, including in the Eastern District of Texas.

11. On information and belief, LGE and LG USA also have each derived substantial revenue from infringing acts in the Eastern District of Texas, including from the sale and use of infringing products such as the LG V60 ThinQ 5G.

12. Defendants have not disputed this Court’s personal jurisdiction over them in other recent patent infringement actions. *See, e.g.*, Answer at ¶¶ 6-7, *KT Imaging USA, LLC v. LG Elecs. Inc., et al.*, No. 4:20-cv-00338, Dkt. 17 (E.D. Tex. Sept. 16, 2020) (“for purposes of this action and this action only, LG[] does not contest personal jurisdiction in this action”); Answer at ¶¶ 10-11, 19, *Sovereign Peak Ventures, LLC v. LG Elecs., Inc., et al.*, No. 2:20-cv-00107-JRG, Dkt. 14 (E.D. Tex. Aug. 5, 2020) (“does not contest personal jurisdiction in this lawsuit”).

13. Venue is proper against LGE pursuant to 28 U.S.C. § 1391(c)(3) because venue is proper in any judicial district against a foreign corporation. *See In re HTC Corp.*, 889 F.3d 1349, 1354 (Fed. Cir. 2018).

14. Venue is proper against LG USA pursuant to 28 U.S.C. § 1400(b) because it has regular and established physical places of business in this District—including at 2151-2155 Eagle Pkwy, Fort Worth, Texas 76177 and 14901 Beach Street, Fort Worth, Texas 76177—and has committed acts of patent infringement in the District. *See In re Cray Inc.*, 871 F.3d 1355, 1362-63 (Fed. Cir. 2017).

15. On information and belief, Defendant LG USA has been registered to do business in the State of Texas since at least April 3, 1984, and may be served for process at its registered

agent for service of process at United States Corporation Company, 211 E. 7th Street, Suite 620, Austin, Texas 78701.

16. On information and belief, LG designs, manufactures, distributes, imports, offers for sale, and/or sells in the State of Texas and the Eastern District of Texas mobile devices, including smartphones, tablets, and computers, that infringe the Patents asserted in this matter.

SINGLE ACTION

17. 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.

18. Plaintiff is informed and believes, and on that basis alleges, that its right to relief arises out of the same transaction, occurrence, or series of transactions or occurrences relating to Defendants' import, manufacture, offer for sale, and/or sale of the same accused products.

THE ASSERTED PATENTS

19. This complaint asserts causes of action for infringement of United States Patent No. 6,603,343 and United States Patent No. 8,947,164 (together, the "Asserted Patents"). The Asserted Patents are valid and enforceable United States Patents, the entire right, title, and interest to which Arigna owns by assignment.

20. The Asserted Patents relate to power semiconductor devices using high-frequency RF signals for use in mobile devices, including smartphones, tablets, and computers.

21. On August 5, 2003, the U.S. Patent and Trademark Office duly and legally issued

the '343 Patent, which is entitled "Phase Correction Circuit for Transistor Using High-Frequency Signal." Plaintiff holds all rights and title to the Patent, including the sole and exclusive right to bring a claim for its infringement. A true and correct copy of the '343 Patent is attached as **Exhibit A**.

22. The '343 Patent generally claims a phase correction circuit for a transistor using a high-frequency signal. The claimed phase correction circuit stabilizes a phase of an output signal of a transistor even if the transistor's gate potential is increased by a temperature increase or other factors.

23. To the extent applicable, Plaintiff has complied with 35 U.S.C. § 287(a) with respect to the '343 Patent.

24. On February 3, 2015, the U.S. Patent and Trademark Office duly and legally issued the '164 Patent, which is entitled "Integrated Technique for Enhanced Power Amplifier Forward Power Detection." Plaintiff holds all rights and title to the Patent, including the sole and exclusive right to bring a claim for its infringement. A true and correct copy of the '164 Patent is attached as **Exhibit B**.

25. The '164 Patent generally claims a method for accurate power detection in power amplifiers at a low cost, and in which the power detector's design does not affect the design of the power amplifier.

26. To the extent applicable, Plaintiff has complied with 35 U.S.C. § 287(a) with respect to the '164 Patent.

27. Plaintiff owns all rights, title, and interest in and to the Asserted Patents 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. Defendants have no right to practice the intellectual property protected by the Asserted Patents.

30. Defendants make, use, offer to sell, sell, and/or import into the United States products made in accordance with the ’343 Patent, including but not limited to the LG V60 ThinQ 5G, in addition to other mobile devices including smartphones, tablets, and computers.

31. Defendants also make, use, offer to sell, sell, and/or import into the United States products made in accordance with the ’164 Patent, including but not limited to the LG V60 ThinQ 5G, in addition to other mobile devices including smartphones, tablets, and computers.

COUNT ONE
INFRINGEMENT OF U.S. PATENT NO. 6,603,343

32. Plaintiff repeats and incorporates by reference each preceding paragraph as if fully set forth herein and further states:

33. LG has infringed and continues to infringe at least claim 1 of the ’343 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 1 of the ’343 Patent. LG is liable for its infringement of the ’343 Patent pursuant to 35 U.S.C. § 271(a), (b), and (c).

34. More specifically, LG designs, manufactures, assembles, imports, offers for sale, and/or sells mobile devices that incorporate the HG11-PG660-200 RF die semiconductor device, which infringe at least independent claim 1 of the ’343 Patent.

35. For example, the HG11-PG660-200 RF die is found inside the Qualcomm QTM525

mmWave antenna module. The QTM525 mmWave antenna module that includes the HG11-PG660-200 RF die is designed to be included in smartphones.

FIGURE 4



Source: Qualcomm, *Snapdragon X55 and 5G RF briefing slides* (Feb. 2019), available at: https://www.t-mobile.com/content/dam/tfb/pdf/tfb-iot/Qualcomm_SDx55_datasheet.pdf.

36. The QTM525 mmWave antenna module comes pre-installed in certain LG mobile devices, including at least the LG V60 ThinQ 5G smartphone.¹

37. Claim 1 is illustrative of the '343 Patent. It recites “[a] phase correction circuit for a transistor, comprising: a circuit element having an output terminal connected to a gate of a transistor to which a control signal line is connected, and an input terminal, wherein the circuit element has a reactance that changes with potential difference between the input terminal and the output terminal; and a voltage control circuit supplying a voltage to the input terminal of the circuit element so that the reactance of the circuit element decreases in response to an increase in potential

¹ Signals Research Group, *All Things 5G NR mmWave* (accessed Sept. 6, 2021), available at: <https://www.qualcomm.com/media/documents/files/srg-mmwave-whitepaper.pdf>.

of the gate, wherein a sum of the reactance of the circuit element and a gate-source reactance of the transistor remains substantially constant.”

38. Devices with transceivers, antenna modules, front-end modules (FEMs), and/or other components which incorporate the HG11-PG660-200 RF die meet every element of this claim.² The HG11-PG660-200 RF die contains a phase correction circuit for a transistor. For example, the transmitter portion of the HG11-PG660-200 RF die contains transistors with a phase correction circuit. For instance, a circuit element in the HG11-PG660-200 RF die (hereafter called “MOS-C”) forms part of a phase correction circuitry for a transistor in the HG11-PG660-200 RF die (hereafter called “MOS7”).

39. This phase correction circuit contains a circuit element having an output terminal connected to a gate of a transistor to which a control signal line is connected. For example, in the HG11-PG660-200 RF die, the circuit element MOS-C has an output terminal connected to a gate of the MOS7 transistor. It also has an input terminal.

40. A control signal line is also connected to the gate of the transistor. For example, a control signal line is connected to the gate of the MOS7 transistor through a passive bias network.

41. The circuit element has a reactance that changes with potential difference between the input terminal and the output terminal. For example, the identified MOS-C circuit element is an NMOS Field Effect Transistor whose source and drain are connected. MOS-C acts as a varactor whose capacitance (and thus reactance) changes according to the potential difference between the input terminal (drain and source node) and the output terminal (gate node).

42. This phase correction circuit in the HG11-PG660-200 RF die also contains a voltage control circuit supplying a voltage to the input terminal of the circuit element so that the

² This description of infringement is illustrative and not intended to be an exhaustive or limiting explanation of every manner in which LG’s products infringe the ’343 Patent.

reactance of the circuit element decreases in response to an increase in the potential of the gate. For example, another transistor in the HG11-PG660-200 RF die forms part of the voltage control circuit supplying a voltage to the input terminal of the circuit element MOS-C.

43. The reactance of the circuit element decreases in response to an increase in potential of the gate, wherein a sum of the reactance of the circuit element and a gate-source reactance of the transistor remains substantially constant. For example, when the magnitude of the gate-source potential at MOS7 increases, it leads to a reduction in the capacitance of the circuit element (MOS-C). As the gate potential of the MOS7 gets more negative (i.e., the magnitude of gate-source potential increases), the gate-source capacitance of transistor MOS7 increases. This increase is offset, however, by the decrease in the capacitance of the circuit element (MOS-C) that occurs due to the increase in the magnitude of the gate potential of MOS7 such that the sum of capacitance (i.e. reactance) of the circuit element (MOS-C) and transistor (MOS7) remains substantially constant.

44. LG makes, uses, imports, offers for sale, and/or sells mobile devices, such as smartphones, that incorporate the infringing HG11-PG660-200 RF die in their antenna modules, including but not limited to the V60 ThinQ 5G.

45. LG has imported and sold, and continues to sell and offer for sale, these mobile devices in the United States, including through LG websites (LG.com) and LG authorized retailers in the Eastern District of Texas.

46. LG committed and is committing the foregoing infringing activities without license from Arigna. LG's acts of infringement have damaged Arigna, as owner and assignee of the '343 Patent. Arigna is entitled to recover from LG the damages it has sustained as a result of LG's wrongful acts in an amount subject to proof at trial. LG's infringement of Arigna's rights under

the '343 Patent will continue to damage Arigna.

47. Beginning no later than the filing of this Complaint, LG has had actual knowledge of the '343 Patent. LG's continued infringement following the filing of this Complaint, despite its knowledge of the '343 Patent and Arigna's infringement allegations, is intentional and deliberate and willful.

48. In addition, LG indirectly infringed, and continues to indirectly infringe, the '343 Patent by actively inducing its infringement in violation 35 U.S.C. § 271(b).

49. LG's authorized retailers, such as Sears, and wireless carriers, such as Verizon, directly infringe the '343 Patent by selling the accused LG devices to consumers. Consumers directly infringe the '343 Patent by using the accused LG devices.

50. LG knowingly induced and induces these acts of infringement with the specific intent to encourage them by taking active steps to encourage and facilitate direct infringement by these third parties, in this District and elsewhere in the United States, through its manufacture and sale of the infringing products, and through its creation and dissemination of promotional and marketing materials, supporting materials, instructions, product manuals, and/or technical information relating to the products with knowledge and the specific intent that its efforts will result in the direct infringement of the '343 Patent by these third parties.

51. Such active steps include, for example, advertising and marketing the infringing products to resellers, wireless carriers, and consumers, obtaining FCC approval for such devices to be utilized in the United States, and distributing and selling such devices to consumers and resellers knowing that they would be marketed, offered for sale, and used in the United States.

52. LG user guides for the accused products likewise facilitate infringement, instructing consumers about, among other things, how to "turn mobile data on and off" and

“customize mobile data settings.”³ By instructing third parties to turn on and use the accused products for infringing purposes, such as to make and receive calls using the products’ antenna modules, LG knowingly induces these third parties to commit infringing acts.

53. In addition, LG has indirectly infringed and continues to indirectly infringe the ’343 Patent as a contributory infringer in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, infringing products with knowledge that they are especially designed or adapted to operate in a manner that infringes the ’343 Patent and despite the fact that the infringing technology is not a staple article of commerce suitable for substantial non-infringing use. LG knowingly incorporates antenna modules with the HG11-PG660-200 RF die into the accused LG products such that they operate in an infringing manner. By incorporating such antenna modules into its products, LG contributes to infringing use as consumers make and receive calls using the antennas of the accused products, which lack substantially non-infringing uses because the accused products are designed and manufactured to operate as phones in a manner that infringes the ’343 Patent.

COUNT TWO
INFRINGEMENT OF U.S. PATENT NO. 8,947,164

54. Plaintiff repeats and incorporates by reference each preceding paragraph as if fully set forth herein and further states:

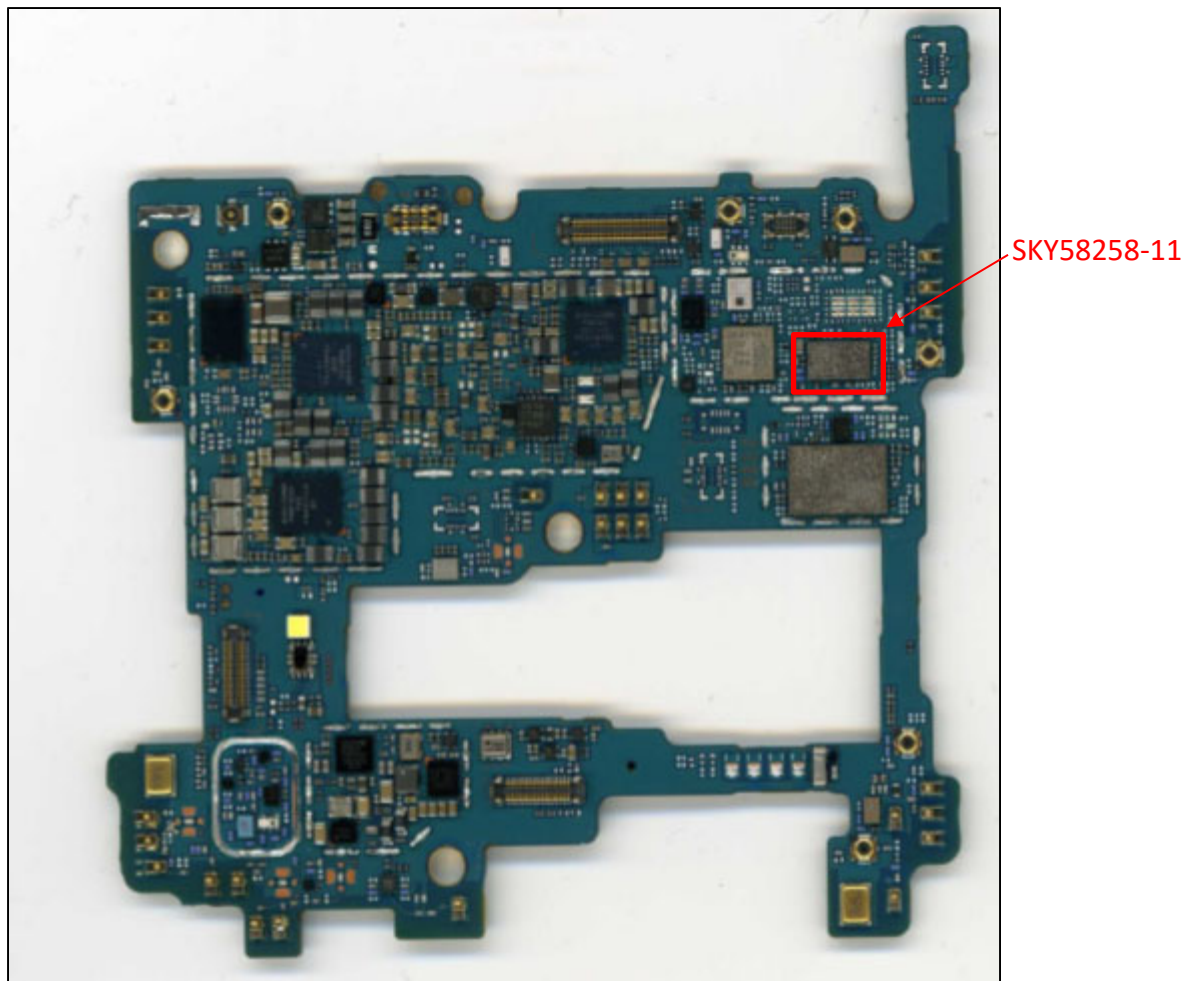
55. LG has infringed and continues to infringe at least claim 1 of the ’164 Patent in violation of 35 U.S.C. § 271, either literally or through the doctrine of equivalents, by making, using, selling, or offering for sale in the United States, and/or importing into the United States, without authorization, products that practice at least claim 1 of the ’164 Patent. LG is liable for its infringement of the ’164 Patent pursuant to 35 U.S.C. § 271(a), (b), and (c).

³ LG, *User Guide for the LG V60 ThinQ 5G*.

56. More specifically, LG designs, manufactures, assembles, imports, offers for sale, and/or sells mobile devices that incorporate the Qualcomm SDR865 transceiver and Skyworks SKY58258-11 front-end module, and/or other components, which infringe at least independent claim 1 of the '164 Patent.

57. For example, the SDR865 transceiver and SKY58258-11 front-end module come preinstalled in certain LG mobile devices, including the V60 ThinQ 5G. For example, Figure 5 identifies the SKY58258-11 front-end module in the V60 ThinQ 5G.

FIGURE 5



Source: Tech Insights.

58. Claim 1 is illustrative of the '164 Patent. It recites “[a] power amplifier with power

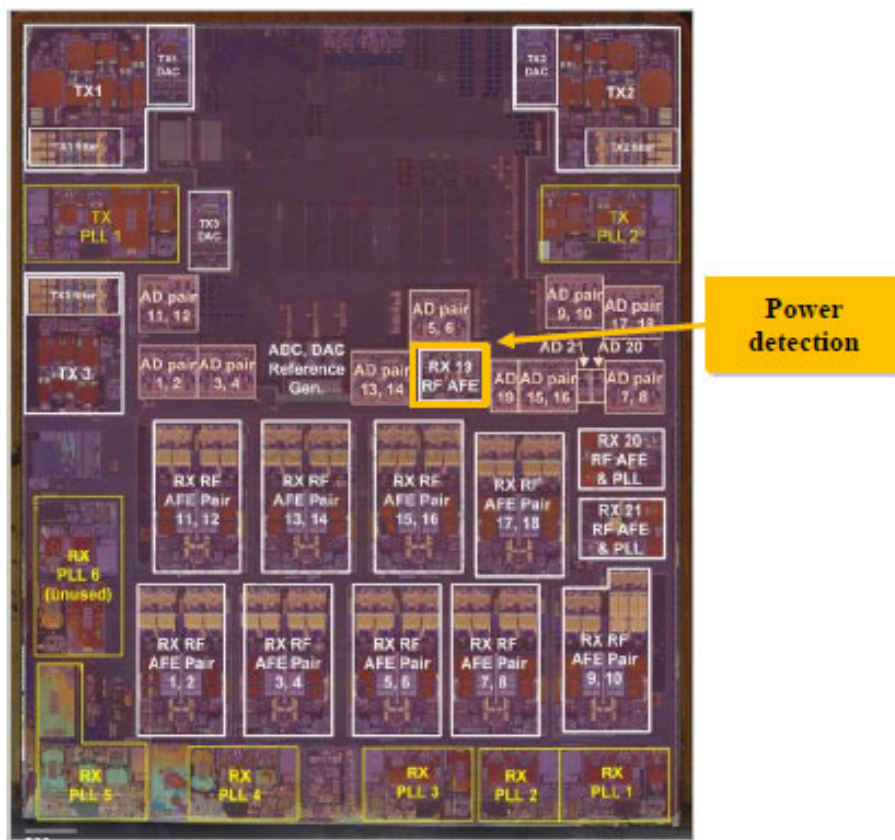
detection, comprising: a radio frequency (RF) power amplifier having a gain stage that includes a gain stage input, a gain stage output, and a feedback loop coupled between an input and an output of the power amplifier; a detection circuit having a first detection circuit input electrically coupled to the gain stage input and having a detection circuit output; an amplitude control circuit and a phase control circuit electrically coupled together in series between the gain stage output and a second detection circuit input; wherein the amplitude control circuit and the phase control circuit produce a signal received by the second detection circuit input so that the detection circuit detects a signal at the output of the detection circuit that has a power proportional to a forward power output of the power amplifier.”

59. The SDR865 transceiver and SKY58258-11 front-end module, as installed by LG in at least the V60 ThinQ 5G, meet every element of this claim.⁴

60. A power amplifier is present in the SKY58258-11 with power detection provided by the SDR865. For example, the RX19 RF AFE identified below is part of a feedback receiver in the SDR865 that carries out a power detection function.

⁴ This description of infringement is illustrative and not intended to be an exhaustive or limiting explanation of every manner in which LG’s products infringe the ’164 Patent.

FIGURE 6



Source: Tech Insights, *Analysis of Qualcomm's Snapdragon SDR865 Transceiver* (accessed Sept. 6, 2021) available at: <https://www.techinsights.com/blog/analysis-qualcomms-snapdragon-sdr865-transceiver-supporting-5g-sub-6-ghz-and-lte-services>

61. The SKY58258-11 front-end module contains a radio frequency (RF) power amplifier having a gain stage that includes a gain stage input and a gain stage output. A feedback loop is coupled between an input and an output of the power amplifier.

62. The SDR865 contains a detection circuit having a first detection circuit input electrically coupled to the gain stage input and having a detection circuit output. For example, the gain stage input of the power amplifier in the SKY58258-11 is electrically coupled to a first detection circuit input in the SDR865.

63. The SDR865 and SKY58258-11 also contain an amplitude control circuit and a phase control circuit electrically coupled together in series between the gain stage output and a

second detection circuit input. The phase control circuit consists of an inductor and a capacitor in series with a low noise amplifier acting as an amplitude control circuit.

64. The amplitude control circuit and the phase control circuit produce a signal received by the second detection circuit input so that the detection circuit detects a signal at the output of the detection circuit that has a power proportional to a forward power output of the power amplifier. For example, the amplitude and phase control circuit produce a signal that is received into the mixer of the detection circuit (second input). The mixer also receives a LO signal (first input) and the result is used to estimate the forward power output of the power amplifier in the front-end module.

65. LG makes, uses, imports, offers for sale, and/or sells mobile devices that incorporate the infringing combination of SDR865 and SKY58258-11 components, or components which operate in a substantially equivalent manner, including the V60 ThinQ 5G.

66. LG has imported and sold, and continues to sell and offer for sale, these mobile devices in the United States, including through LG websites (LG.com) and LG authorized retailers in the Eastern District of Texas.

67. LG committed and is committing the foregoing infringing activities without license from Arigna. LG's acts of infringement have damaged Arigna, as owner and assignee of the '164 Patent. Arigna is entitled to recover from LG the damages it has sustained as a result of LG's wrongful acts in an amount subject to proof at trial. LG's infringement of Arigna's rights under the '164 Patent will continue to damage Arigna.

68. Beginning no later than the filing of this Complaint, LG has had actual knowledge of the '164 Patent. LG's continued infringement following the filing of this Complaint, despite its knowledge of the '164 Patent and Arigna's infringement allegations, is intentional and deliberate

and willful.

69. In addition, LG indirectly infringed, and continues to indirectly infringe, the '164 Patent by actively inducing its infringement in violation 35 U.S.C. § 271(b).

70. LG's authorized retailers, such as Sears, and wireless carriers, such as Verizon, directly infringe the '164 Patent by selling the accused LG devices to consumers. Consumers directly infringe the '164 Patent by using the accused LG devices.

71. LG knowingly induced and induces these acts of infringement with the specific intent to encourage them by taking active steps to encourage and facilitate direct infringement by these third parties, in this District and elsewhere in the United States, through its manufacture and sale of the infringing products, and through its creation and dissemination of promotional and marketing materials, supporting materials, instructions, product manuals, and/or technical information relating to the products with knowledge and the specific intent that its efforts will result in the direct infringement of the '164 Patent by these third parties.

72. Such active steps include, for example, advertising and marketing the infringing products to resellers, wireless carriers, and consumers, obtaining FCC approval for such devices to be utilized in the United States, and distributing and selling such devices to consumers and resellers knowing that they would be marketed, offered for sale, and used in the United States. LG user guides for the accused products facilitate infringement, instructing consumers how to, among other things, "[p]ress and hold" the power/lock button "to turn the phone on/off, restart, or activate/deactivate Airplane mode."⁵ By instructing third parties to turn on and use the accused products, and go in and out of Airplane mode, LG knowingly induces these third parties to commit infringing acts as the power detection functions of the infringing products operate.

⁵ LG, *User Guide for the LG V60 ThinQ 5G*.

73. In addition, LG has indirectly infringed and continues to indirectly infringe the '164 Patent as a contributory infringer in violation of 35 U.S.C. § 271(c) by selling or offering to sell in the United States, or importing into the United States, infringing products with knowledge that they are especially designed or adapted to operate in a manner that infringes the '164 Patent and despite the fact that the infringing technology is not a staple article of commerce suitable for substantial non-infringing use. LG knowingly incorporates specific transceivers and front-end modules into the accused products such that they operate in an infringing manner. By incorporating such devices into its products, LG contributes to infringing use as consumers turn on and use the accused products, which lack substantially non-infringing uses because the accused products are designed and manufactured to operate in a powered-on mode that infringes the '164 Patent.

DEMAND FOR JURY TRIAL

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

PRAYER FOR RELIEF

WHEREFORE, Plaintiff Arigna Technology Limited requests entry of judgment in its favor and against Defendants LGE and LG USA as follows:

- A. Declaring that Defendants LGE and LG USA have each infringed United States Patent No. 6,603,343;
- B. Declaring that Defendants LGE and LG USA have each infringed United States Patent No. 8,947,164;
- C. Declaring that LGE's and LG USA's infringement of United States Patent No. 6,603,343 has been willful and deliberate, at least from the filing of this Complaint;
- D. Declaring that LGE's and LG USA's infringement of United States Patent No. 8,947,164 has been willful and deliberate, at least from the filing of this Complaint;

- E. Awarding damages to Plaintiff in an amount no less than a reasonable royalty for each Defendant's infringement of United States Patent No. 6,603,343 and United States Patent No. 8,947,164, together with treble damages for willful infringement, prejudgment and post-judgment interest, and costs as permitted under 35 U.S.C. § 284;
- F. Awarding attorneys' fees pursuant to 35 U.S.C. § 285 or as otherwise permitted by law;
- G. Ordering Defendants to pay supplemental damages to Arigna, including any ongoing royalties and interest, with an accounting, as needed; and
- H. Awarding such other costs and further relief as the Court may deem just and proper.

Dated: October 6, 2021

Respectfully submitted,

/s/ Matthew R. Berry w/permission Andrea L. Fair

Matthew R. Berry – **Lead Counsel**

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Andres Healy

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LIMITED***