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**VIA HAND DELIVERY**

July 16, 2024

The Honorable Lisa R. Barton, Secretary
U.S. International Trade Commission
500 E Street, SW
Washington, D.C. 20436

**Re:** ***Certain Wireless Front-End Modules, Devices Containing the Same, and Components Thereof***

Dear Secretary Barton:

Enclosed for filing, please find documents in support of a request by Skyworks Solutions, Inc., Skyworks Solutions Canada, Inc., and Skyworks Global Pte. Ltd. (collectively "Complainants") that the U.S. International Trade Commission institute an investigation pursuant to Section 337 of the Tariff Act of 1930, as amended, concerning certain wireless front-end modules, devices containing the same, and components thereof. Complainants' submission includes the following documents:

1. One (1) original and eight (8) paper copies of Complainants' Verified Complaint pursuant to Commission Rule 210.8(a)(1)(i).

2. One (1) electronic copy of the public exhibits to the Verified Complaint pursuant to Commission Rules 210.8(a)(1)(i) and 210.12(a)(9), including:

    a. one (1) electronic certified copy of each of United States Patent Nos. 8,717,101 ("the '101 patent), 9,917,563 ("the '563 patent), 7,409,200 ("the '200 patent"), 9,450,579 ("the '579 patent"), and 9,148,194 ("the '194 patent"), copies of which are respectively included as Exhibits 1-5 to the Verified Complaint pursuant to Commission Rule 210.12(a)(9)(i); and

    b. one (1) electronic copy of the certified assignment records for each of the '101 patent,'563 patent, '200 patent, '579 patent, and '194 patent, copies of which are included as Exhibits 6-8 to the Verified Complaint pursuant to Commission Rule 210.12(a)(9)(ii).

3. One (1) electronic copy of the confidential exhibits to the Verified Complaint, pursuant to Commission Rules 201.6(c) and 210.8(a)(1)(ii).

Skyworks Ex 2003
Kangxi v. Skyworks
IPR2025-00372

4. Eight (8) additional copies of the Verified Complaint and accompanying electronic copies of the public exhibits, for service upon the Proposed Respondents, pursuant to Commission Rules 201.6(c) and 210.8(a)(1)(iii); and six (6) additional copies of the electronic copies of the confidential exhibits to the Verified Complaint for service upon each of the Proposed Respondents' respective counsel after each has subscribed to the protective order.

5. Four (4) electronic copies each of the certified prosecution history of the '101 patent, the '563 patent, the '200 patent, the '579 patent, and the '194 patent, which are respectively identified as Appendices A-E to the Verified Complaint, pursuant to Commission Rule 210.12(c)(1).

6. Four (4) electronic copies each of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '101 patent, the '563 patent, the '200 patent, the '579 patent, and the '194 patent, which are respectively identified as Appendices A-E to the Verified Complaint, pursuant to Commission Rule 210.12(c)(2).

7. A letter and certification requesting confidential treatment for the information contained in the confidential exhibits 42-49 to the Verified Complaint, pursuant to Commission Rules 201.6(b) and 210.5(d).

8. A Statement of the Public Interest regarding the remedial orders sought by Complainants in the Verified Complaint, pursuant to Commission Rule 210.8(b).

Respectfully submitted,

*/s/ James M. Dowd*
James M. Dowd
*Counsel for Skyworks Solutions, Inc.,*
*Skyworks Solutions Canada, Inc.,*
*and Skyworks Global Pte Ltd.*

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**VIA HAND DELIVERY**

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July 16, 2024

The Honorable Lisa R. Barton, Secretary
U.S. International Trade Commission, Secretary
500 E Street, SW
Washington, D.C. 20436

Re: ***Certain Wireless Front-End Modules, Devices Containing the Same, and Components Thereof***

Dear Secretary Barton:

In accordance with Commission Rule 201.6 and 210.5, Complainants Skyworks Solutions, Inc., Skyworks Solutions Canada, Inc., and Skyworks Global Pte Ltd. (collectively, "Skyworks") respectfully requests confidential treatment of certain business information contained in confidential exhibits 42-49 to the Verified Complaint.

The information for which confidential treatment is sought is proprietary commercial information not otherwise publicly available. Confidential treatment is sought for the following Confidential Exhibits:

i. Confidential Exhibit 42, which discloses the terms of a confidential license agreement between SiGe Semiconductor, Inc. and Skyworks Global Pte Ltd.
ii. Confidential Exhibit 43, which discloses a list of licensees to the Asserted Patents.
iii. Confidential Exhibits 44-48, which contain confidential business information to establish that Skyworks' SKY85408 product practices each of the Asserted Patents.
iv. Confidential Exhibit 49, which contains Skyworks' confidential information to establish an economic domestic industry for Skyworks' domestic industry products.

The information described herein qualifies as confidential business information pursuant to Commission Rule 201.6(a) because substantially-identical information is not available to the public, authorized disclosure of such information could cause substantial harm to Skyworks's competitive position, and the disclosure of such information for which Skyworks seeks confidential treatment could impair the Commission's ability to obtain information necessary to perform its statutory function.

Thank you for your attention. Please contact me with any questions regarding this request for confidential treatment.

Respectfully submitted,

*/s/ James M. Dowd*
James M. Dowd
*Counsel for Complainants Skyworks Solutions, Inc.,*
*Skyworks Solutions Canada, Inc.,*
*and Skyworks Global Ple Ltd.*

**UNITED STATES INTERNATIONAL TRADE COMMISSION**
**WASHINGTON, D.C.**

| | |
|---|---|
| **In the Matter of**<br><br>**CERTAIN WIRELESS FRONT-END MODULES, DEVICES CONTAINING THE SAME, AND COMPONENTS THEREOF** | **Inv. No. 337-TA-__** |

## CERTIFICATION

I, James M. Dowd, counsel for Complainants Skyworks Solutions, Inc., Skyworks Solutions Canada, Inc., and Skyworks Global Pte Ltd. ("Complainants") declare as follows:

1. I am duly authorized by Complainants to execute this certification;
2. I have reviewed Confidential Exhibit Nos. 42-49 to Complainants' Verified Complaint, for which Complainants seek confidential treatment;
3. To the best of my knowledge, information, and belief, founded after a reasonable inquiry, substantially-identical information to that contained in Confidential Exhibits Nos. 42-49 is not available to the public.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 16th day of July, 2024 in Los Angeles, CA.

*/s/ James M. Dowd*

James M. Dowd

**UNITED STATES INTERNATIONAL TRADE COMMISSION**
**WASHINGTON, D.C.**

| | |
|---|---|
| **In the Matter of**<br><br>**CERTAIN WIRELESS FRONT END MODULES, DEVICS CONTAINING THE SAME, AND COMPONENTS THEREOF** | Inv. No. 337-TA-____ |

**COMPLAINANTS SKYWORKS SOLUTIONS INC., SKYWORKS SOLUTIONS CANADA, INC., AND SKYWORKS GLOBAL PTE. LTD.'S PUBLIC INTEREST STATEMENT**

Complainants Skyworks Solutions, Inc., Skyworks Global Pte. Ltd., and Skyworks Solutions Canada, Inc. (collectively, "Skyworks") respectfully submit the following comments regarding the public interest pursuant to 19 C.F.R. § 210.8(b). Skyworks has requested that the Commission enter general and limited exclusion orders relating to certain Wireless Front-End Modules ("FEMs") manufactured, imported, and sold by Respondents Kangxi Communication Technologies (Shanghai) Co., Ltd. ("KXComTech") and Grand Chip Labs, Inc. (collectively, "KCT" or the "KCT Respondents") and downstream products containing the same (the "Accused Products") that infringe U.S. Patent Nos. 8,717,101 (the "'101 patent"), 9,917,563 (the "'563 patent"), 7,409,200 (the "'200 patent"), 9,450,579 (the "'579 patent"), and 9,148,194 (the "'194 patent") (collectively, the "Asserted Patents"). Skyworks also seeks cease-and-desist orders against KCT; D-Link Corporation and D-Link Systems, Inc. (collectively, "D-Link" or the "D-Link Respondents"); and Ruijie Networks Co., Ltd. ("Ruijie"), halting the importation, sale, offer for sale, use, marketing, and/or advertising of the Accused Products as set forth in the Complaint. *See* Complaint at ¶¶ 210-222.

For the reasons set forth herein, Skyworks respectfully submits that the issuance of the requested remedial orders will not adversely impact public health, safety, or welfare in the U.S., nor will it affect the competitive conditions in the U.S. economy, the production of like or directly competitive articles in the U.S., or U.S. consumers. To the contrary, the public has a vested interest in ensuring that intellectual property rights are protected, especially where those rights protect substantial U.S. investments in research and development, as they do here. *See* Complaint at ¶¶ 206-207. Moreover, should the Commission issue remedial orders, the Accused Products can be replaced by FEMs (or downstream products containing FEMs) from other manufacturers (including Skyworks itself), which contain the same functionality. Moreover,

because KCT is a newcomer to the Wireless FEM market, their current market share is relatively small and can be absorbed by Skyworks and other Wireless FEM manufacturers.

Because the public interest weighs so heavily in favor of Skyworks, this is not a case where the Commission should delegate public interest issues to the ALJ. Rather, the Commission can, through its ordinary processes, address such issues through briefing and submissions following an Initial Determination.

## I. THE COMMISSION HAS A STRONG PUBLIC INTEREST IN PROTECTING INTELLECTUAL PROPERTY

The Commission has repeatedly found that the public has a strong interest in the protection of intellectual property rights. *See Certain Two-Handle Centerset Faucets & Escutcheons & Components Thereof*, Inv. No. 337-TA-422, Comm'n Op. at 9 (July 21, 2000); *Certain Baseband Processor Chips and Chipsets, Transmitter and Receiver (Radio) Chips, Power Control Chips, and Products Containing Same, Including Cellular Telephone Handsets*, Inv. No. 337-TA-543, USITC Pub. 4258, at 136-37 (Oct. 2011). The Commission has rarely determined that the public interest is so adversely affected that the strong public policy of protecting intellectual property rights must be sacrificed, and this case is not like those where it has made such a finding. *See, e.g.*, *Certain Fluidized Supporting Apparatus*, Inv. Nos. 337-TA-182/188 (Oct. 1984) (denying relief where public health would be impacted by reduction in supply of hospital burn beds); *Certain Microfluidic Devices*, Inv. No. 337-TA-1068, Comm'n Op. at 30-34, 46 (Jan. 10, 2020) (tailoring remedial order to allow narrow exception for importation of infringing chips being used in numerous medical and scientific research studies).

## II. USE OF ARTICLES POTENTIALLY SUBJECT TO REMEDIAL ORDERS IN THE UNITED STATES

The Respondents' products potentially subject to remedial orders in the proposed investigation are wireless FEMs and products that incorporate those products as components, such as certain Wi-Fi routers for use in residential or commercial settings. As described in the Complaint, the Accused Products are used in the transfer of data between various computing devices over wireless networks. KCT advertises its accused FEMs as interchangeable with those of Skyworks and other suppliers (*see* Ex. 9 [KCT Product Roadmap Presentation] at 13 (listing Skyworks and Qorvo FEMs as pin-to-pin compatible with the accused KCT8547HE and KCT8576HE products). As detailed in the attached Complaint, Original Equipment Manufacturers have incorporated KCT FEMs into their products, which are imported into and sold in the United States. .

## III. THE PROPOSED REMEDIAL ORDERS WILL HAVE NO MEANINGFUL IMPACT ON PUBLIC HEALTH, SAFETY, OR WELFARE IN THE UNITED STATES

The requested remedial orders pose no significant public health, safety, or welfare concern. Although wireless technology is ubiquitous and used in a wide array of products for a wide variety of applications, the requested remedial orders will not affect the availability of wireless connectivity (or even Wi-Fi) in the United States.[1] Indeed, nothing about the proposed remedial orders will affect the existing wireless networking tools already in place in the United States. Moreover, as explained below, excluding products containing KCT FEMs from the market going forward will have little or no impact on public health, safety, and welfare, because

[1] Moreover, the Commission has previously determined that devices having Wi-Fi capabilities similar to those accused in the Complaint do not raise public interest concerns sufficient to bar remedial orders. *See Certain Mobile Devices, Associated Software, and Components Thereof*, Inv. No. 337-TA-744, Comm'n Op. at 30 (June 5, 2012).

Skyworks and/or its competitors can readily meet the demand for wireless FEMs currently satisfied by the Accused Products.

## IV. SKYWORKS AND OTHERS SELL PRODUCTS THAT COULD REPLACE THE ACCUSED PRODUCTS IF THEY ARE REMOVED FROM THE UNITED STATES, AND HAVE THE CAPACITY TO MEET DEMAND

If the proposed remedial orders are granted, wireless FEMs will continue to be available from Skyworks and its competitors. For instance, Skyworks alone has invested (and continues to invest) millions of dollars worldwide and in the United States in developing and maintaining a robust, vertically-integrated manufacturing infrastructure that allows it to meet demand in the market.[2] Skyworks presently manufactures approximately 10 million multi-chip modules per day, and continues to invest in improvements that will drive that figure higher in the future.[3] As a result, even if the accused wireless FEMs are excluded, Skyworks can continue to provide OEMs with access to the technology necessary to implement wireless connectivity in their products.

Moreover, as of the date of the Complaint, KCT appears to have a smaller (but growing) share of the U.S. market for wireless FEMs that Skyworks and its competitors would easily be able to fill, should the Accused Products be excluded.[4] Indeed, KCT's own publicly available documents allege that the Accused Products are pin-to-pin compatible with comparable products

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[2] Skyworks 2022 Annual Report at 83, *available at*: https://www.skyworksinc.com/-/media/SkyWorks/Documents/IR/2022-SWKS-Annual-Report.pdf (last visited May 24, 2024).
[3] https://www.skyworksinc.com/en/Operations (last visited May 24, 2024); *see also* Skyworks 2022 Annual Report, *supra* n. 3, at 88 ("As part of our normal course of business, we intend to improve gross profit with efforts to increase unit volumes, improve manufacturing efficiencies, lower manufacturing costs of existing products, and by introducing new and higher value-added products.").
[4] *See* https://perma.cc/R3R7-5B47 (last visited May 24, 2024) (reporting that KCT "is strengthening its presence in the US and in the EU" and quoting KCT's VP of US Business Development as saying that KCT "has a lot of value to add to the Wi-Fi industry over coming years – also very much in the USA and Europe").

from Skyworks and others. See Ex. 9 [KCT Product Roadmap Presentation] at 13 (claiming pin-to-pin compatibility between KCT, Skyworks, Qorvo, and Richwave FEMs).

## V. THE PROPOSED REMEDIAL ORDERS WILL NOT MEANINGFULLY IMPACT CONSUMERS

As discussed above, even after the requested remedy is issued, OEMs will still have access to comparable wireless FEMs from numerous sources, including Skyworks. There should therefore be little to no disruption to the availability of consumer products that utilize wireless connectivity. Accordingly, the issuance of such relief will have no relevant public interest impact on U.S. consumers.

## VI. CONCLUSION

For the foregoing reasons, Skyworks respectfully submits that no public-interest concerns preclude the issuance of the proposed remedies against the Respondents or others who may import infringing products or components.

Dated: July 16, 2024

Respectfully Submitted,

**SKYWORKS SOLUTIONS INC., SKYWORKS SOLUTIONS CANADA, INC. AND SKYWORKS GLOBAL PTE LTD**

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**UNITED STATES INTERNATIONAL TRADE COMMISSION**
**WASHINGTON, D.C.**

| **In the Matter of**<br><br>**CERTAIN WIRELESS FRONT-END MODULES, DEVICES CONTAINING THE SAME, AND COMPONENTS THEREOF** | Inv. No. 337-TA-___ |
|---|---|

**COMPLAINT OF SKYWORKS SOLUTIONS, INC., SKYWORKS SOLUTIONS CANADA, INC. AND SKYWORKS GLOBAL PTE LTD. UNDER SECTION 337 OF THE TARIFF ACT OF 1930, AS AMENDED**


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## LIST OF EXHIBITS

| Exhibit No. | Description |
|---|---|
| 1. | Certified Copy of U.S. Patent No. 8,717,101 |
| 2. | Certified Copy of U.S. Patent No. 9,917,563 |
| 3. | Certified Copy of U.S. Patent No. 7,409,200 |
| 4. | Certified Copy of U.S. Patent No. 9,450,579 |
| 5. | Certified Copy of U.S. Patent No. 9,148,194 |
| 6. | Certified Copy of U.S. Patent Nos. 8,717,101 and 9,917,563 Patent Assignment |
| 7. | Certified Copy of U.S. Patent No. 7,409,200 Patent Assignment |
| 8. | Certified Copy of U.S. Patent Nos. 9,450,579 and 9,148,194 Patent Assignment |
| 9. | Kangxi Communication Technologies Product Roadmap |
| 10. | Kangxi Communication Technologies Notice Letter, Mar. 2023 |
| 11. | Kangxi Communication Technologies Notice Letter, Apr. 2024 |
| 12. | Kangxi Communication Technologies Press Release, May 2024 |
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| 15. | Kangxi Communication Technologies Press Release, Oct. 2022 |
| 16. | Grand Chip Labs, Inc. CA Business Registration |
| 17. | D-Link Computer Systems, Inc. CA Business Registration |
| 18. | List of Corresponding Foreign Patents |
| 19. | U.S. Patent Nos. 8,717,101 Patent Chart (KCT8547HE + D-Link) |
| 20. | U.S. Patent Nos. 8,717,101 Patent Chart (KCT8539S + Ruijie) |
| 21. | D-Link Amazon Listing |

| Exhibit No. | Description |
|---|---|
| 22. | Ruijie Amazon Listing |
| 23. | D-Link Notice Letter, 2024 |
| 24. | Ruijie Notice Letter, 2024 |
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| 26. | U.S. Patent No. 9,917,563 Patent Chart (KCT8539S + Ruijie) |
| 27. | U.S. Patent No. 7,409,200 Patent Chart (KCT8547HE + D-Link) |
| 28. | U.S. Patent No. 7,409,200 Patent Chart (KCT8539S + Ruijie) |
| 29. | U.S. Patent No. 9,450,579 Patent Chart (KCT8547HE + D-Link) |
| 30. | U.S. Patent No. 9,450,579 Patent Chart (KCT8539S + Ruijie) |
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| Exhibit No. | Description |
|---|---|
| 44. | U.S. Patent No. 8,717,101 Patent Claim Chart |
| 45. | U.S. Patent No. 9,917,563 Patent Claim Chart |
| 46. | U.S. Patent No. 7,409,200 Patent Claim Chart |
| 47. | U.S. Patent No. 9,450,579 Patent Claim Chart |
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| Appendix No. | Description |
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| A. | Certified File History of U.S. Patent No. 8,717,101 |
| B. | Certified File History of U.S. Patent No. 9,917,563 |
| C. | Certified File History of U.S. Patent No. 7,409,200 |
| D. | Certified File History of U.S. Patent No. 9,450,579 |
| E. | Certified File History of U.S. Patent No. 9,148,194 |

# I. INTRODUCTION

1. Complainants Skyworks Solutions, Inc., Skyworks Solutions Canada, Inc. ("Skyworks Canada"), and Skyworks Global Pte. Ltd. ("Skyworks Global") (collectively, "Skyworks" or "Complainants") respectfully file this complaint under Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337, based on the unlawful importation into the United States, sale for importation into the United States, and/or sale within the United States after importation of certain wireless Front-End Modules ("FEMs"),[1] devices containing the same, and components thereof that directly and/or indirectly infringe one or more claims of U.S. Patent Nos. 8,717,101 (the "'101 patent"), 9,917,563 (the "'563 patent"), 7,409,200 (the "'200 patent"), 9,450,579 (the "'579 patent"), and 9,148,194 (the "'194 patent") (collectively, the "Asserted Patents"),[2] either literally or under the doctrine of equivalents. The allegations herein are made based on the personal knowledge of the Complainants with respect to their own actions and on information and belief as to all other matters.

2. The proposed Respondents are Kangxi Communication Technologies (Shanghai) Co., Ltd. ("KXComTech") and Grand Chip Labs, Inc. ("GCLI") (collectively, "KCT" or the "KCT Respondents"); D-Link Corporation and D-Link Systems, Inc. (collectively, "D-Link" or the "D-Link Respondents"); and Ruijie Networks Co., Ltd. ("Ruijie").[3]

---

[1] A wireless system's Front-End Module (or "FEM") is typically located adjacent to the system's antenna and comprises, for example, radio frequency signal conditioning elements that operate in the analog domain, such as amplification, switching, and/or filtering elements. As discussed further below, FEMs may address noise, distortion, and/or signal leakage associated with the physical environment.

[2] The Asserted Patents can be categorized into three groups by their respective specifications: (1) the '101 and '563 patents, which share a common specification; (2) the '579 and '194 patents, which share a common specification; and (3) the '200 patent.

[3] This complaint uses the term "Respondents" when referring to all proposed Respondents collectively and the term Original Equipment Manufacturer (or "OEM") Respondents when referring to D-Link and Ruijie as a group.

3. This complaint is directed to wireless FEMs, devices containing the same, and components thereof that infringe either directly or indirectly one or more of the Asserted Claims below:

| Patent No. | Asserted Claims (Ind. Claims Bolded) |
|---|---|
| U.S. Patent No. 8,717,101 | **1**, 2, 10-11, **17**, 18, 20, **21**, and 22 |
| U.S. Patent No. 9,917,563 | **14**, 15, 17, and 20 |
| U.S. Patent No. 7,409,200 | **1**, 2, 6, 10-12, 15, **18**, 19, 20, and 23-25 |
| U.S. Patent No. 9,450,579 | **1** and **7** |
| U.S. Patent No. 9,148,194 | **4** |

4. Certified copies of each of the Asserted Patents are attached as Exhibits 1-5, respectively. Certified copies of the recorded assignments for each of the Asserted Patents are attached as Exhibits 6-8, respectively. Certified copies of the prosecution histories for each of the Asserted Patents are attached as Appendices A-E, respectively.

5. The accused wireless FEMs at issue in this Complaint include all KCT wireless FEMs that embody infringing features, including but not limited to KCT's wireless FEMs sold under the tradenames KCT8539S and KCT8547HE and at least all other infringing KCT Products that are compatible with the sixth generation (802.11ax or "Wi-Fi 6"), sixth generation extended ("Wi-Fi 6E"),[4] or the seventh generation (802.11be or "Wi-Fi 7") Wi-Fi Standards[5] ("Accused KCT Products"). The accused wireless routers at issue in this complaint include all D-Link and Ruijie wireless routers containing one or more of the Accused KCT Products, including but not

[4] Wi-Fi 6E expanded on the pre-existing Wi-Fi 6 standard by enabling access to a 6GHz band.
[5] Although KCT markets the Accused Products as compatible with certain Wi-Fi standards, Skyworks' Asserted Patents have not been declared standards-essential and are not subject to any FRAND obligations.

limited to D-Link's AX1800 wireless router and Ruijie's Reyee E5 AX3200 wireless router (collectively with the Accused KCT Products, the "Accused Products").[6]

6. Pursuant to 19 U.S.C. § 1337(a)(2) and (3), an industry exists or is in the process of being established in the United States relating to articles protected by the Asserted Patents.

7. Skyworks therefore respectfully requests that the U.S. International Trade Commission institute an immediate investigation, pursuant to Section 337 of the Tariff Act of § 1903, as amended, 19 U.S. C. § 1337, with respect to violations of Section 337 based on the sale for importation into the United States, the importation into the United States, and/or the sale within the United States after importation of Respondents' wireless FEMs, devices containing the same, and components thereof that infringe one or more of the claims of the Asserted Patents.

## II. NATURE OF THE INVESTIGATION

8. Semiconductors are an essential component of the goods and products that Americans use every day. They are critical to a range of industries and are used to power almost every aspect of the United States economy and infrastructure.

9. The semiconductor industry directly provides nearly 300,000 American jobs and indirectly supports more than 1 million jobs throughout the supply chain. (Christopher A. Thomas, *A Semiconductor Strategy for the United States*, THE BROOKINGS INSTITUTION, [https://perma.cc/RQ59-C9PM], at 3.) Semiconductors are a critical component for key strategic sectors of the economy, including the national defense, telecommunications, automotive, and health care industries. Semiconductors also represent one of the United States's leading export industries and are used in nearly every other domestic export industry. (*Id.*) Production of fewer

[6] The identification of a specific model or type of FEM chip or wireless router is not intended to limit the scope of this investigation. Discovery may reveal that additional Respondent products infringe the claims of the Asserted Patents and/or that additional claims are infringed.

semiconductors domestically can therefore lead to a reduction in American jobs, impairment of American national security capabilities, a decline in the national economy, and a shortage of components used to power nearly every digital electronic device. (*Id.*) Recognizing these implications, Congress and the Biden Administration recently acknowledged the importance of innovative American semiconductor companies in the CHIPS and Science Act of 2022, which was directed to advancing the domestic semiconductor industry through increased government investment. (The White House, *FACT SHEET: Biden-Harris Administration Announces Over $5 Billion from the CHIPS and Science Act for Research, Development, and Workforce,* [https://perma.cc/2KA2-3YLV].)

10. Formed in 2002 in Irvine, California, and with U.S. roots that trace back to 1919,[7] Skyworks is an American success story that has built its position in the market through a long-standing commitment to innovation via investment in research and development. Since its inception, Skyworks has invested tens of thousands of engineering hours and billions of dollars researching and developing innovations that power semiconductor-based applications across all major segments of the domestic economy, including the defense, automotive, telecommunications, and consumer Wi-Fi industries. Skyworks' commitment to innovation has resulted in the development of numerous pioneering technologies (and more than 4,600 patents)—including the inventions protected by the Asserted Patents—that have been incorporated into chips used by devices of all kinds. In short, as an innovative American semiconductor company, Skyworks is

[7] In particular, Skyworks was formed in 2002 from the merger of the wireless communication division of Conexant Systems, Inc. ("Conexant") and Massachusetts-based chip manufacturer Alpha Industries Inc. Before going public as the world's largest, standalone communications-IC company in 1999, Conexant had been the semiconductor division of Rockwell International which was, in turn, successor to the Rockwell Manufacturing Company founded in 1919 by Willard Rockwell.

precisely the type of company that Section 337 and the CHIPS Act were enacted to protect.

11. Wireless FEMs comprise one of Skyworks' major business segments. Wireless FEMs are incorporated in wireless devices and perform the critical task of conditioning wireless signals that are transmitted and received by a device. They are complex chip components that are produced through an intricate design and manufacturing process that is difficult to perform. As a result, producing wireless FEMs requires a lengthy research and development cycle, utilizing specialized scientific and engineering expertise, and requiring an investment of capital that far exceeds the production costs associated with many other semiconductor-based products. Skyworks has invested many years of research and many millions of dollars in the development of its wireless FEM products, which has enabled it to achieve its current position as one of the largest providers of wireless FEMs in the world.

12. Formed in 2014, KCT is a semiconductor company based in Shanghai, China that has recently brought several wireless FEM products, including FEMs designed for use in Wi-Fi enabled devices, to market at cut-rate prices. On information and belief, KCT brought its Wi-Fi FEMs to market without having made the multitude of investments in research and development necessary to independently create such complex products, which has enabled KCT to undercut leading Wi-Fi FEM providers like Skyworks on costs and thus compete (unfairly) on price. On information and belief, KCT was able to accelerate its time to market (and undercut then-prevailing FEM chip prices) by its unauthorized and unlicensed copying of Skyworks' patented technology, including the technologies covered by the Asserted Patents.

13. The scale of KCT's infringement has been increasing and, without Commission intervention, is likely to continue to grow. Indeed, KCT's infringement comes at a critical time for the Wi-Fi industry, as the industry transitions from Wi-Fi 6 to Wi-Fi 7, and manufacturers, like

the proposed OEM Respondents, are actively selecting FEM suppliers for their next generation devices. Wi-Fi 7 is the future of short-range wireless networking technology, including because it enables faster data transfer speeds and better connectivity than prior generations. A small number of Wi-Fi 7 certified products have begun to reach the market, and many more are in development as of the date of this Complaint. Recognizing that the industry is in a period of transition, KCT has specifically targeted the United States Wi-Fi 7 FEM market to sell its next generation of FEM chips. (*See, e.g.*, Wi-Fi Now, *Meet KXcomtech: On track to ship hundreds of millions of Wi-Fi FEMs in 2022*, [https://perma.cc/R3R7-5B47] (reporting that KCT "is strengthening its presence in the US" and quoting KCT's Vice President of US Business Development as saying that KCT is "very much in the USA").)

14. KCT's plan to sell its wireless FEM chips into the United States market appears predicated on displacing Skyworks. (Wi-Fi Now, *Meet KXcomtech: On track to ship hundreds of millions in Wi-Fi FEMs in 2022*, [https://perma.cc/R3R7-5B47].) For example, KCT has marketed its products as pin-for-pin replacements for Skyworks' products (*see*, *e.g.*, Ex. 9 [KCT Product Roadmap Presentation] at 8-24), has set up its United States sales and marketing subsidiary (GCLI) ten miles from Skyworks' corporate headquarters, and has targeted Skyworks' current and former customers—such as the OEM Respondents—including by directly comparing its products to Skyworks' products "in terms of linearity, efficiency, noise figure, and other performance metrics" (KXComTech, *IPO Press Release*, [https://perma.cc/6D7X-VUU6]).

15. In an effort to convince KCT to cease infringing its patents and instead engage in fair market competition, Skyworks has repeatedly reached out to KCT seeking to resolve these issues without the need for Commission intervention but has been rebuffed at every turn. For example, in March 2023 Skyworks wrote to KCT informing it of Skyworks' substantial wireless

FEM patent portfolio, reflecting Skyworks' decades of research and development investment, and asking KCT to stop its infringement. (Ex. 10 [KCT 2023 Notice Letter].) Skyworks followed up on this outreach in May 2023 with a presentation to KCT explaining the pervasive nature of KCT's infringement and reiterating its request that KCT stop its infringement. And again, in April of this year, Skyworks wrote to KCT providing notice that the Accused KCT Products infringe enumerated claims of the Asserted Patents and asking KCT to cease its infringement and instead compete fairly. (Ex. 11 [KCT 2024 Notice Letter].) Despite these efforts, KCT's infringement has continued unabated. As a result, on May 6, 2024, Skyworks was compelled to file two patent infringement suits against KCT in federal district court seeking to protect its same inventions covered by the patents at issue in this Complaint: *Skyworks Sols., Inc. v. Kangxi Comm'ns Techs. Shanghai Co., Ltd. et al*, 8:24-cv-00974 (C.D. Cal.); *Skyworks Sols. Canada, Inc. et al. v. Kangxi Comm'ns Techs. Shanghai Co., Ltd. et al*, 8:24-cv-00976 (C.D. Cal.) Having apparently anticipated this event, KCT issued a press release responding to Skyworks' allegations on May 8, 2024. (Ex. 12 [Machine Translated KCT Press Release].) This release was as remarkable for what it omitted as for what it said. Nowhere did KCT's release dispute that its products infringe Skyworks' patents. (*Id.*) Instead, the release proclaimed KCT's intent to avoid the consequences of its infringement and evade any judicially imposed equitable remedies by channeling its "overseas market sales" through "China and Taiwan"—locations where the proposed OEM Respondents are headquartered—and touting the company's active expansion through "the Southeast Asian" market. (*Id.*)

16. Respondents' unlicensed and unauthorized use of Skyworks' patented technology to import and sell the Accused Products in the United States constitutes an unfair act within the

meaning of Section 337.[8]

17. On information and belief, the Accused Products are manufactured and/or sold for importation into the United States, imported into the United States, and/or sold after importation into the United States by or on behalf of the Respondents.

18. A domestic industry as required by 19 U.S.C. § 1337(a)(2) and (3) exists in the United States relating to articles protected by Skyworks' Asserted Patents. Skyworks' domestic industry includes significant investments in plants and equipment, significant employment of labor and capital, and substantial investments in the exploitation of the inventions claimed in Skyworks' Asserted Patents, including through activities such as engineering, research and development, supply chain management, and quality assurance, among others.

19. Skyworks seeks, as permanent relief, a general exclusion order barring from entry into the United States all infringing KCT wireless FEM chips, devices containing the same, and components thereof. Alternatively, Skyworks seeks as relief a permanent limited exclusion order under 19 U.S.C. § 1337(d) barring from entry into the United States infringing Accused Products, or Accused Products that are manufactured abroad, sold for importation into the United States, and/or sold in the United States after importation by or on behalf of any of the Respondents.

20. Skyworks further seeks a permanent cease and desist order under 19 U.S.C. § 1337(f) prohibiting the Respondents from importing, admitting, or withdrawing from a foreign trade zone, marketing, advertising, demonstrating, testing, warehousing inventory of, distributing, offering for sale, selling, selling for importation into the United States, licensing, programming, packaging, repackaging, bundling, updating, soliciting U.S. agents or distributors for, or aiding

[8] As indicated above, this Complaint uses the term "Accused Products" to refer to all products of all Respondents that are accused of infringing one or more of the patents Skyworks asserts in this Investigation.

and abetting other entities in the importation, sale for importation, sale after importation, transfer, or distribution of the infringing Accused Products.

21. Skyworks further seeks the imposition of a bond requirement upon importation of Accused Products that infringe one or more claims of the Asserted Patents during the 60-day Presidential review period, pursuant to 19 U.S.C. § 1337(j).

## III. PARTIES

### A. Skyworks

22. Skyworks Solutions, Inc. is a Delaware Corporation with its principal place of business at 5260 California Avenue, Irvine, California 92617. Skyworks Solutions Inc. is the exclusive owner of the ’101, ’563, ’579 and ’194 patents and is also responsible for the domestic investments underlying Skyworks’ domestic industry.

23. Skyworks Canada is a Canadian Corporation with its principal place of business at 1135 Innovation Dr., Ottawa, ON K2K 3G7, Canada. Skyworks Canada is a wholly owned subsidiary of Skyworks Luxembourg S.a.r.l. (“Skyworks Luxembourg”), a corporation based in Luxembourg with a principal place of business at 2-8, Avenue Charles De Gaulle, L-1653 Luxembourg. Skyworks Luxembourg is, in turn, a wholly owned subsidiary of Complainant Skyworks Solutions, Inc. Skyworks Canada was formed after a transaction in which Skyworks Solutions, Inc. acquired SiGe Semiconductor, Inc. (“SiGe”), which later formally changed its name to “Skyworks Solutions Canada, Inc.” (Ex. 13 [Certificate of Amendment].) Together with Skyworks Global, Skyworks Canada owns all rights to the ’200 patent.

24. Skyworks Global is a Singaporean Corporation with its principal place of business at 3 Bedok South Rd, Singapore. Skyworks Global is also a wholly owned subsidiary of Skyworks Luxembourg, which as explained above is a wholly owned subsidiary of Skyworks Solutions, Inc. Together with Skyworks Canada, Skyworks Global owns all rights to the ’200 patent.

25. Skyworks is renowned in the wireless semiconductor industry for its innovative approach to radio frequency and semiconductor system design. It is a worldwide leader in the wireless FEM industry based in part on the success of its strong and long-standing investments in research and development throughout the United States. Skyworks' wireless FEM products have enjoyed particular success in Wi-Fi applications. Wi-Fi is a family of wireless network protocols based on the Institute of Electrical and Electronics Engineers ("IEEE") 802.11 series of standards.[9] Skyworks provides innovative Wi-Fi FEM chips that are used in a wide array of products that play critical roles in the U.S. economy, including in enabling reliable Wi-Fi connectivity for the network of wireless devices that power today's economy and infrastructure.

26. Skyworks' technology enables everything from daily essentials like smartphones, computers, and Internet of Things (IoT) devices to societal necessities like lifesaving patient telemetry in hospitals, advanced security systems, and industrial automation. Skyworks' technology also serves the aerospace and national defense sectors, among others.

27. As one of the largest producers of wireless FEMs in the world (Ex. 14 [Mordor Intelligence Report] at 4), Skyworks is committed to developing innovative solutions to meet the ever-evolving demands for wireless communication across many industries. To that end, Skyworks spent more than $606 million on research and development in 2023 alone, for example, and it has been awarded more than 4,600 patents worldwide in recognition of its pioneering innovations. (Skyworks Solutions, Inc., *2023 Annual Report*, [https://perma.cc/Y23Q-J8TG] at 140.)

28. Skyworks employs hundreds of scientists, engineers, and other personnel in the

[9] The IEEE 802.11 standard has evolved to serve a variety of wireless data communication use cases, including recently the automotive use cases under the IEEE 802.11p standard.

United States, including at its numerous facilities in California, Iowa, Massachusetts, New Hampshire, North Carolina, Oregon, and Texas.

**B. The KCT Respondents**

29. KXComTech is a corporation organized under the laws of China, with its principal place of business located at 5th Floor, Building 10, No. 399 Keyuan Road, Pudong New Area, Shanghai, China.

30. Established in 2014, KXComTech offers wireless FEM products compliant with the Wi-Fi 6, 6E, and 7 protocols, among others. According to its website, KXComTech was "founded by seasoned experts with global experience[] in the field of RF chip design, application, production, and sales" and operates with a mission to "provide wireless devices with faster speed, lower latency, higher capacity and wider coverage for more complex and diversified network access scenarios." (KXComTech, *About Us*, [https://perma.cc/ST82-V7TA].) KXComTech has stated publicly that "most of [its] R&D teams" have "overseas work experience" at American semiconductor companies, like Skyworks. (Ex. 15 [KCT Press Release] ("Most of the R&D teams … have overseas work experience in RFaxis (acquired by Skyworks in 2016), RFMD (merged into Qorvo), Anadigics and other internationally renowned RF front-end chip companies[.]").)

31. KXComTech purports to work with distributors to sell its products in the United States. (KXComTech, *Distributors*, [https://perma.cc/39JG-J7Y6].) It also sells its products here directly. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ].)

32. On November 17, 2023, KXComTech was officially listed on the Shanghai Stock Exchange's Science and Technology Innovation Board. (KXComTech, *IPO Press Release*, [https://perma.cc/6D7X-VUU6].) According to its public offering filings, KXComTech employs 156 people, has a market capitalization of $1.24 billion, and an enterprise value of $1.16 billion.

33. GCLI is a corporation organized under Nevada law and domiciled in California

with a principal place of business at 14151 Newport Ave., Suite 204, Tustin, CA 92780. (Ex. 16 [GCLI California Corporation Registration]). GCLI is a wholly owned subsidiary of KXComTech. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ].)

34. On information and belief, GCLI is directly controlled by KXComTech and handles business development and sales of wireless FEM products in the United States for KXComTech.

35. KCT has recently announced its intent to displace Skyworks in the market for Wi-Fi FEM chips. (Wi-Fi Now, *Meet KXcomtech: On track to ship hundreds of millions in Wi-Fi FEMs in 2022*, [https://perma.cc/R3R7-5B47].) For instance, KCT advertises its products as being pin-to-pin replacements for Skyworks' products (*see*, *e.g.*, Ex. 5 [KCT Product Roadmap Presentation] at 8-24) and has publicly compared its products to Skyworks' products "in terms of linearity, efficiency, noise figure, and other performance metrics" (KXComTech, *IPO Press Release*, [https://perma.cc/6D7X-VUU6]). Moreover, KCT has intentionally targeted and continues to target Skyworks' customers, and certain of them have begun to sell products that incorporate KCT wireless FEMs. KCT has engaged in this conduct despite knowledge of Skyworks' patent portfolio generally and the Asserted Patents in particular. On information and belief, the KCT wireless FEMs used in D-Link's and Ruijie's products copy Skyworks' technology, including the technology covered by the Asserted Patents.

**C. The D-Link Respondents**

36. D-Link Corporation is a corporation organized under the laws of Taiwan with a principal place of business at 4F 289 Sinhu 3rd Road, Neihu District, Taipei, 114 Taiwan.

37. D-Link Systems Inc. is a corporation organized under California law with a principal place of business at 14420 Myford Road, Suite 100, Irvine, CA 92606. (Ex. 17 [D-Link Systems Inc. California Corporation Registration]). D-Link Systems Inc. is a wholly owned subsidiary of D-Link Corporation. (D-Link Corporation, *2023 Annual Report*,

[https://perma.cc/9QWC-HUSZ] at 148.)

38. Originally established in Taiwan in 1986 as Datex System, Inc. to market network adapters, D-Link is now a multinational designer, manufacturer, and seller of products ranging from surveillance cameras to whole home Wi-Fi systems. D-Link sells its products worldwide, including in the United States where it made approximately $37 million in sales in 2023 alone. (*Id.* at 167.) On information and belief, these sales are made both directly and through third-party distributors.

39. D-Link's Wi-Fi routers and other products utilize wireless FEMs. D-Link has historically purchased these FEMs from Skyworks but has recently started shipping products that contain KCT FEMs that KCT advertises as pin-for-pin replacement of Skyworks' products. (*See, e.g.*, Ex. 5 [KCT Product Roadmap Presentation] at 8-24.) On information and belief, the KCT FEMs used in D-Link's products copy Skyworks' technology, including the technology covered by the Asserted Patents.

**D. Ruijie**

40. Ruijie is a corporation organized under the laws of China with a principal place of business at Building 19, Juyuanzhou Industrial Park, No. 618 Jinshan Road, Cangshan District, Fuzhou, Fujian, China.

41. Founded in 2003, Ruijie is a network infrastructure and solution provider that produces and sells network equipment, network security products, and cloud desktop solutions, among other products. Ruijie has stated publicly that it "serves energy and electric power, government, entertainment and hospitality, telecommunications, healthcare, transportations, finance, Internet, exhibition, education, and enterprise industries." (Yahoo! Finance, *Ruijie Networks Co., Ltd. (301165.SZ)*, [https://perma.cc/B7J4-YH8V].) Ruijie reported sales of more than 11.25 billion Chinese Yuan (approximately $1.55 billion) in 2022 alone. (Wall Street Journal,

*Ruijie Networks Co. Ltd. A*, [https://perma.cc/5TV4-VRTN].) On information and belief, these sales are made both directly and through third-party distributors.

42. Ruijie's Wi-Fi routers and other products utilize wireless FEMs. Ruijie has historically purchased these FEMs from Skyworks but has recently started shipping products that contain KCT FEMs that KCT advertises as pin-for-pin replacement of Skyworks' products. (*See, e.g.*, Ex. 5 [KCT Product Roadmap Presentation] at 8-24.) On information and belief, the KCT FEMs used in Ruijie's products copy Skyworks' technology, including the technology covered by the Asserted Patents.

## IV. THE TECHNOLOGY AND PRODUCTS AT ISSUE

### A. Products at Issue

43. Pursuant to Commission Rule 210.12(a)(12), the Accused Products include all KCT wireless front-end modules that infringe one or more claims of the Asserted Patents, downstream products containing the same, and components thereof.

### B. Technology Background

44. The Asserted Patents relate to an innovative collection of technologies for improving the performance and design of wireless FEMs, including Wi-Fi FEMs. These technologies relate to various aspects and features of FEMs, including power amplifiers, RF modules, low-noise amplifiers, and radio frequency switches.

45. Skyworks has been at the forefront of advancing wireless connectivity technologies, and its commitment to innovation can be seen across all of its business segments, including its Wi-Fi FEM product offerings.

46. Wi-Fi FEMs are integrated circuits contained in wireless routers (and many other devices) that enable wireless communication with a user device (e.g., a computer or smartphone) so that the user device can transmit and receive information with other systems, such as via the

Internet. Wi-Fi FEMs are typically located between the wireless router's antenna and its transceiver and are generally comprised of semiconductor components, including but not limited to, power amplifiers, low noise amplifiers, and switches.

47. When a user device accesses the Internet, it sends signals requesting data and receives the data in response. When a user device uses Wi-Fi to request access to the Internet, it sends a wireless signal to the wireless router. The wireless router processes the signal and passes it to the Internet. When the Internet responds, the wireless router processes the response, determines which user device to send the response to (if there are multiple user devices connected to the wireless router), and wirelessly sends the response to the appropriate user device.

48. Proper wireless communication between a user device and a wireless router requires transmission of strong and clear wireless signals. However, myriad external factors can weaken or warp the signal during transmission. As a result, signals received by a wireless router often need to be adjusted so that they can reach their intended destination in a discernable fashion. This signal adjustment is typically performed by the wireless router's Wi-Fi FEM.

49. For example, during the transmission of a wireless signal from a wireless router to a user device, outside noise sources may disrupt the transmitted signal. This disruption is commonly referred to as "interference," and it can decrease the strength and quality of the signal sent from the wireless router to the user device. To prevent this, the wireless router sends the signal from its transceiver to the Wi-Fi FEM for adjustment for wireless transmission. The Wi-Fi FEM uses power amplifiers to strengthen the signal without distorting it. This reduces the impact of any interference the signal might experience during transmission so that a strong and clear signal can be received by the user device.

50. Further, when a wireless router receives a signal from a user device, factors such as

the distance between the wireless router and the user device can reduce the signal strength. To account for this, the wireless router uses the Wi-Fi FEM to adjust the received wireless signal. The Wi-Fi FEM can use its low-noise amplifier to both amplify the strength of the signal and isolate the signal from interference. This ensures that the signal received by the wireless router is strong enough for the wireless router to properly process and route.

51. The Asserted Patents reflect Skyworks' many years of dedication, expertise, and investment in research and development related to wireless FEMs. Designing wireless FEM chips that can keep pace with new wireless networking capabilities has posed significant challenges for FEM producers—especially given the increasing need for smaller and more efficient chips. The technologies of the Asserted Patents address these challenges by enhancing wireless FEM performance in a power-efficient manner through use of improved circuitry associated with power amplifiers and innovative RF switch systems.

## V. NON-TECHNICAL DESCRIPTION OF THE ASSERTED PATENTS[10]

### A. The '101 Patent

#### 1. Identification and Ownership of the '101 Patent

52. Skyworks owns by assignment the right, title, and interest in the '101 patent, titled "Apparatus and methods for biasing power amplifiers," which issued on May 6, 2014 and named Paul T. DiCarlo and Ping Li as inventors.[11] The '101 patent issued from U.S. Patent Application No. 13/468,749, filed on May 10, 2012, and the '101 patent expires on June 2, 2032.

[10] All non-technical descriptions of the Asserted Patents included in this Complaint are presented to give a general background to the patents. Statements made in connection with these non-technical descriptions are not intended nor should they be used for purposes of patent claim construction. Skyworks presents these statements subject to and without waiver of its right to argue that claim terms should be construed in a particular way under claim interpretation jurisprudence and the relevant evidence.

[11] Certified copies of the assignment records for the Asserted Patents are attached hereto as Exs. 6-8.

53. A certified copy of the ’101 patent is attached as Exhibit 1. A copy of the assignment from the named inventors to Skyworks is attached as Exhibit 6. A certified copy of the prosecution history of the ’101 patent is included as Appendix A. Copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the ’101 patent are included as Appendix A.

**2. Foreign Counterparts to the ’101 Patent**

54. Exhibit 18 lists each foreign patent and each pending foreign patent application (not already issued as a patent), and each foreign patent application that has been denied, abandoned, or withdrawn, corresponding to the ’101 patent, with an indication of the prosecution status of each such patent application. No other foreign patents or patent applications corresponding to the ’101 patent have been filed, abandoned, withdrawn, or rejected.

**3. Non-Technical Description of the ’101 Patent**

55. The ’101 patent relates generally to radio frequency (“RF”) power amplifier systems and methods for biasing of power amplifiers.

56. The ’101 patent explains that prior art power amplifiers struggled to manage the “amplification of a RF signal” on a granular level, which is necessary because “amplifying the RF signal to an incorrect power level can cause a wireless device to transmit out of band.” (Ex. 1 [’101 patent] at 1:28-30.) As such, the ’101 patent explains that there was a need for “improved power amplifier systems” and “improving power amplifier biasing.” (*Id.* at 1:31-33.)

57. The ’101 patent addresses this problem, for example, through a “power amplifier system” that may contain a “bias block [that] includes a time dependent signal generator configured to shape an enable signal of the power amplifier to generate a control current, a current amplifier configured to amplify the control current to generate a correction current, and a primary biasing circuit configured to generate a bias current for the power amplifier based at least partly

on the correction current." (*Id.* at 1:37-46.) According to the '101 patent, such a power amplifier system "correct[s] for a variation in gain of the power amplifier when the power amplifier is enabled" (*id.* at 1:46-48), which "can improve the power amplifier's performance" (*id.* at 4:39-42).

**B. The '563 Patent**

**1. Identification and Ownership of the '563 Patent**

58. Skyworks owns by assignment the right, title, and interest in the '563 patent, titled "Apparatus and methods for biasing of power amplifiers," which issued on March 13, 2018, and named Paul T. DiCarlo and Ping Li as inventors. The '563 patent issued from U.S. Patent Application No. 15/377,842, filed on December 13, 2016, which is a continuation of U.S. Patent Application No. 14/825,053, filed on August 12, 2015 (now U.S. Patent No. 9,667,203), which is a continuation of U.S. Patent Application No. 14/242,150, filed on April 1, 2014 (now U.S. Patent No. 9,136,803), which is a continuation of U.S. Patent Application No. 13/468,749 that issued as the '101 patent that Skyworks asserts in this Complaint.[12] The '563 patent expires on May 10, 2032.

59. A certified copy of the '563 patent is attached as Exhibit 2. A copy of the assignment from the named inventors to Skyworks is attached as Exhibit 6. A certified copy of the prosecution history of the '563 patent is included as Appendix B. Copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '563 patent

[12] On August 27, 2012, the named inventors of U.S. Patent Application No. 13/468,749 (the "'749 application") assigned to Skyworks "any and all inventions and improvements disclosed [the '749 application]…and all divisional, continuing, substitute, renewal, reissue, and all other applications for Letters Patent derived from or claiming priority to [the '749 application]" (Ex. 6 ['101 Patent Assignment] at 3.) Because the '563 patent is a continuation of the '749 application, Skyworks received its rights to the '563 patent through the '749 application assignment, which is attached to this Complaint as Exhibit 6.

are included as Appendix B.

**2. Foreign Counterparts to the ’563 Patent**

60. Exhibit 18 lists each foreign patent and each pending foreign patent application (not already issued as a patent), and each foreign patent application that has been denied, abandoned, or withdrawn, corresponding to the ’563 patent, with an indication of the prosecution status of each such patent application. No other foreign patents or patent applications corresponding to the ’563 patent have been filed, abandoned, withdrawn, or rejected.

**3. Non-Technical Description of the ’563 Patent**

61. The ’563 patent relates generally to RF power amplifier systems and methods for biasing of power amplifiers.

62. The ’563 patent explains that prior art power amplifiers struggled to manage the “amplification of a RF signal” on a granular level, which is important because “amplifying the RF signal to an incorrect power level can cause a wireless device to transmit out of band.” (Ex. 2 [’563 patent] at 1:38-41.) As such, the ’563 patent explains that there was a need for “improved power amplifier systems” and “improving power amplifier biasing.” (*Id.* at 1:42-44.)

63. The ’563 patent addresses this problem, for example, through a “power amplifier system” that may contain a “bias block [that] includes a time dependent signal generator configured to shape an enable signal of the power amplifier to generate a control current, a current amplifier configured to amplify the control current to generate a correction current, and a primary biasing circuit configured to generate a bias current for the power amplifier based at least partly on the correction current.” (*Id.* at 1:48-58.) According to the ’563 patent, such a power amplifier system “correct[s] for a variation in gain of the power amplifier when the power amplifier is enabled” (*id.* at 1:58-60), which “can improve the power amplifier’s performance” (*id.* at 4:52-55). Additionally, the ’563 patent describes techniques to arrange the components of its inventive

power amplifier system in a way that can allow "the magnitude of the components of the time-dependent signal generator [to] be reduced to a size suitable for on-chip integration." (*Id.* at 9:1-7.)

### C. The '200 Patent

#### 1. Identification and Ownership of the '200 Patent

64. The '200 patent, titled "Module integration integrated circuits," issued on August 5, 2008 and named James H. Derbyshire and Alan J.A. Trainor as inventors. The '200 patent issued from U.S. Patent Application No. 10/857,938, filed on June 2, 2004. It expires on April 1, 2026.

65. The '200 patent was originally assigned to SiGe on June 2, 2004. (Ex. 3 ['200 patent assignment].) Skyworks acquired SiGe on May 17, 2011 and, on August 1, 2011, SiGe executed a patent license agreement granting an exclusive license to the '200 patent (among others) to Skyworks Global. On June 23, 2016, SiGe formally changed its corporate name to Complainant Skyworks Solutions Canada, Inc. (Ex. 13 [Certificate of Amendment].) As a result, Skyworks Global and Skyworks Canada own all substantial rights to the '200 patent, including the right to enforce the patent and seek all legal and equitable remedies for infringement thereof.

66. A certified copy of the '200 patent is attached as Exhibit 3. A copy of the assignment from the named inventors to SiGe is attached as Exhibit 7. A copy of the certificate of amendment through which SiGe changed its name to Skyworks Solutions Canada, Inc. is attached as Exhibit 13. A copy of the August 1, 2011 patent license under which SiGe granted an exclusive patent license to the '200 patent to Skyworks Global is attached as Confidential Exhibit 42. A certified copy of the prosecution history of the '200 patent is included as Appendix C. Copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '200 patent are included as Appendix C.

### 2. Foreign Counterparts to the ’200 Patent

67. Exhibit 18 lists each foreign patent and each pending foreign patent application (not already issued as a patent), and each foreign patent application that has been denied, abandoned, or withdrawn, corresponding to the ’200 patent, with an indication of the prosecution status of each such patent application. No other foreign patents or patent applications corresponding to the ’200 patent have been filed, abandoned, withdrawn, or rejected.

### 3. Non-Technical Description of the ’200 Patent

68. The ’200 patent relates generally to systems and methods of designing RF front-end circuits in RF front-end modules.

69. The ’200 patent explains that prior art RF modules incorporated many separate semiconductor dies to accommodate the circuits of an RF front-end module. (Ex. 3 [’200 patent] at 1:42-55.) According to the ’200 patent, having many semiconductor dies presents drawbacks such as “progressively larger and more expensive modules.” (*Id*. at 4:14-27). However, reducing the number of dies by integrating more components onto fewer dies can lead to undesirable increases in crosstalk and thus output signal noise. (*Id.* at 7:14-20.) As the ’200 patent explains, there was therefore a need for a more “compact” RF module (*id*. at 2:29-30) having “high levels of integration” (*id.* at 1:63-66) while at the same time avoiding undesirable increases in crosstalk and thus unwanted output signal noise (*id.* at 7:14-20, Figs. 2, 4, 5).

70. The ’200 patent addresses this need, for example, through an RF module with a first integrated circuit semiconductor die having a first portion of a first signal conditioning circuit integrated within the first integrated circuit die and disposed along a first signal path and a second integrated circuit semiconductor die containing a second signal conditioning circuit on a second signal conditioning path. (*Id*. at 7:32-50; Fig. 5). By largely separating the two signal paths onto different dies, the ’200 patent explains that the RF module can be made more compact—thereby

"reduc[ing] cost, reduc[ing] assembly time, and increas[ing] yield and module longevity" (*id.* at 1:63-66)—without causing an undesirable increase in crosstalk, and thus reducing the potential for unwanted output signal noise (*id.* at 7:14-20, Fig. 5).

### D. The '579 Patent

#### 1. Identification and Ownership of the '579 Patent

71. Skyworks owns by assignment the right, title, and interest in the '579 patent, titled "Radio frequency devices having reduced intermodulation distortion," which issued on September 20, 2016, and named Anuj Madan, Fikret Altunkilic, and Guillaume Alexandre Blin as inventors. The '579 patent issued from U.S. Patent Application No. 14/833,076, filed on August 22, 2015. The '579 patent is a division of U.S. Patent Application No. 13/936,175, filed on July 6, 2013 that issued as the '194 patent that Skyworks asserts in this Complaint.[13] The '579 patent expires on July 6, 2033.

72. A certified copy of the '579 patent is attached as Exhibit 4. A copy of the assignment from the named inventors to Skyworks is attached as Exhibit 8. A certified copy of the prosecution history of the '579 patent is included as Appendix D. Copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the '579 patent are included as Appendix D.

#### 2. Foreign Counterparts to the '579 Patent

73. Exhibit 18 lists each foreign patent and each pending foreign patent application (not

[13] On November 26, 2013, the named inventors of U.S. Patent Application No. 13/936,175 (the "'175 application") assigned to Skyworks "any and all inventions and improvements disclosed [the '175 application]…and all ***divisional***, continuing, substitute, renewal, reissue, and all other applications for Letters Patent derived from or claiming priority to [the '175 application]" (Ex. 8 ['194 Patent Assignment] at 3 (emphasis added)). Because the '579 patent is a division of the '175 application, Skyworks received its rights to the '579 patent through the '175 application assignment, which is attached to this Complaint as Exhibit 8.

already issued as a patent), and each foreign patent application that has been denied, abandoned, or withdrawn, corresponding to the ’579 patent, with an indication of the prosecution status of each such patent application. No other foreign patents or patent applications corresponding to the ’579 patent have been filed, abandoned, withdrawn, or rejected.

**3. Non-Technical Description of the ’579 Patent**

74. The ’579 patent relates generally to “a radio-frequency (RF) switch system” designed to reduce signal interference. (Ex. 4 [’579 patent] at 1:34-37.)

75. The ’579 patent explains that “mixing products from other RF signals” can cause “an unwanted signal [to be] added to a desired signal” and that “[s]uch an effect can be particularly dominant in a multi-mode, multi-band environment.” (*Id.* at 9:2-5.) The ’579 patent refers to the unwanted signal as “intermodulation distortion” or “IMD” and notes that it can “yield frequencies that are not harmonic frequencies.” (*Id.* at 9:2-7.) The ’579 patent explains that this is problematic because it “can contribute to the introduction of spurious signals into the RF system, thereby contributing to degradation of overall RF system linearity and IMD performance.” (*Id.* at 6:49-53.)

76. The ’579 patent addresses this problem, for example, through an RF device designed to reduce IMD. (*Id.* at Abstract.) The RF device may contain an RF switch system that “includes a switch having a stack of field-effect transistors (FETs) connected in series between first and second nodes” (*id.* at 1:34-37) and “a capacitor connected in series with the switch configured to inhibit a low-frequency blocker signal from mixing with a fundamental-frequency signal in the switch” (*id.* at 1:37-40). According to the ’579 patent, this system can allow for “a low-frequency jammer signal [to] be blocked or reduced from mixing with any ON or OFF paths” (*id.* at 9:49-53), which can improve the “linearity of the system building blocks,” leading to a decrease in “the overall susceptibility of a system to interference” (*id.* at 9:9-14).

### E. The ’194 Patent

#### 1. Identification and Ownership of the ’194 Patent

77. Skyworks owns by assignment the right, title, and interest in the ’194 patent, titled “Radio-frequency switch system having improved intermodulation distortion performance,” which issued on September 29, 2015, and named Anuj Madan, Fikret Altunkilic, and Guillaume Alexandre Blin as inventors. The ’194 patent issued from U.S. Patent Application No. 13/936,175, filed on July 6, 2013. It expires on July 6, 2033.

78. A certified copy of the ’194 patent is attached as Exhibit 5. A copy of the assignment from the named inventors to Skyworks is attached as Exhibit 8. A certified copy of the prosecution history of the ’194 patent is included as Appendix E. Copies of each patent and applicable pages of each technical reference mentioned in the prosecution history of the ’194 patent are included as Appendix E.

#### 2. Foreign Counterparts to the ’194 Patent

79. Exhibit 18 lists each foreign patent and each pending foreign patent application (not already issued as a patent), and each foreign patent application that has been denied, abandoned, or withdrawn, corresponding to the ’194 patent, with an indication of the prosecution status of each such patent application. No other foreign patents or patent applications corresponding to the ’194 patent have been filed, abandoned, withdrawn, or rejected.

#### 3. Non-Technical Description of the ’194 Patent

80. The ’194 patent relates generally to “a radio-frequency (RF) switch system” designed to reduce signal interference. (Ex. 5 [’194 patent] at 1:31-37.)

81. The ’194 patent explains that “mixing products from other RF signals” can cause “an unwanted signal [to be] added to a desired signal” and that “[s]uch an effect can be particularly dominant in a multi-mode, multi-band environment.” (*Id.* at 8:55-60.) The ’194 patent refers to

the unwanted signal as "intermodulation distortion" or "IMD" and notes that it can "yield frequencies that are not harmonic frequencies." (*Id.*) The '194 patent explains that this is problematic because it "can contribute to the introduction of spurious signals into the RF system, thereby contributing to degradation of overall RF system linearity and IMD performance." (*Id.* at 6:38-44.)

82. The '194 patent addresses this problem through, for example, an RF device designed to reduce IMD. (*Id.* at Abstract.) The RF device may contain an RF switch system that "includes a switch having a stack of field-effect transistors (FETs) connected in series between first and second nodes" (*id.* at 1:31-34) and "a capacitor connected in series with the switch and configured to inhibit a low-frequency blocker signal from mixing with a fundamental-frequency signal in the switch" (*id.* at 1:34-37). According to the '194 patent, this system can allow for "a low-frequency jammer signal [to] be blocked or reduced from mixing with any ON or OFF paths," which can "lead to improvement in IMD performance, especially for low-frequency blocker signals." (*Id.* at 9:35-38.)

### F. Licensees to the Asserted Patents

83. Confidential Exhibit 43 is a list of licenses that include one or more of the Asserted Patents.

## VI. PROPOSED RESPONDENTS' INFRINGEMENT OF THE ASSERTED PATENTS

84. The Asserted Patents are infringed by Respondents KCT, D-Link, and Ruijie.

85. As set forth below, KCT, D-Link, and Ruijie each have been and are still infringing, contributing to infringement, and/or inducing others to infringe the Asserted Patents in the United States by making, using, offering for sale, selling, or importing devices that practice the Asserted Patents.

### A. Infringement of the '101 Patent

### 1. KCT Respondents

86. KCT has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’101 patent by making, using, offering for sale, selling, or importing infringing wireless FEMs, including, but not limited to, the Accused KCT Products.[14]

87. The Accused KCT Products infringe at least claims 1, 2, 10-11, 17, 18, 20, 21, and 22 of the ’101 patent.

88. For instance, the Accused KCT Products infringe independent claims 1, 17, and 21 of the ’101 patent for at least the reasons described in Skyworks’ exemplary infringement charts set forth as Exhibits 19-20.

89. With respect to claims 2 and 22, the Accused KCT Products further contain a resistor-capacitor (RC) network in a time-dependent signal generator. Thus, the Accused KCT Products infringe claims 2 and 22 of the ’101 patent.

90. With respect to claim 10, the Accused KCT Products further contain a bipolar transistor in a power amplifier. The bipolar transistor has an emitter, a base, and a collector, the base configured to receive a radio frequency (RF) signal and a bias current. Thus, the Accused KCT Products infringe claim 10 of the ’101 patent.

91. With respect to claim 11, the bipolar transistor contained in Accused KCT Products has an emitter electrically connected to a power low voltage. The bipolar transistor has a collector configured to generate an amplified version of the RF signal. Thus, the Accused KCT Products infringe claim 11 of the ’101 patent.

92. With respect to claim 18, the Accused KCT Products further use a resistor-capacitor

[14] Skyworks’ infringement allegations regarding the ’101 patent extend, without limitation, to all KCT wireless FEMs embodying an infringing power amplifier system, including KCT Wi-Fi 6, 6E, and 7 FEMs.

(RC) network of a time-dependent signal generator. Thus, the Accused KCT Products infringe claim 18 of the ’101 patent.

93. With respect to claim 20, when generating a bias current, the Accused KCT Products further shape the bias current so as to compensate for a gain variation of a transistor. On information and belief, the transistor is a heterojunction bipolar transistor (HBT). Thus, the Accused KCT Products infringe claim 20 of the ’101 patent.

94. KCT has had knowledge of the ’101 patent at least since March 7, 2023, when Skyworks sent a letter to KCT’s President informing KCT that its 2.4 GHz and 5 GHz Wi-Fi FEMs infringed the claims of certain Skyworks patents, including (but not limited to) the ’101 patent family, and including without limitation U.S. Patent Nos. 9,136,803, 9,667,203, 9,917,563, and 10,566,943. (Ex. 10 [2023 Notice Letter] at 1-2.) Skyworks met with KCT and gave a presentation outlining KCT’s infringement. Skyworks further sent a letter to KCT on April 23, 2024, providing notice of KCT’s infringement of each Asserted Patent, including the ’101 patent. (Ex. 11 [2024 KCT Notice Letter].) Moreover, on May 8, 2024, KCT issued a press release confirming its knowledge of Skyworks’ infringement allegations based on the ’101 patent (among other patents). (Ex. 12 [Machine Translated KCT Press Release].) Despite receiving notice of its infringement, KCT has continued to infringe Skyworks’ patented technology, including the technology claimed in the ’101 patent, and made no effort to avoid infringement.

95. KCT actively, knowingly, and intentionally has induced and continues to induce infringement of the ’101 patent by, for example, controlling the design and manufacture of, offering for sale, selling, supplying, and otherwise providing instruction and guidance regarding the Accused KCT Products, with the knowledge and specific intent to encourage and facilitate acts of direct infringement with respect to such products, including by resellers, retailers, end product

manufacturers, and end users of the Accused KCT Products, both inside and outside the United States. For example, KCT's website advertises the Accused KCT Products as integrating "a high-efficiency high-linearity power amplifier (PA)" that includes a "power detector" for "accurately monitoring [] output power from the [power amplifier]." (KXComTech, *KCT8547HE-1*, [https://perma.cc/7QFB-L3FW]; KXComTech, *KCT8539S*, [https://perma.cc/WRA7-GDPD].) Further, KCT advertises the Accused KCT Products as being pin-to-pin replacements for Skyworks' products. On information and belief, KCT sells and distributes infringing products to customers in the United States both directly and through third-party distributors like Disman Bakner. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ]; KXComTech, *Distributors*, [https://perma.cc/FYC6-XH8A].) On information and belief, KCT also sells the Accused KCT Products to the D-Link and Ruijie Respondents with knowledge that the Accused KCT Products will be incorporated into wireless routers sold by D-Link and Ruijie in the United States. On information and belief, KCT's distributors, customers, and end users directly infringe the '101 patent by, for example, making, using, offering to sell, and/or selling within the United States, and importing into the United States, without authority or license, both the Accused KCT Products themselves and/or products containing the Accused KCT Products.

96. KCT also contributes to infringement of the '101 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the Accused KCT Products, which are not suitable for substantial non-infringing use and which embody a material part of the invention described in the '101 patent. These Accused KCT Products are known by KCT to be especially made or especially adapted for use in the infringement of the '101 patent. Specifically, on information and belief, KCT sells the Accused KCT Products to resellers, retailers, and end product manufacturers with knowledge that such

entities perform acts of direct infringement with the Accused KCT Products. On information and belief, KCT sells and distributes infringing products to customers in the United States both directly and through third-party distributors like Disman Bakner. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ]; KXComTech, *Distributors*, [https://perma.cc/FYC6-XH8A].) On information and belief, KCT's distributors, customers, and end users directly infringe the '101 patent by, for example, making, using, offering to sell, selling within the United States, and/or importing into the United States, without authority or license, both the Accused KCT Products themselves and/or products containing the Accused KCT Products.

**2. D-Link Respondents**

97. D-Link has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the '101 patent by making, using, offering for sale, selling, or importing wireless routers that include one or more of the Accused KCT Products that practice the '101 patent, including but not limited to the D-Link AX1800 wireless router.

98. The D-Link AX1800 wireless router infringes the '101 patent because it contains a KCT8547HE Wi-Fi FEM. For the reasons described above (*supra* ¶¶ 86-93), the KCT8547HE Wi-Fi FEM infringes at least claims 1, 2, 10-11, 17, 18, 20, 21, and 22 of the '101 patent.

99. Exemplary infringement charts showing infringement of independent claims 1, 17, and 21 of the '101 patent by the D-Link AX1800 wireless router is set forth as Exhibit 19.

100. D-Link actively, knowingly, and intentionally induces, and continues to actively, knowingly, and intentionally induce infringement of the '101 patent by its customers and end users. D-Link has known of the '101 patent at least since April 23, 2024, when Skyworks sent a letter to D-Link providing notice that D-Link's AX1800 wireless router infringed enumerated claims of the '101 patent through its use of Accused KCT Products. (Ex. 23 [2024 D-Link Notice Letter].) Despite notice, D-Link nevertheless actively induces its customers, including end-users

of the D-Link AX1800, to directly infringe the ’101 patent by instructing, directing, and encouraging these end-users to purchase and use the D-Link AX1800 wireless router and the Accused KCT Products it contains. On information and belief, D-Link instructs, directs, and encourages its customers to infringe by advertising the AX1800 wireless router (D-Link, *AX 1800*, [https://perma.cc/6JQD-5DVR] (contending that the AX1800 wireless router provides “faster and more reliable Wi-Fi speeds” on both 2.4Ghz and 5GHz Wi-Fi bands in advertising materials), and providing at least installation/technical manuals, troubleshooting guides, and/or product tutorials. For instance, the D-Link AX1800’s user manual lists a series of troubleshooting strategies that the end-user can perform to resolve connectivity issues, including “unplug[ing] the power to the router for 10 seconds and plug[ing] back in” and then connecting the router to the desired computer device. (D-Link, *D-Link R-18 User Manual*, [https://support.dlink.com/resource/products/R18/REVA/R18_A1_Manual_v1.00(WW).pdf] at 141-42.) The process of starting the D-Link AX1800 wireless router and connecting it to a user device like a computer is an infringing use of the Accused KCT Product contained within that router, including without limitation because following this instruction from D-Link causes the Accused KCT Product inside the D-Link router to perform the method steps claimed in the ’101 patent.

101. D-Link also contributes to infringement of the ’101 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the D-Link AX1800 wireless router, which is not suitable for a substantial non-infringing use and which embodies a material part of the invention described in the ’101 patent. The D-Link AX1800 wireless router is known by D-Link to contain the KCT8547HE Wi-Fi FEM, which is especially made or especially adapted for use in the

infringement of the ’101 patent. Specifically, on information and belief, D-Link sells the D-Link AX1800 wireless router to resellers, retailers, and end users with knowledge that the D-Link AX1800 wireless router contains the KCT8547HE, which is used for infringement. D-Link’s customers directly infringe the ’101 patent by, for example, using, without authority or license, the D-Link AX1800 wireless router, including to perform the method steps claimed by the ’101 patent.

**3. Ruijie**

102. Ruijie has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’101 patent by making, using, offering for sale, selling, or importing wireless routers that include one or more of the Accused KCT Products that practice the ’101 patent, including but not limited to the Ruijie Reyee E5 AX3200 wireless router.

103. The Ruijie Reyee E5 AX3200 wireless router infringes the ’101 patent because it contains a KCT8539S Wi-Fi FEM. For the reasons described above (*supra* ¶¶ 86-93), the KCT8539S Wi-Fi FEM infringes at least claims 1, 2, 10-11, 17, 18, 20, 21, and 22 of the ’101 patent.

104. Exemplary infringement charts showing infringement of independent claims 1, 17, and 21 of the ’101 patent by the Ruijie Reyee E5 AX3200 wireless router are set forth as Exhibit 20.

105. Ruijie actively, knowingly, and intentionally induces, and continues to actively, knowingly, and intentionally induce infringement of the ’101 patent by its customers and end users. Ruijie has known of the ’101 patent at least since April 23, 2024, when Skyworks sent a letter to Ruijie providing notice that Ruijie infringes enumerated claims of the ’101 patent through its use of Accused KCT Products. (Ex. 24 [2024 Ruijie Notice Letter].) Ruijie responded shortly thereafter promising to stop selling routers containing the Accused KCT Products in the United States. However, on July 11, 2024—five days before the date of this complaint—Skyworks

purchased a Ruijie Reyee E5 AX3200 wireless router, tore it down, and discovered that it contained several of the accused KCT8539S FEMs. (Ex. 40 [Ruijie Product Purchase Receipt]; Ex. 41 [Ruijie Board Photo].) As such, and despite notice, Ruijie nevertheless actively induces its customers, the end-users of the Ruijie Reyee E5 AX3200 wireless router, to directly infringe the ’101 patent by instructing, directing, and encouraging these end-users to purchase and use the Ruijie Reyee E5 AX3200 wireless router and the Accused KCT Product it contains. On information and belief, Ruijie instructs, directs, and encourages its customers to infringe by advertising the Reyee E5 AX3200 wireless router (Amazon, *Ruijie Reyee E5 AX3200*, [https://perma.cc/P8B8-NNP9] (contending that the Reyee E5 AX3200 contains 8 Wi-Fi FEMs, which allows the router to provide higher Wi-Fi speeds in advertising materials), and providing at least installation/technical manuals, troubleshooting guides, and/or product tutorials. For instance, the Ruijie Reyee E5 AX3200 wireless router’s user manual outlines certain steps to configure the router to connect with a user device, including powering on the router, selecting the router’s internet connection on a user device, and connecting the device to the router. (Ruijie, *Reyee E5 AX3200 User Guide*, [https://manuals.plus/reyee/rg-e5-mesh-smart-wifi-6-router-manual.pdf] at 3-4.) The process of connecting the Ruijie Reyee E5 AX3200 wireless router to a user device like a computer is an infringing use of the Accused KCT Product contained within that router, including without limitation because following this instruction from Ruijie causes the Accused KCT Product inside the Ruijie router to perform the method steps claimed in the ’101 patent.

106. Ruijie also contributes to infringement of the ’101 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the Ruijie Reyee E5 AX3200 wireless router, which is not suitable for a substantial non-infringing use and which embodies a material part of the invention described in

the ’101 patent. The Ruijie Reyee E5 AX3200 wireless router is known by Ruijie to contain the KCT8539S Wi-Fi FEM, which is especially made or especially adapted for use in the infringement of the ’101 patent. Specifically, on information and belief, Ruijie sells the Ruijie Reyee E5 AX3200 wireless router to resellers, retailers, and end users with knowledge that the Ruijie Reyee E5 AX3200 wireless router contains the KCT8539S, which is used for infringement. Ruijie’s customers directly infringe the ’101 patent by, for example, using, without authority or license, the Ruijie Reyee E5 AX3200 wireless router, including to perform the method steps claimed by the ’101 patent.

### B. Infringement of the ’563 Patent

#### 1. KCT Respondents

107. KCT has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’563 patent by making, using, offering for sale, selling, or importing wireless FEMs that infringe the ’563 patent, including but not limited to the Accused KCT Products.[15]

108. The Accused KCT Products infringe at least claims 14, 15, 17, and 20 of the ’563 patent.

109. For instance, the Accused KCT Products infringe independent claim 14 of the ’563 patent for at least the reasons described in Skyworks’ exemplary infringement chart set forth as Exhibits 25-26.

110. With respect to claim 15, the Accused KCT Products further contain a first transistor in a primary bias circuit. The Accused KCT Products’ correction current, as identified

[15] Skyworks’ infringement allegations regarding the ’563 patent extend, without limitation, to all KCT wireless FEMs embodying an infringing power amplifier system, including KCT Wi-Fi 6, 6E, and 7 certified FEMs.

in the exemplary infringement chart for claim 14 (Exs. 26-27), is configured to change a current flowing through the first transistor. Thus, the Accused KCT Products infringe claim 15 of the ’563 patent.

111. With respect to claim 17, the Accused KCT Products further contain a current mirror in a gain correction circuit. The current mirror is configured to generate the correction current by mirroring the control current as identified in the exemplary infringement chart for claim 14. The current mirror is further configured to receive a power amplifier enable signal. Thus, the Accused KCT Products infringe claim 17 of the ’563 patent.

112. With respect to claim 20, the Accused KCT Products further contain a second transistor in a primary bias circuit. The second transistor is electrically coupled to the first transistor as discussed above in connection with claim 15. The second transistor is further configured to provide a bias signal to a power amplifier. Thus, the Accused KCT Products infringe claim 20 of the ’563 patent.

113. KCT has had knowledge of the ’563 patent at least since March 7, 2023, when Skyworks sent a letter to KCT’s President informing KCT that its 2.4 GHz and 5 GHz Wi-Fi FEMs infringed the claims of certain Skyworks patents, including (but not limited to) the ’563 patent. (Ex. 10 [2023 Notice Letter] at 1-2.) Skyworks met with KCT and gave a presentation outlining KCT’s infringement. Skyworks further sent a letter to KCT on April 23, 2024, providing notice of KCT’s infringement of each Asserted Patent, including the ’563 patent. (Ex. 11 [2024 KCT Notice Letter].) Moreover, on May 8, 2024, KCT issued a press release confirming knowledge of Skyworks’ infringement allegations based on the ’563 patent (among other patents). (Ex. 12 [Machine Translated KCT Press Release].) Despite receiving notice of its infringement, KCT has continued to infringe Skyworks’ patented technology, including the technology claimed in the

’563 patent, and made no effort to avoid infringement.

114. KCT actively, knowingly, and intentionally has induced and continues to induce infringement of the ’563 patent by, for example, controlling the design and manufacture of, offering for sale, selling, supplying, and otherwise providing instruction and guidance regarding the Accused KCT Products, with the knowledge and specific intent to encourage and facilitate acts of direct infringement with respect to such products, including by resellers, retailers, end product manufacturers, and end users of the Accused KCT Products, both inside and outside the United States. For example, KCT’s website advertises the Accused KCT Products as integrating “a high-efficiency high-linearity power amplifier (PA)” that includes a “power detector” for “accurately monitoring [] output power from the [power amplifier].” (KXComTech, *KCT8547HE-1*, [https://perma.cc/7QFB-L3FW]; KXComTech, *KCT8539S*, [https://perma.cc/WRA7-GDPD].) Further, KCT advertises the Accused KCT Products as being pin-to-pin replacements for Skyworks’ products. On information and belief, KCT sells and distributes infringing products to customers in the United States both directly and through third-party distributors like Disman Bakner. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ]; KXComTech, *Distributors*, [https://perma.cc/FYC6-XH8A].) On information and belief, KCT also sells the Accused KCT Products to the D-Link and Ruijie Respondents with knowledge that the Accused KCT Products will be incorporated into wireless routers sold by D-Link and Ruijie in the United States. On information and belief, KCT’s distributors, customers, and end users directly infringe the ’563 patent by, for example, making, using, offering to sell, and/or selling within the United States, and importing into the United States, without authority or license, both the Accused KCT Products themselves and/or products containing the Accused KCT Products.

115. KCT also contributes to infringement of the ’563 patent by selling for importation

into the United States, importing into the United States, and/or selling within the United States after importation the Accused KCT Products, which are not suitable for substantial non-infringing use and which embody a material part of the invention described in the ’563 patent. These Accused KCT Products are known by KCT to be especially made or especially adapted for use in the infringement of the ’563 patent. Specifically, on information and belief, KCT sells the Accused KCT Products to resellers, retailers, and end product manufacturers with knowledge that such entities perform acts of direct infringement with the Accused KCT Products. On information and belief, KCT sells and distributes infringing products to customers in the United States both directly and through third-party distributors like Disman Bakner. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ]; KXComTech, *Distributors*, [https://perma.cc/FYC6-XH8A].) On information and belief, KCT’s distributors, customers, and end users directly infringe the ’563 patent by, for example, making, using, offering to sell, selling within the United States, and/or importing into the United States, without authority or license, both the Accused KCT Products themselves and/or products containing the Accused KCT Products.

**2. D-Link Respondents**

116. D-Link has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’563 patent by making, using, offering for sale, selling, or importing wireless routers that include one or more of the Accused KCT Products that practice the ’563 patent, including but not limited to the D-Link AX1800 wireless router.

117. The D-Link AX1800 wireless router infringes the ’563 patent because it contains a KCT8547HE Wi-Fi FEM. For the reasons described above (*supra* ¶¶ 107-112), the KCT8547HE Wi-Fi FEM infringes at least claims 14, 15, 17, and 20 of the ’563 patent.

118. An exemplary infringement chart showing infringement of independent claim 14 of the ’563 patent by the D-Link AX1800 wireless router is set forth as Exhibit 25.

119. D-Link actively, knowingly, and intentionally induces, and continues to actively, knowingly, and intentionally induce infringement of the ’563 patent by its customers and end users. D-Link has known of the ’563 patent at least since April 23, 2024, when Skyworks sent a letter to D-Link providing notice that D-Link’s AX1800 wireless router infringed enumerated claims of the ’563 patent through its use of Accused KCT Products. (Ex. 23 [2024 D-Link Notice Letter].) Despite notice, D-Link nevertheless actively induces its customers, including end-users of the D-Link AX1800, to directly infringe the ’563 patent by instructing, directing, and encouraging these end-users to purchase and use the D-Link AX1800 wireless router and the Accused KCT Product it contains. On information and belief, D-Link instructs, directs, and encourages its customers to infringe by advertising the AX1800 wireless router (D-Link, *AX-1800*, [https://perma.cc/6JQD-5DVR] (contending that the AX1800 wireless router provides “faster and more reliable Wi-Fi speeds” on both 2.4Ghz and 5GHz Wi-Fi bands in advertising materials), and providing at least installation/technical manuals, troubleshooting guides, and/or product tutorials. For instance, the D-Link AX1800’s user manual lists a series of troubleshooting strategies that the end-user can perform to resolve connectivity issues, including “unplug[ing] the power to the router for 10 seconds and plug[ing] back in” and then connecting the router to the desired computer device. (D-Link, *D-Link R18 User Manual*, [https://support.dlink.com/resource/products/R18/REVA/R18_A1_Manual_v1.00(WW).pdf] at 141-42.) D-Link’s customers directly infringe because following the steps D-Link instructs them to perform, including starting the D-Link router and connecting it to a user device like a computer, results in an infringing use of the Accused KCT Product contained within that router.

120. D-Link also contributes to infringement of the ’563 patent by selling for importation into the United States, importing into the United States, and/or selling within the

United States after importation the D-Link AX1800 wireless router, which is not suitable for a substantial non-infringing use and which embodies a material part of the invention described in the ’563 patent. The D-Link AX1800 wireless router is known by D-Link to contain the KCT8547HE Wi-Fi FEM, which is especially made or especially adapted for use in the infringement of the ’563 patent. Specifically, on information and belief, D-Link sells the D-Link AX1800 wireless router to resellers, retailers, and end users with knowledge that the D-Link AX1800 wireless router contains the KCT8547HE, which is used for infringement. D-Link’s customers directly infringe the ’563 patent by, for example, without authority or license using the D-Link AX1800 wireless router and the KCT Accused Product it contains.

**3. Ruijie**

121. Ruijie has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’563 patent by making, using, offering for sale, selling, or importing wireless routers that include one or more of the Accused KCT Products that practice the ’563 patent, including but not limited to the Ruijie Reyee E5 AX3200 wireless router.

122. The Ruijie Reyee E5 AX3200 wireless router infringes the ’563 patent because it contains a KCT8539S Wi-Fi FEM. For the reasons described above (*supra* ¶¶ 107-112), the KCT8539S Wi-Fi FEM infringes at least claims 14, 15, 17, and 20 of the ’563 patent.

123. An exemplary infringement chart showing infringement of independent claim 14 of the ’563 patent by the Ruijie Reyee E5 AX3200 wireless router is set forth as Exhibit 26.

124. Ruijie actively, knowingly, and intentionally induces, and continues to actively, knowingly, and intentionally induce infringement of the ’563 patent by its customers and end users. Ruijie has known of the ’563 patent at least since April 23, 2024, when Skyworks sent a letter to Ruijie providing notice that Ruijie infringes enumerated claims of the ’563 patent through its use of Accused KCT Products. (Ex. 24 [2024 Ruijie Notice Letter].) Ruijie responded shortly

thereafter promising to stop selling routers containing the Accused KCT Products in the United States. However, on July 11, 2024—five days before the date of this complaint—Skyworks purchased a Ruijie Reyee E5 AX3200 wireless router, tore it down, and discovered that it contained several of the accused KCT8539S FEMs. (Ex. 40 [Ruijie Product Purchase Receipt]; Ex. 41 [Ruijie Board Photo].) As such, and despite notice, Ruijie nevertheless actively induces its customers, the end-users of the Ruijie Reyee E5 AX3200 wireless router, to directly infringe the '563 patent by instructing, directing, and encouraging these end-users to purchase and use the Ruijie Reyee E5 AX3200 wireless router and the Accused KCT Product it contains. On information and belief, Ruijie instructs, directs, and encourages its customers to infringe by advertising the Reyee E5 AX3200 wireless router (Amazon, *Ruijie Reyee E5 AX3200*, [https://perma.cc/P8B8-NNP9] (contending that the Reyee E5 AX3200 contains 8 Wi-Fi FEMs, which allows the router to provide higher Wi-Fi speeds in advertising materials), and providing at least installation/technical manuals, troubleshooting guides, and/or product tutorials. For instance, the Ruijie Reyee E5 AX3200 wireless router's user manual outlines certain steps to configure the router to connect with a user device, including powering on the router, selecting the router's internet connection on a user device, and connecting the device to the router. (Ruijie, *Reyee E5 AX3200 User Guide*, [https://manuals.plus/reyee/rg-e5-mesh-smart-wifi-6-router-manual.pdf] at 3-4.) Ruijie's customers directly infringe because following the steps Ruijie instructs them to perform, including starting the Ruijie router and connecting it to a user device like a computer, results in an infringing use of the Accused KCT Product contained within that router.

125. Ruijie also contributes to infringement of the '563 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the Ruijie Reyee E5 AX3200 wireless router, which is not suitable for a

substantial non-infringing use and which embodies a material part of the invention described in the ’563 patent. The Ruijie Reyee E5 AX3200 wireless router is known by Ruijie to contain the KCT8539S Wi-Fi FEM, which is especially made or especially adapted for use in the infringement of the ’563 patent. Specifically, on information and belief, Ruijie sells the Ruijie Reyee E5 AX3200 wireless router to resellers, retailers, and end users with knowledge that the Ruijie Reyee E5 AX3200 wireless router contains the KCT8539S, which is used for infringement. Ruijie’s customers directly infringe the ’563 patent by, for example, without authority or license using the Ruijie Reyee E5 AX3200 wireless router and the Accused KCT Product it contains.

### C. Infringement of the ’200 Patent

#### 1. KCT Respondents

126. KCT has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’200 patent by making, using, offering for sale, selling, or importing infringing wireless FEMs, including, but not limited to, the Accused KCT Products.[16]

127. The Accused KCT Products infringe at least claims 1, 2, 6, 10-12, 15, 18, 19, 20, and 23-25 of the ’200 patent, including because the Accused KCT Products are manufactured using a process that infringes the ’200 patent and because the Accused KCT Products, on information and belief, are neither materially changed by a subsequent process nor rendered trivial and nonessential components of another product.

128. For instance, the Accused KCT Products infringe independent claims 1 and 18 of the ’200 patent for at least the reasons described in Skyworks’ exemplary infringement charts set forth as Exhibits 27-28.

[16] Skyworks’ infringement allegations regarding the ’200 patent extend without limitation to all KCT wireless FEMs embodying an infringing RF Module, including KCT Wi-Fi 6, 6E, and 7 FEMs.

129. With respect to claim 2, the Accused KCT Products further contain a second signal conditioning circuit on the low noise amplifier die including a plurality of circuitry including, but not limited to, a low noise amplifier and switch circuits through which a signal passes to make a received signal suitable for further processing. The first portion of the second signal conditioning circuit includes a switch that can be appropriately set to allow reception of an incoming signal. The second portion of the second signal conditioning circuit has a low noise amplifier and low noise amplifier bypass path. The signal path of the second signal conditioning circuit is different from the signal path of the first signal conditioning circuit. Thus, the Accused KCT Products infringe claim 2 of the ’200 patent.

130. With respect to claim 6, the Accused KCT Products further contain a first signal conditioning circuit that includes a plurality of circuitry including, but not limited to, power amplifier circuitry and switch circuitry through which a signal passes to make it suitable for transmission. The first portion of the first signal conditioning circuit includes power amplifier circuitry for amplifying an input signal before transmission. Thus, the Accused KCT Products infringe claim 6 of the ’200 patent.

131. With respect to claim 10, the Accused KCT Products further contain a power amplifier die manufactured by a process that is different from the process used to manufacture the low noise amplifier die such that the circuitry associated with signal conditioning on the low noise amplifier die would not be suitable for manufacturing and integration onto the power amplifier die. Thus, the Accused KCT Products infringe claim 10 of the ’200 patent.

132. With respect to claim 11, the Accused KCT Products further contain a low noise amplifier die that is manufactured using a different set of semiconductor processing steps compared to the power amplifier die. Thus, the Accused KCT Products infringe claim 11 of the

’200 patent.

133. With respect to claim 12, the Accused KCT Products further contain a power amplifier die that is made from a semiconductor wafer comprising GaAs. Thus, the Accused KCT Products infringe claim 12 of the ’200 patent.

134. With respect to claim 15, the Accused KCT Products further contain a first signal conditioning circuit that includes a plurality of circuitry including, but not limited to, power amplifier circuitry and switch circuitry through which a signal passes to make it suitable for transmission. The second portion of the first signal conditioning circuit has at least one of a capacitor and an inductor. Thus, the Accused KCT Products infringe claim 15 of the ’200 patent.

135. With respect to claim 19, the Accused KCT Products further contain a first portion of a first signal path on the power amplifier die and a second portion of the first signal path on the low noise amplifier die. The signal path is located between an input to the power amplifier die and an output of the low noise amplifier die. Thus, the Accused KCT Products infringe claim 19 of the ’200 patent.

136. With respect to claim 20, the Accused KCT Products further contain a second signal path located on the low noise amplifier die that is different from the second portion of the first signal path which is also located on the low noise amplifier die, providing approximate RF isolation. The circuitry along the second signal path extends from the antenna node to the receive node and includes switch circuitry to allow reception of an incoming signal as well as a low noise amplifier path and low noise amplifier bypass path. The circuitry along the second portion of the first signal path extends from the input to the low noise amplifier die to the antenna node and includes switch circuitry that allows the signal to be transmitted through the antenna when the switch circuit is appropriately set. Thus, the Accused KCT Products infringe claim 20 of the ’200

patent.

137. With respect to claim 23, the Accused KCT Products further contain a power amplifier die manufactured by a semiconductor process that is different from the semiconductor process used to manufacture the low noise amplifier die such that the circuitry associated with second portion of the first signal conditioning on the low noise amplifier die would not facilitate its implementation in the power amplifier die. Thus, the Accused KCT Products infringe claim 23 of the ’200 patent.

138. With respect to claim 24, the Accused KCT Products each implement the second portion of the first signal conditioning circuit in the low noise amplifier die for improved performance over implementing the second portion of the first signal conditioning circuit in the power amplifier die. The low noise amplifier die includes a second portion of a first signal conditioning circuit having switch circuitry that allows the signal to be transmitted through the antenna when the switch circuit is appropriately set. Implementing this signal conditioning circuit in the low noise amplifier die yields better performance than implementing it in the power amplifier die due to the differences in the semiconductor processing used to manufacture the two dies. Thus, the Accused KCT Products infringe claim 24 of the ’200 patent.

139. With respect to claim 25, the Accused KCT Products further contain a first signal conditioning circuit partitioned into a first portion and a second portion. The first portion includes power amplifier circuitry for amplifying an input signal before transmission, and the second portion includes switch circuitry that allows the signal to be transmitted through the antenna when the switch circuit is appropriately set. Thus, the Accused KCT Products infringe claim 25 of the ’200 patent.

140. KCT has had knowledge of the ’200 patent at least since March 7, 2023, when

Skyworks sent a letter to KCT's President informing KCT that its 2.4 GHz and 5 GHz Wi-Fi FEMs infringed the claims of certain Skyworks patents, including (but not limited to) the '200 patent. (Ex. 10 [2023 Notice Letter] at 1-2.) Skyworks met with KCT and gave a presentation outlining KCT's infringement. Skyworks additionally sent a letter to KCT on April 23, 2024, providing further notice of KCT's infringement of the '200 patent. (Ex. 11 [2024 KCT Notice Letter].) Moreover, on May 8, 2024, KCT issued a press release confirming knowledge of Skyworks' infringement allegations based on the '200 patent (among other patents). (Ex. 12 [Machine Translated KCT Press Release].) Despite receiving notice of its infringement, KCT has continued to infringe Skyworks' patented technology, including the technology claimed in the '200 patent, and made no effort to avoid infringement.

141. KCT actively, knowingly, and intentionally has induced and continues to induce infringement of the '200 patent by, for example, controlling the design and manufacture of, offering for sale, selling, supplying, and otherwise providing instruction and guidance regarding the Accused KCT Products, with the knowledge and specific intent to encourage and facilitate acts of direct infringement with respect to such products, including by resellers, retailers, end product manufacturers, and end users of the Accused KCT Products, both inside and outside the United States. For example, KCT advertises the Accused KCT Products as being pin-to-pin replacements for Skyworks' products. On information and belief, KCT sells and distributes infringing products to customers in the United States both directly and through third-party distributors like Disman Bakner. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ]; KXComTech, *Distributors*, [https://perma.cc/FYC6-XH8A].) KCT also sells the Accused KCT Products to the D-Link and Ruijie Respondents with knowledge that the Accused KCT Products will be incorporated into wireless routers sold by these OEM Respondents in the United States. KCT's

distributors, customers, and end users directly infringe the ’200 patent by, for example, making, using, offering to sell, and selling within the United States, and/or importing into the United States, without authority or license, both the Accused KCT Products themselves and/or products containing the Accused KCT Products.

142. KCT also contributes to infringement of the ’200 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the Accused KCT Products, which are not suitable for substantial non-infringing use and which embody a material part of the invention described in the ’200 patent. These Accused KCT Products are known by KCT to be especially made or especially adapted for use in the infringement of the ’200 patent. Specifically, on information and belief, KCT sells the Accused KCT Products to resellers, retailers, and end product manufacturers with knowledge that such entities perform acts of direct infringement with the Accused KCT Products. KCT sells and distributes infringing products to customers in the United States both directly and through third-party distributors like Disman Bakner. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ]; KXComTech, *Distributors*, [https://perma.cc/FYC6-XH8A].) KCT’s distributors, customers, and end users directly infringe the ’200 patent by, for example, making, using, offering to sell, selling within the United States, and/or importing into the United States, without authority or license, both the Accused KCT Products themselves and/or products containing the Accused KCT Products.

**2. D-Link Respondents**

143. D-Link has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’200 patent by making, using, offering for sale, selling, or importing wireless routers that include one or more of the Accused KCT Products that practice the ’200 patent, including but not limited to the D-Link AX1800 wireless router.

144. The D-Link AX1800 wireless router infringes the ’200 patent because it contains a KCT8547HE Wi-Fi FEM. For the reasons described above (*supra* ¶¶ 126-139), the KCT8547HE Wi-Fi FEM infringes at least claims 1, 2, 6, 10-12, 15, 18, 19, 20, and 23-25 of the ’200 patent.

145. Exemplary infringement charts showing infringement of independent claims 1 and 18 of the ’200 patent by the D-Link AX1800 wireless router are set forth as Exhibit 27.

146. D-Link actively, knowingly, and intentionally induces, and continues to actively, knowingly, and intentionally induce infringement of the ’200 patent by its customers and end users. D-Link has known of the ’200 patent at least since April 23, 2024, when Skyworks sent a letter to D-Link providing notice that D-Link’s AX1800 wireless router infringed enumerated claims of the ’200 patent through its use of Accused KCT Products. (Ex. 23 [2024 D-Link Notice Letter].) Despite notice, D-Link nevertheless actively induces its customers, including end-users of the D-Link AX1800, to directly infringe the ’200 patent by instructing, directing, and encouraging these end-users to purchase and use the D-Link AX1800 wireless router and the Accused KCT Products it contains. On information and belief, D-Link instructs, directs, and encourages its customers to infringe by advertising the AX1800 wireless router (D-Link, *AX-1800*, [https://perma.cc/6JQD-5DVR] (contending that the AX1800 wireless router provides “faster and more reliable Wi-Fi speeds” on both 2.4Ghz and 5GHz Wi-Fi bands in advertising materials), and providing at least installation/technical manuals, troubleshooting guides, and/or product tutorials. For instance, the D-Link AX1800’s user manual lists a series of troubleshooting strategies that the end-user can perform to resolve connectivity issues, including “unplug[ing] the power to the router for 10 seconds and plug[ing] back in” and then connecting the router to the desired computer device. (D-Link, *D-Link R18 User Manual*, [https://support.dlink.com/resource/products/R18/REVA/R18_A1_Manual_v1.00(WW).pdf] at

141-42.) D-Link customers directly infringe because following the steps D-Link instructs them to perform, including starting the D-Link router and connecting it to a user device like a computer, results in an infringing use of the Accused KCT Product contained within that router.

147. D-Link also contributes to infringement of the ’200 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the D-Link AX1800 wireless router, which is not suitable for a substantial non-infringing use and which embodies a material part of the invention described in the ’200 patent. The D-Link AX1800 wireless router is known by D-Link to contain the KCT8547HE Wi-Fi FEM, which is especially made or especially adapted for use in the infringement of the ’200 patent. Specifically, on information and belief, D-Link sells the D-Link AX1800 wireless router to resellers, retailers, and end users with knowledge that the D-Link AX1800 wireless router contains the KCT8547HE, which is used for infringement. D-Link customers directly infringe the ’200 patent by, for example, without authority or license using the D-Link AX1800 wireless router and the Accused KCT Product it contains.

**3. Ruijie**

148. Ruijie has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’200 patent by making, using, offering for sale, selling, or importing wireless routers that include one or more of the Accused KCT Products that practice the ’200 patent, including but not limited to the Ruijie Reyee E5 AX3200 wireless router.

149. The Ruijie Reyee E5 AX3200 wireless router infringes the ’200 patent because it contains a KCT8539S Wi-Fi FEM. For the reasons described above (*supra* ¶¶ 126-139), the KCT8539S Wi-Fi FEM infringes at least claims 1, 2, 6, 10-12, 15, 18, 19, 20, and 23-25 of the ’200 patent.

150. Exemplary infringement charts showing infringement of independent claims 1 and

18 of the ’200 patent by the Ruijie Reyee E5 AX3200 wireless router are set forth as Exhibit 28.

151. Ruijie actively, knowingly, and intentionally induces, and continues to actively, knowingly, and intentionally induce infringement of the ’200 patent by its customers and end users. Ruijie has known of the ’200 patent at least since April 23, 2024, when Skyworks sent a letter to Ruijie providing notice that Ruijie infringes enumerated claims of the ’200 patent through its use of Accused KCT Products. (Ex. 24 [2024 Ruijie Notice Letter].) Ruijie responded shortly thereafter promising to stop selling routers containing the Accused KCT Products in the United States. However, on July 11, 2024—five days before the date of this complaint—Skyworks purchased a Ruijie Reyee E5 AX3200 wireless router, tore it down, and discovered that it contained several of the accused KCT8539S FEMs. (Ex. 40 [Ruijie Product Purchase Receipt]; Ex. 41 [Ruijie Board Photo].) As such, and despite notice, Ruijie nevertheless actively induces its customers, the end-users of the Ruijie Reyee E5 AX3200 wireless router, to directly infringe the ’200 patent by instructing, directing, and encouraging these end-users to purchase and use the Ruijie Reyee E5 AX3200 wireless router and the Accused KCT Product it contains. On information and belief, Ruijie instructs, directs, and encourages its customers to infringe by advertising the Reyee E5 AX3200 wireless router (Amazon, *Ruijie Reyee E5 AX3200*, [https://perma.cc/P8B8-NNP9] (contending that the Reyee E5 AX3200 contains 8 Wi-Fi FEMs, which allows the router to provide higher Wi-Fi speeds in advertising materials), and providing at least installation/technical manuals, troubleshooting guides, and/or product tutorials. For instance, the Ruijie Reyee E5 AX3200 wireless router’s user manual outlines certain steps to configure the router to connect with a user device, including powering on the router, selecting the router’s internet connection on a user device, and connecting the device to the router. (Ruijie, *Reyee E5 AX3200 User Guide*, [https://manuals.plus/reyee/rg-e5-mesh-smart-wifi-6-router-manual.pdf] at

4.) Ruijie customers directly infringe because following the steps Ruijie instructs them to perform, including starting the Ruijie router and connecting it to a user device like a computer, results in an infringing use of the Accused KCT Product contained within that router.

152. Ruijie also contributes to infringement of the ’200 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the Ruijie Reyee E5 AX3200 wireless router, which is not suitable for a substantial non-infringing use and which embodies a material part of the invention described in the ’200 patent. The Ruijie Reyee E5 AX3200 wireless router is known by Ruijie to contain the KCT8539S Wi-Fi FEM, which is especially made or especially adapted for use in the infringement of the ’200 patent. Specifically, on information and belief, Ruijie sells the Ruijie Reyee E5 AX3200 wireless router to resellers, retailers, and end users with knowledge that the Ruijie Reyee E5 AX3200 wireless router contains the KCT8539S, which is used for infringement. Ruijie’s customers directly infringe the ’200 patent by, for example, without authority or license using the Ruijie Reyee E5 AX3200 wireless router and the Accused KCT Product it contains.

### D. Infringement of the ’579 Patent

#### 1. KCT Respondents

153. KCT has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’579 patent by making, using, offering for sale, selling, or importing wireless FEMs that practice the ’579 patent, including but not limited to the Accused KCT Products.[17]

154. The Accused KCT Products infringe at least claims 1 and 7 of the ’579 patent.

[17] Skyworks’ infringement allegations regarding the ’579 patent extend, without limitation, to all KCT wireless FEMs embodying an infringing RF switch system, including KCT Wi-Fi 6, 6E, and 7 certified FEMs.

155. For instance, the Accused KCT Products infringe independent claims 1 and 7 of the ’579 patent for at least the reasons described in Skyworks’ exemplary infringement charts set forth as Exhibits 29-30.

156. KCT has had knowledge of the ’579 patent and its infringement of the ’579 patent at least since April 23, 2024, when Skyworks sent a letter to KCT providing notice of KCT’s infringement of each Asserted Patent, including the ’579 patent. (Ex. 10 [2024 KCT Notice Letter].) Even before April 23, 2024, KCT was, at a minimum, willfully blind to its infringement of the ’579 patent. For instance, KCT touts that “most of [its] R&D team[]” had prior overseas industry experience before being hired to work at KCT, including at Skyworks. (Ex. 11 [KCT Press Release] (“Most of the R&D teams … have overseas work experience [at] RFaxis (acquired by Skyworks in 2016), RFMD (merged into Qorvo), Anadigics and other internationally renowned RF front-end chip companies[.]”).) KCT also touts that the products developed by this team of engineers—including engineers who, on information and belief, were formerly employed by Skyworks or Skyworks affiliates—are “pin-to-pin” copies of Skyworks’ wireless FEM chips (Ex. 5 [KCT Product Roadmap Presentation] at 13), and allegedly are comparable “in terms of linearity, efficiency, noise figure, and other performance metrics” (KXComTech, *IPO Press Release*, [https://perma.cc/6D7X-VUU6]). At the same time, KCT has been aware that Skyworks patented the technologies contained in its wireless FEM products, and that KCT’s “pin-to-pin” copies infringed these patents, at least since March 7, 2023, when Skyworks sent a letter to KCT’s President informing KCT that its 2.4GHz and 5 GHz Wi-Fi FEMs infringed. (Ex. 10 [2023 Notice Letter] at 1-2.) Indeed, Skyworks met with KCT and gave a presentation outlining KCT’s infringement. Moreover, on May 8, 2024, KCT issued a press release confirming knowledge of Skyworks’ infringement allegations based on the ’579 patent (among other patents). (Ex. 12

[Machine Translated KCT Press Release].) Under the circumstances present here, KCT knew or should have known of the high probability that it infringed Skyworks' patented technologies, including the '579 patent, by making, using, selling, offering for sale, and importing its own pin-to-pin compatible wireless FEM chips.

157. KCT actively, knowingly, and intentionally has induced and continues to induce infringement of the '579 patent by, for example, controlling the design and manufacture of, offering for sale, selling, supplying, and otherwise providing instruction and guidance regarding the Accused KCT Products, with the knowledge and specific intent to encourage and facilitate acts of direct infringement with respect to such products, including by resellers, retailers, end product manufacturers, and end users of the Accused KCT Products, both inside and outside the United States. For example, KCT's website advertises the Accused KCT Products as integrating "a high-efficiency high-linearity power amplifier (PA)" that includes a "power detector" for "accurately monitoring [] output power from the [power amplifier]." (KXComTech, *KCT8547HE-1*, [https://perma.cc/7QFB-L3FW]; KXComTech, *KCT8539S*, [https://perma.cc/WRA7-GDPD].) Further, KCT advertises the Accused KCT Products as being pin-to-pin replacements for Skyworks' products. KCT sells and distributes infringing products to customers in the United States both directly and through third-party distributors like Disman Bakner. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ]; KXComTech, *Distributors*, [https://perma.cc/FYC6-XH8A].) KCT also sells the Accused KCT Products to the D-Link and Ruijie Respondents with knowledge that the Accused KCT Products will be incorporated into wireless routers sold by these OEM Respondents in the United States. KCT's distributors, customers, and end users directly infringe the '579 patent by, for example, making, using, offering to sell, and/or selling within the United States, and importing into the United States, without authority or license, both the Accused

KCT Products themselves and/or products containing the Accused KCT Products.

158. KCT also contributes to infringement of the ’579 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the Accused KCT Products, which are not suitable for substantial non-infringing use and which embody a material part of the invention described in the ’579 patent. These Accused KCT Products are known by KCT to be especially made or especially adapted for use in the infringement of the ’579 patent. Specifically, on information and belief, KCT sells the Accused KCT Products to resellers, retailers, and end product manufacturers with knowledge that such entities perform acts of direct infringement with the Accused KCT Products. KCT sells and distributes infringing products to customers in the United States both directly and through third-party distributors like Disman Bakner. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ]; KXComTech, *Distributors*, [https://perma.cc/FYC6-XH8A].) KCT’s distributors, customers, and end users directly infringe the ’579 patent by, for example, making, using, offering to sell, selling within the United States, and/or importing into the United States, without authority or license, both the Accused KCT Products themselves and/or products containing the Accused KCT Products.

**2. D-Link Respondents**

159. D-Link has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’579 patent by making, using, offering for sale, selling, or importing wireless routers that include one or more of the Accused KCT Products that practice the ’579 patent, including but not limited to the D-Link AX1800 wireless router.

160. The D-Link AX1800 wireless router infringes the ’579 patent because it contains a KCT8547HE Wi-Fi FEM. For the reasons described above (*supra* ¶¶ 153-155), the KCT8547HE Wi-Fi FEM infringes at least claims 1 and 7 of the ’579 patent.

161. Exemplary infringement charts showing infringement of independent claims 1 and 7 of the ’579 patent by the D-Link AX1800 wireless router are set forth as Exhibit 29.

162. D-Link actively, knowingly, and intentionally induces, and continues to actively, knowingly, and intentionally induce infringement of the ’579 patent by its customers and end users. D-Link has known of the ’579 patent at least since April 23, 2024, when Skyworks sent a letter to D-Link providing notice that D-Link’s AX1800 wireless router infringed enumerated claims of the ’579 patent through its use of Accused KCT Products. (Ex. 23 [2024 D-Link Notice Letter].) Despite notice, D-Link nevertheless actively induces its customers, including end-users of the D-Link AX1800, to directly infringe the ’579 patent by instructing, directing, and encouraging these end-users to purchase and use the D-Link AX1800 wireless router and the Accused KCT Products it contains. On information and belief, D-Link instructs, directs, and encourages its customers to infringe by advertising the AX1800 wireless router (D-Link, *AX-1800*, [https://perma.cc/6JQD-5DVR] (contending that the AX1800 wireless router “reduce[s] interference between different Wi-Fi networks” in advertising materials), and providing at least installation/technical manuals, troubleshooting guides, and/or product tutorials. For instance, the D-Link AX1800’s user manual lists a series of troubleshooting strategies that the end-user can perform to resolve connectivity issues, including “unplug[ing] the power to the router for 10 seconds and plug[ing] back in” and then connecting the router to the desired computer device. (D-Link, *D-Link R18 User Manual*, [https://support.dlink.com/resource/products/R18/REVA/R18_A1_Manual_v1.00(WW).pdf] at 141-42.) The process of starting the D-Link AX1800 wireless router and connecting it to a user device like a computer is an infringing use of the Accused KCT Products contained within that router, including without limitation, because following this instruction from D-Link causes the

Accused KCT Products inside the D-Link router to perform the method steps claimed in the ’579 patent.

163. D-Link also contributes to infringement of the ’579 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the D-Link AX1800 wireless router, which is not suitable for a substantial non-infringing use and which embodies a material part of the invention described in the ’579 patent. The D-Link AX1800 wireless router is known by D-Link to contain the KCT8547HE Wi-Fi FEM, which is especially made or especially adapted for use in the infringement of the ’579 patent. Specifically, on information and belief, D-Link sells the D-Link AX1800 wireless router to resellers, retailers, and end users with knowledge that the D-Link AX1800 wireless router contains the KCT8547HE, which is used for infringement. D-Link’s customers directly infringe the ’579 patent by, for example, using, without authority or license, the D-Link AX1800 wireless router, including to perform the method steps claimed by the ’579 patent.

**3. Ruijie**

164. Ruijie has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’579 patent by making, using, offering for sale, selling, or importing wireless routers that include one or more of the Accused KCT Products that practice the ’579 patent, including but not limited to the Ruijie Reyee E5 AX3200 wireless router.

165. The Ruijie Reyee E5 AX3200 wireless router infringes the ’579 patent because it contains a KCT8539S Wi-Fi FEM. For the reasons described above (*supra* ¶¶ 153-155), the KCT8539S Wi-Fi FEM infringes at least claims 1 and 7 of the ’579 patent.

166. Exemplary infringement charts showing infringement of independent claims 1 and 7 of the ’579 patent by the Ruijie Reyee E5 AX3200 wireless router are set forth as Exhibit 30.

167. Ruijie actively, knowingly, and intentionally induces, and continues to actively,

knowingly, and intentionally induce infringement of the ’579 patent by its customers and end users. Ruijie has known of the ’579 patent at least since April 23, 2024, when Skyworks sent a letter to Ruijie providing notice that Ruijie infringes enumerated claims of the ’579 patent through its use of Accused KCT Products. (Ex. 24 [2024 Ruijie Notice Letter].) Ruijie responded shortly thereafter promising to stop selling routers containing the Accused KCT Products in the United States. However, on July 11, 2024—five days before the date of this complaint—Skyworks purchased a Ruijie Reyee E5 AX3200 wireless router, tore it down, and discovered that it contained several of the accused KCT8539S FEMs. (Ex. 40 [Ruijie Product Purchase Receipt]; Ex. 41 [Ruijie Board Photo].) As such, and despite notice, Ruijie nevertheless actively induces its customers, the end-users of the Ruijie Reyee E5 AX3200 wireless router, to directly infringe the ’579 patent by instructing, directing, and encouraging these end-users to purchase and use the Ruijie Reyee E5 AX3200 wireless router and the Accused KCT Product it contains. On information and belief, Ruijie instructs, directs, and encourages its customers to infringe by advertising the Reyee E5 AX3200 wireless router (Amazon, *Ruijie Reyee E5 AX3200*, [https://perma.cc/P8B8-NNP9] (contending that the Reyee E5 AX3200 contains 8 Wi-Fi FEMs, which allows the router to provide higher Wi-Fi speeds in advertising materials), and providing at least installation/technical manuals, troubleshooting guides, and/or product tutorials. For instance, the Ruijie Reyee E5 AX3200 wireless router’s user manual outlines certain steps to configure the router to connect with a user device, including powering on the router, selecting the router’s internet connection on a user device, and connecting the device to the router. (Ruijie, *Reyee E5 AX3200 User Guide*, [https://manuals.plus/reyee/rg-e5-mesh-smart-wifi-6-router-manual.pdf] at 3-4.) The process of starting the Ruijie Reyee E5 AX3200 wireless router and connecting it to a user device like a computer is an infringing use of the Accused KCT Products contained within

that router, including without limitation, because following this instruction from Ruijie causes the Accused KCT Products inside the Ruijie router to perform the method steps claimed in the ’579 patent.

168. Ruijie also contributes to infringement of the ’579 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the Ruijie Reyee E5 AX3200 wireless router, which is not suitable for a substantial non-infringing use and which embodies a material part of the invention described in the ’579 patent. The Ruijie Reyee E5 AX3200 wireless router is known by Ruijie to contain the KCT8539S Wi-Fi FEM, which is especially made or especially adapted for use in the infringement of the ’579 patent. Specifically, on information and belief, Ruijie sells the Ruijie Reyee E5 AX3200 wireless router to resellers, retailers, and end users with knowledge that the Ruijie Reyee E5 AX3200 wireless router contains the KCT8539S, which is used for infringement. Ruijie’s customers directly infringe the ’579 patent by, for example, using, without authority or license, the Ruijie Reyee E5 AX3200 wireless router, including to perform the method steps claimed by the ’579 patent.

### E. Infringement of the ’194 Patent

#### 1. KCT Respondents

169. KCT has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’194 patent by making, using, offering for sale, selling, or importing wireless FEMs that practice the ’194 patent, including but not limited to the Accused KCT Products).[18]

[18] Skyworks’ infringement allegations regarding the ’194 patent extend, without limitation, to all KCT wireless FEMs embodying an infringing RF switch system, including KCT Wi-Fi 6, 6E, and 7 certified FEMs.

170. The Accused KCT Products infringe at least claim 4 of the ’194 patent for at least the reasons described in Skyworks’ exemplary infringement chart set forth as Exhibits 31-32.

171. KCT has had knowledge of the ’194 patent and its infringement of the ’194 patent at least since April 23, 2024, when Skyworks sent a letter to KCT providing notice of KCT’s infringement of each Asserted Patent, including the ’194 patent. (Ex. 11 [2024 KCT Notice Letter].) Even before April 23, 2024, KCT was, at a minimum, willfully blind to its infringement of the ’194 patent. For instance, KCT touts that “most of [its] R&D team[]” had prior overseas industry experience before being hired to work at KCT, including at Skyworks. (Ex. 12 [KCT Press Release] (“Most of the R&D teams … have overseas work experience [at] RFaxis (acquired by Skyworks in 2016), RFMD (merged into Qorvo), Anadigics and other internationally renowned RF front-end chip companies[.]”).) KCT also touts that the products developed by this team of engineers—comprised at least in part of engineers who, on information and belief, were formerly employed by Skyworks or Skyworks affiliates—are “pin-to-pin” copies of Skyworks’ wireless FEM chips (Ex. 5 [KCT Product Roadmap Presentation] at 13), and allegedly are comparable “in terms of linearity, efficiency, noise figure, and other performance metrics” (KXComTech, *IPO Press Release*, [https://perma.cc/6D7X-VUU6]). At the same time, KCT has been aware that Skyworks patented the technologies contained in its wireless FEM products, and that KCT’s “pin-to-pin” copies infringed these patents, at least since March 7, 2023, when Skyworks sent a letter to KCT’s President informing KCT that its 2.4GHz and 5 GHz Wi-Fi FEMs infringed other patents in Skyworks’ portfolio. (Ex. 10 [2023 Notice Letter] at 1-2.) Indeed, Skyworks even met with KCT and gave a presentation outlining KCT’s infringement. Moreover, on May 8, 2024, KCT issued a press release confirming knowledge of Skyworks’ infringement allegations based on the ’194 patent (among other patents). (Ex. 12 [Machine Translated KCT Press Release].) Under the

circumstances present here, KCT knew or should have known of the high probability that it infringed Skyworks' patented technologies, including the '194 patent, by making, using, selling, offering for sale, and importing its own pin-to-pin compatible wireless FEM chips.

172. KCT actively, knowingly, and intentionally has induced and continues to induce infringement of the '194 patent by, for example, controlling the design and manufacture of, offering for sale, selling, supplying, and otherwise providing instruction and guidance regarding the Accused KCT Products, with the knowledge and specific intent to encourage and facilitate acts of direct infringement with respect to such products, including by resellers, retailers, end product manufacturers, and end users of the Accused KCT Products, both inside and outside the United States. For example, KCT's website advertises the Accused KCT Products as integrating "a high-efficiency high-linearity power amplifier (PA)" that includes a "power detector" for "accurately monitoring [] output power from the [power amplifier]." (KXComTech, *KCT8547HE-1*, [https://perma.cc/7QFB-L3FW]; KXComTech, *KCT8539S*, [https://perma.cc/WRA7-GDPD].) Further, KCT advertises the Accused KCT Products as being pin-to-pin replacements for Skyworks' products. KCT sells and distributes infringing products to customers in the United States both directly and through third-party distributors like Disman Bakner. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ]; KXComTech, *Distributors*, [https://perma.cc/FYC6-XH8A].) KCT also sells the Accused KCT Products to the D-Link and Ruijie Respondents with knowledge that the Accused KCT Products will be incorporated into wireless routers sold by these OEM Respondents in the United States. KCT's distributors, customers, and end users directly infringe the '194 patent by, for example, making, using, offering to sell, and/or selling within the United States, and importing into the United States, without authority or license, both the Accused KCT Products themselves and/or products containing the Accused KCT Products.

173. KCT also contributes to infringement of the ’194 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States after importation the Accused KCT Products, which are not suitable for substantial non-infringing use and which embody a material part of the invention described in the ’194 patent. These Accused KCT Products are known by KCT to be especially made or especially adapted for use in the infringement of the ’194 patent. Specifically, on information and belief, KCT sells the Accused KCT Products to resellers, retailers, and end product manufacturers with knowledge that such entities perform acts of direct infringement with the Accused KCT Products. KCT sells and distributes infringing products to customers in the United States both directly and through third-party distributors like Disman Bakner. (KXComTech, *Sales Support*, [https://perma.cc/2PTT-F9XZ]; KXComTech, *Distributors*, [https://perma.cc/FYC6-XH8A].) KCT’s distributors, customers, and end users directly infringe the ’194 patent by, for example, making, using, offering to sell, selling within the United States, and/or importing into the United States, without authority or license, both the Accused KCT Products themselves and/or products containing the Accused KCT Products.

**2. D-Link Respondents**

174. D-Link has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’194 patent by making, using, offering for sale, selling, or importing wireless routers that include one or more of the Accused KCT Products that practice the ’194 patent, including but not limited to the D-Link AX1800 wireless router.

175. The D-Link AX1800 wireless router infringes the ’194 patent because it contains a KCT8547HE Wi-Fi FEM. For the reasons described above (*supra* ¶¶ 169-170), the KCT8547HE Wi-Fi FEM infringes at least claim 4 of the ’194 patent.

176. An exemplary infringement chart showing infringement of independent claim 4 of

the ’194 patent by the D-Link AX1800 wireless router is set forth as Exhibit 31.

177. D-Link actively, knowingly, and intentionally induces, and continues to actively, knowingly, and intentionally induce infringement of the ’194 patent by its customers and end users. D-Link has known of the ’194 patent at least since April 23, 2024, when Skyworks sent a letter to D-Link providing notice that D-Link’s AX1800 wireless router infringed enumerated claims of the ’194 patent through its use of Accused KCT Products. (Ex. 23 [2024 D-Link Notice Letter].) Despite notice, D-Link nevertheless actively induces its customers, including end-users of the D-Link AX1800, to directly infringe the ’194 patent by instructing, directing, and encouraging these end-users to purchase and use the D-Link AX1800 wireless router and the Accused KCT Products it contains. On information and belief, D-Link instructs, directs, and encourages its customers to infringe by advertising the AX1800 wireless router (D-Link, *AX-1800*, [https://perma.cc/6JQD-5DVR] (contending that the AX1800 wireless router “reduce[s] interference between different Wi-Fi networks” in advertising materials), and providing at least installation/technical manuals, troubleshooting guides, and/or product tutorials. For instance, the D-Link AX1800’s user manual lists a series of troubleshooting strategies that the end-user can perform to resolve connectivity issues, including “unplug[ing] the power to the router for 10 seconds and plug[ing] back in” and then connecting the router to the desired computer device. (D-Link, *D-Link R18 User Manual*, [https://support.dlink.com/resource/products/R18/REVA/R18_A1_Manual_v1.00(WW).pdf] at 141-42.) D-Link customers directly infringe because following the steps D-Link instructs them to perform, including starting the D-Link router and connecting it to a user device like a computer, results in an infringing use of the Accused KCT Product contained within that router.

178. D-Link also contributes to infringement of the ’194 patent by selling for

importation into the United States, importing into the United States, and/or selling within the United States after importation the D-Link AX1800 wireless router, which is not suitable for a substantial non-infringing use and which embodies a material part of the invention described in the ’194 patent. The D-Link AX1800 wireless router is known by D-Link to contain the KCT8547HE Wi-Fi FEM, which is especially made or especially adapted for use in the infringement of the ’194 patent. Specifically, on information and belief, D-Link sells the D-Link AX1800 wireless router to resellers, retailers, and end users with knowledge that the D-Link AX1800 wireless router contains the KCT8547HE, which is used for infringement. D-Link’s customers directly infringe the ’194 patent by, for example, without authority or license using the D-Link AX1800 wireless router and the Accused KCT Product it contains.

**3. Ruijie**

179. Ruijie has been and is still infringing, directly or indirectly, literally or under the doctrine of equivalents, the ’194 patent by making, using, offering for sale, selling, or importing wireless routers that include one or more of the Accused KCT Products that practice the ’194 patent, including but not limited to the Ruijie Reyee E5 AX3200 wireless router.

180. The Ruijie Reyee E5 AX3200 wireless router infringes the ’194 patent because it contains a KCT8539S Wi-Fi FEM. For the reasons described above (*supra* ¶¶ 169-170), the KCT8539S Wi-Fi FEM infringes at least claim 4 of the ’194 patent.

181. An exemplary infringement chart showing infringement of independent claim 4 of the ’194 patent by the Ruijie Reyee E5 AX3200 wireless router is set forth as Exhibit 32.

182. Ruijie actively, knowingly, and intentionally induces, and continues to actively, knowingly, and intentionally induce infringement of the ’194 patent by its customers and end users. Ruijie has known of the ’194 patent at least since April 23, 2024, when Skyworks sent a letter to Ruijie providing notice that Ruijie infringes enumerated claims of the ’194 patent through

its use of Accused KCT Products. (Ex. 24 [2024 Ruijie Notice Letter].) Ruijie responded shortly thereafter promising to stop selling routers containing the Accused KCT Products in the United States. However, on July 11, 2024—five days before the date of this complaint—Skyworks purchased a Ruijie Reyee E5 AX3200 wireless router, tore it down, and discovered that it contained several of the accused KCT8539S FEMs. (Ex. 40 [Ruijie Product Purchase Receipt]; Ex. 41 [Ruijie Board Photo].) As such, and despite notice, Ruijie nevertheless actively induces its customers, the end-users of the Ruijie Reyee E5 AX3200 wireless router, to directly infringe the '194 patent by instructing, directing, and encouraging these end-users to purchase and use the Ruijie Reyee E5 AX3200 wireless router and the Accused KCT Product it contains. On information and belief, Ruijie instructs, directs, and encourages its customers to infringe by advertising the Reyee E5 AX3200 wireless router (Amazon, *Ruijie Reyee E5 AX3200*, [https://perma.cc/P8B8-NNP9] (contending that the Reyee E5 AX3200 contains 8 Wi-Fi FEMs, which allows the router to provide higher Wi-Fi speeds in advertising materials), and providing at least installation/technical manuals, troubleshooting guides, and/or product tutorials. For instance, the Ruijie Reyee E5 AX3200 wireless router's user manual outlines certain steps to configure the router to connect with a user device, including powering on the router, selecting the router's internet connection on a user device, and connecting the device to the router. (Ruijie, *Reyee E5 AX3200 User Guide*, [https://manuals.plus/reyee/rg-e5-mesh-smart-wifi-6-router-manual.pdf] at 3-4.) Ruijie customers directly infringe because following the steps Ruijie instructs them to perform, including starting the Ruijie router and connecting it to a user device like a computer, results in an infringing use of the Accused KCT Product contained within that router.

183. Ruijie also contributes to infringement of the '194 patent by selling for importation into the United States, importing into the United States, and/or selling within the United States

after importation the Ruijie Reyee E5 AX3200 wireless router, which is not suitable for a substantial non-infringing use and which embodies a material part of the invention described in the ’194 patent. The Ruijie Reyee E5 AX3200 wireless router is known by Ruijie to contain the KCT8539S Wi-Fi FEM, which is especially made or especially adapted for use in the infringement of the ’194 patent. Specifically, on information and belief, Ruijie sells the Ruijie Reyee E5 AX3200 wireless router to resellers, retailers, and end users with knowledge that the Ruijie Reyee E5 AX3200 wireless router contains the KCT8539S, which is used for infringement. Ruijie’s customers directly infringe the ’194 patent by, for example, without authority or license using the Ruijie Reyee E5 AX3200 wireless router and the Accused KCT Product it contains.

## VII. SPECIFIC INSTANCES OF UNFAIR IMPORTATION AND SALE

### A. KCT Defendants

184. The Accused KCT Products are wireless FEMs that, on information and belief, are designed, developed, and manufactured outside of the United States, and are either imported by KCT into the United States or sold by KCT outside the United States for importation into the United States. For instance, KCT’s website indicates that its research and development center is located in Shanghai, China (KXComTech, *About US*, [https://perma.cc/7436-JQJ9]), and that it runs global logistics out of Hong Kong (*id.*). Further, a KCT “Company Profile” presentation from the first quarter of 2024 states that KCT relies on foundries located in Taiwan, China, and Singapore to manufacture certain of its products and facilities in China to test its products. (Ex. 33 [2024 Company Profile Presentation] at 7.)

185. KCT unlawfully imports, sells for importation, and/or sells after importation in the United States the Accused KCT Products in violation of, *inter alia*, Section 337(a)(1)(B)(i)-(ii). The specific instances of importation of the Accused KCT Products set forth below are illustrative and non-exhaustive examples of the unlawful importation of infringing products.

186. On information and belief, KCT has itself imported, sold for importation, and/or offered for sale after importation in the United States the Accused KCT Products. For instance, KCT's website indicates that its United States subsidiary, GCLI, is responsible for "Business Development," which on information and belief involves importing the products that GCLI is selling. (KXComTech, *About US*, [https://perma.cc/7436-JQJ9].) Further, under a tab labeled "How to Buy," KCT's website provides contact information for "sales support" representatives in the United States. (KXComTech, *Sales Support*, [https://perma.cc/8CTG-Y578].) Additionally, KCT has stated publicly that it is targeting the United States market (Wi-Fi Now, *Meet KXcomtech: On track to ship hundreds of millions of Wi-Fi FEMs in 2022*, [https://perma.cc/R3R7-5B47]), and its marketing materials target United States customers, as is evidenced by the fact that they are written in English (*see, e.g.*, Ex. 5 [KCT Product Roadmap]).

187. As another example, on information and belief, KCT imports, sells for importation, and/or offers for sale after importation in the United States the Accused KCT Products through third-party distributors. For instance, under a tab entitled "How to Buy," KCT's website names a number of United States distributors as selling the Accused KCT Products, including without limitation Disman Bakner for the Western United States and Sierra RF for the Southeastern United States. (KXComTech, *Distributors*, [https://perma.cc/VG5F-SKTF].) Moreover, KCT works with additional third-party distributors, including Amplitude Technical Sales and Aztec Enterprises, Inc. to sell its products—including, on information and belief, the Accused KCT Products—in the United States. (Aztec Enterprises, Inc., *Products Represented*, [https://perma.cc/4AE2-7ZMJ]; Amplitude Technical Sales, *Our Manufacturers*, [https://perma.cc/TF4W-SQF3].) Further, KCT provides the Accused KCT Products to online vendors to sell over the internet in the United States. (*See, e.g.*, LCSC Electronics, *KCT8539S-1*,

[https://perma.cc/L8HH-DSE9].)

188. Additionally, KCT sells the Accused KCT Products to each of Respondents D-Link and Ruijie for assembly into these OEM Respondents' products, including wireless routers, with knowledge that these OEM Respondents' wireless routers and other products are sold for importation into the United States, imported, and/or sold within the United States after importation. (*See infra*, ¶¶ 190-197.)

189. Discovery is expected to reveal additional specific acts of KCT's importation, sale for importation, and/or sale after importation of the Accused Products.

**B. D-Link Respondents**

190. D-Link's infringing products, including the D-Link AX1800 wireless router, contain certain of the Accused KCT Products and are manufactured outside of the United States. For example, and without limitation, Exhibit 34 contains photographs of the D-Link AX1800's printed circuit board demonstrating that it contains at least one KCT8547HE Wi-Fi FEM. Exhibit 35 is a photograph of a label affixed to the back of the D-Link AX1800 demonstrating that it was made in China.

191. D-Link unlawfully imports, sells for importation, and/or sells after importation in the United States infringing products, including the D-Link AX1800, in violation of, *inter alia*, Section 337(a)(1)(B)(i)-(ii). The specific instances of importation of D-Link's infringing products, including the D-Link AX1800, set forth below are illustrative and non-exhaustive examples of the unlawful importation of infringing products.

192. Exhibit 36 is a receipt dated September 18, 2023, reflecting the sale of D-Link's AX1800 wireless router that includes the infringing KCT8547HE Wi-Fi FEM in the United States. The photographs in Exhibits 34 and 35 referenced in paragraph 190 above show aspects of this same wireless router.

193. Discovery is expected to reveal additional specific acts of D-Link's importation, sale for importation, and/or sale after importation of D-Link's infringing products, including the AX1800 wireless router.

**C. Ruijie**

194. Ruijie's infringing products, including the Ruijie Reyee E5 AX3200 wireless router, contain certain of the Accused KCT Products and are manufactured outside of the United States. For example, and without limitation, Exhibit 37 contains photographs of the Ruijie Reyee E5 AX3200's printed circuit board demonstrating that it contains at least one KCT8539S Wi-Fi FEM. Exhibit 38 is a photograph of a label affixed to the back of the Ruijie Reyee E5 AX3200 demonstrating that it was made in China.

195. Ruijie unlawfully imports, sells for importation, and/or sells after importation in the United States infringing products, including the Ruijie Reyee E5 AX3200 wireless router, in violation of, *inter alia*, Section 337(a)(1)(B)(i)-(ii). The specific instances of importation of Ruijie's infringing products, including the Ruijie Reyee E5 AX3200, set forth below are illustrative and non-exhaustive examples of the unlawful importation of infringing products.

196. Exhibit 39 is a receipt dated September 18, 2023, reflecting the sale of Ruijie's Reyee E5 AX3200 wireless router that includes the infringing KCT8539S Wi-Fi FEMs in the United States. The photographs in Exhibits 37 and 38 referenced in paragraph 194 above show aspects of this same wireless router.

197. Discovery is expected to reveal additional specific acts of Ruijie's importation, sale for importation, and/or sale after importation of Ruijie's infringing products, including the Ruijie Reyee E5 AX3200 wireless router

**D. Additional Instances of Unfair Importation and Sale**

198. It is not practical for Skyworks to identify all devices sold for importation into the

United States, imported, and/or sold within the United States after importation that incorporate the Accused KCT Products. On information and belief, KCT continues to market the Accused KCT Products worldwide via the internet to prospective importers of infringing products. For instance, online vendors such as LCSC Electronics (LSCS Electronics, *KCT*, [https://perma.cc/C2HE-SC88]) and Amplitude Technical Sales (Amplitude Technical Sales, *Our Manufacturers*, [https://perma.cc/Q9AB-HBHL]) each purport to sell KCT wireless FEMs, including on information and belief, the Accused KCT Products, in the United States via the internet. Skyworks reserves all rights to supplement its allegations, to amend the Complaint, and to add respondents in the future, based on discovery in this Investigation.

## VIII. HARMONIZED TARIFF SCHEDULE NUMBERS

199. Pursuant to 19 C.F.R. § 210.12(a)(3), the Accused Products are classified under at least the following subheadings of the Harmonized Tariff Schedule of the United States: 8517.79.0000 ("Telephone sets… other apparatus for the transmission or reception of voice, images or other data… parts thereof"), 8504.90.6500 ("Electrical transformers, static converters and inductors; parts thereof: Parts: Other: Printed circuit assemblies: Of the goods of subheading 8504.40 or 8504.50 for telecommunication apparatus"), and 8517.62.0020 ("Telephone sets…; other apparatus for the transmission or reception of voice, images or other data…: Other apparatus for transmission or reception…: Machines for the reception, conversion, and transmission or regeneration of voice, images or other data, including switching and routing apparatus: Switching and routing apparatus"). These classifications are exemplary in nature and not intended to restrict the scope of any exclusion order or other remedy ordered by the Commission.

## IX. THE DOMESTIC INDUSTRY RELATING TO THE ASSERTED PATENTS

200. An industry as required by Section 337(a)(2) and defined by Section 337(a)(3) exists in the United States. Skyworks has made significant investments in plant, equipment, labor,

and capital, and made substantial investments in engineering and research and development related to products protected by the Asserted Patents. In addition, a domestic industry is in the process of being established in accordance with Section 337(a)(2) with respect to the next generation of FEM products being developed by Skyworks.

201. As described below and in the accompanying declaration at Confidential Exhibit 49, Skyworks researches, designs, and develops wireless FEM products in the United States (the "Domestic Industry Products") that are protected by at least one claim of each of the Asserted Patents.

**A. Technical Prong**

202. Skyworks satisfies the technical prong of the domestic industry requirement as set forth in Section 337(a)(2)-(3). The chart below sets forth exemplary Domestic Industry Products, designed and developed in the United States, that are protected by at least one claim of each of the Asserted Patents:

| Patent No. | Domestic Industry Products[19] |
|---|---|
| '101 patent | SKY85787-11; SKY85791-11; SKY85743-11; SKY85336-11; SKY85752-88A; SKY85331-11; SKY85747-11; SKY85337-11; SKY85748-11; SKY85755-11; SKY85784-11; SKY85780-11; SKY85789-11; SKY85788-11; SKY85408-11; SKY85502-11 |
| '563 patent | SKY85787-11; SKY85791-11; SKY85743-11; SKY85336-11; SKY85752-88A; SKY85331-11; SKY85747-11; SKY85337-11; SKY85748-11; SKY85755-11; SKY85784-11; SKY85780-11; SKY85789-11; SKY85788-11; SKY85408-11; SKY85502-11 |
| '200 patent | SKY85787-11; SKY85791-11; SKY85743-11; SKY85336-11; SKY85752-88A; SKY85331-11; SKY85747-11; SKY85337-11; SKY85748-11; SKY85755-11; SKY85784-11; SKY85780-11; SKY85789-11; SKY85788-11; SKY85408-11; SKY85502-11 |
| '579 patent | SKY85787-11; SKY85791-11; SKY85743-11; SKY85336-11; SKY85752-88A; SKY85331-11; SKY85747-11; SKY85337-11; SKY85748-11; SKY85755-11; SKY85784-11; SKY85780-11; SKY85789-11; SKY85788-11; SKY85408-11 |

[19] The SKY85502-11 is a Wi-Fi 7 product that practices the '101, '563, and '200 patents.

| Patent No. | Domestic Industry Products[19] |
|---|---|
| '194 patent | SKY85787-11; SKY85791-11; SKY85743-11; SKY85336-11; SKY85752-88A; SKY85331-11; SKY85747-11; SKY85337-11; SKY85748-11; SKY85755-11; SKY85784-11; SKY85780-11; SKY85789-11; SKY85788-11; SKY85408-11 |

203. Claim charts applying a representative claim of each Asserted Patent to a representative Domestic Industry Product are attached as Confidential Exhibits 44-48.[20]

204. Skyworks also sells the Domestic Industry Products to its customers who then incorporate them into devices that are sold in the United States. On information and belief, these devices may also practice one or more claims of the Asserted Patents.

205. Skyworks is also in the process of establishing a domestic industry through its development of the next generation of FEMs, which include products that practice the Asserted Patents. Skyworks expects these products will begin selling later this year.

**B. Economic Prong**

206. Skyworks satisfies the economic prong of the domestic industry requirement as set forth in Section 337(a)(2)-(3). As further detailed in ¶¶ 1-9 of the accompanying declaration at Confidential Exhibit 49, Skyworks has an existing domestic industry by virtue of its significant domestic investments in plant, equipment, labor, and capital (including for expenditures on research and development, engineering, supply chain management, demand management, and executive compensation) related to the Domestic Industry Products. As just one example, Skyworks employs more than 1,600 engineers and designers in the United States at facilities around the country, including Andover and Woburn, Massachusetts; Cedar Rapids, Iowa;

[20] The Domestic Industry Products are protected by additional claims of the Asserted Patents, and Skyworks may establish the technical prong of the domestic industry requirement through claims other than those explicitly charted in Confidential Exhibits 44-48.

Newbury Park and Irvine, California; Chicago, Illinois; Greensboro, North Carolina; Hillsboro, Oregon; Milpitas, California; and Austin, Texas. Engineers and designers at these facilities play a direct role in the design and development of Skyworks' Domestic Industry Products.

207. In addition, Skyworks has made significant and substantial domestic investments in plant, equipment, labor, and capital (including for expenditures on research and development and engineering) related to its next generation of Wi-Fi 7 FEMs, which are currently under development and slated for release later in 2024. These next-generation investments (discussed in ¶ 10 of Confidential Exhibit 49) demonstrate that Skyworks also has a domestic industry in the process of being established related to these products under development. Indeed, Skyworks' significant expenditures on next-generation Wi-Fi 7 FEMs to-date represent tangible steps to establish a domestic industry in the United States and demonstrate a significant likelihood that a domestic industry related to next-generation Wi-Fi 7 products will exist in the future.

## X. RELATED LITIGATION

208. Prior to this Complaint, Skyworks filed the following complaints in the U.S. District Court for the Central District of California against KCT:

- *Skyworks Solutions, Inc. v. Kangxi Communication Technologies (Shanghai) Co., Ltd. et al.*, 8:24-cv-000974-FWS-ADS (C.D. Cal.) alleging infringement of the '101, '563, '579, and '194 patents.
- *Skyworks Solutions Canada, Inc. et al. v. Kangxi Communication Technologies (Shanghai) Co. Ltd. et al.*, 8:24-cv-00976-FWS-ADS (C.D. Cal.) alleging infringement of the '200 patent.

209. Other than the above litigations, Skyworks is not presently aware of any other foreign or domestic court or agency litigation relating to the Asserted Patents or the Proposed

Respondents' alleged unfair acts and unfair methods of competition.

## XI. REQUEST FOR A GENERAL EXCLUSION ORDER

210. Skyworks requests a general exclusion order under Section 337(d)(2) that prohibits the importation of infringing KCT wireless FEMs and all products containing those infringing FEMs. Such an order is independently justified on each of the two statutory grounds: (A) it is necessary to prevent circumvention of an exclusion order limited to products of the Proposed Respondents; and (B) because there is a pattern of violations of Section 337, and it is difficult to identify the sources of infringing products.

### A. A General Exclusion Order Is Necessary To Prevent Circumvention Of A Limited Exclusion Order

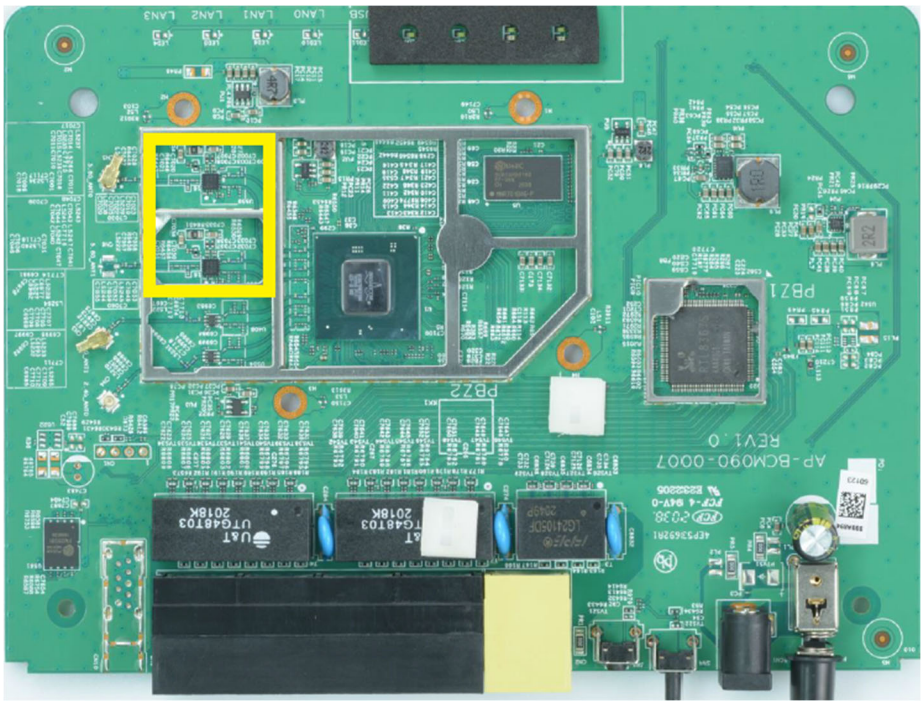
211. The potential profits and the way that the infringing KCT wireless FEMs are incorporated into downstream products and placed into commerce make it likely that an exclusion order that is limited to the Proposed Respondents will be circumvented.

212. There is tremendous demand for the type of wireless FEMs protected by the Asserted Patents. As a general matter, wireless FEMs are contained in a wide range of products manufactured by thousands of different companies and incorporated into billions of individual devices. Moreover, as a direct result of Skyworks' investments in research and development, its products are among the most highly sought after wireless FEMs due to their superior performance and reliability.

213. KCT's pin-for-pin compatible FEMs are effectively unauthorized copies that freeride on Skyworks' investments. Using these copies, KCT has already begun to capture a share of the Wi-Fi FEM market (including by touting their comparability to Skyworks' products) and will, unless stopped by the Commission, continue to do so as the next generation of Wi-Fi enabled products (implementing Wi-Fi 7) go to market. (Wi-Fi Now, *Meet KXcomtech: On track to ship*

*hundreds of millions of Wi-Fi FEMs in 2022*, [https://perma.cc/R3R7-5B47] (reporting that KCT "is strengthening its presence in the US and in the EU" and quoting KCT's VP of US Business Development as saying that KCT "has a lot of value to add to the Wi-Fi industry over coming years – also very much in the USA and Europe").)

214. It is extremely difficult, if not impossible, to determine which of the millions of wireless devices imported into the United States use the infringing KCT wireless FEMs. Wireless FEMs are typically just one component incorporated into a larger circuit board for a finished product. For example, as shown below, in each of the exemplary Accused Products discussed and charted in this Complaint, the Wi-Fi FEMs (shown in the yellow box) are just a small number of components among many.



215. Moreover, because KCT's wireless FEMs are advertised as pin-for-pin compatible with other prevalent FEMs, two different versions of the same OEM product may contain different wireless FEMs. KCT's wireless FEMs and the downstream products that contain them are also placed into commerce via numerous third-party distributors, each with their own unique

component sourcing arrangements. As a result, products that may appear identical from the outside and bear the same model number may, upon a destructive tear-down inspection, be revealed to contain different wireless FEMs. It is also not possible to reliably determine when an OEM has dual-sourced FEMs from KCT from public sources. For example, the Federal Communications Commission ("FCC") reports that Ruijie's Reyee E5 AX3200 wireless router product should contain a MediaTek MT7915AN chipset with a built-in Wi-Fi FEM. (FCC Report, *Brand Name: Ruijee, Model Name: Reyee E5*, [https://perma.cc/7HRP-8LZY], at 11.) But when Skyworks obtained an example of Ruijie's Reyee E5 AX3200 and tore it down, Skyworks discovered that it actually contained the accused KCT8539S FEM. It is therefore not possible to know based on public information, like the FCC's database, the extent to which infringing KCT wireless FEMs are being imported into the United States through incorporation inside downstream products—a problem that is only compounded by the sheer volume of products with wireless capability that are now being imported. Making matters worse, the wireless FEMs incorporated into products are often obscured by additional housing that cannot be easily removed without destroying or otherwise damaging the product (which, of course, impairs the ability to perform reverse engineering or testing).

216. Further, wireless FEMs are not just used in wireless routers—indeed, they are essential components of all Wi-Fi enabled devices, including smartphones, laptops, Internet of Things (IoT) devices, smart devices, televisions, cable boxes, automobiles, and more. (Microchip, *Wi-Fi RF Front-End Components*, [https://perma.cc/3SMM-TA99].) Given that KCT also purports to produce and sell wireless FEMs for use in the IoT, automotive, and Wi-Fi connectivity (cellular devices) fields in addition to the wireless infrastructure (Wi-Fi routers) field (KXComTech, *Main Business*, [https://perma.cc/9UA3-CC8W]), uncovering the full scope of

KCT's infringement for purposes of a limited exclusion order is impracticable because it would require all Wi-Fi enabled and other wireless devices across numerous industries to be torn down and reverse engineered.

217. Given that the source of incorporated wireless FEMs is unpredictable and given the number of different distributors involved in the sale and delivery of KCT's wireless FEMs, there is no reliable way for Skyworks to determine which of these multitude of imported products might contain infringing KCT FEMs.

218. Thus, although a limited exclusion order would inhibit KCT and the other named Respondents' from directly shipping their products to the U.S. market and would exclude Wi-Fi routers from the named Respondents, it would be ineffective at preventing the importation of other, as yet unknown, products that incorporate KCT wireless FEMs. Any OEM that needed a wireless FEM (including proposed Respondents) could establish shell offshore distribution companies to acquire those parts, making those actions extremely difficult to trace. A general exclusion order prohibiting the importation of any infringing KCT wireless FEM, whether as a stand-alone product or as incorporated into downstream products—is thus necessary to ensure a remedy that bars the importation of infringing products, whether in their raw form or in a finished good.

### B. A General Exclusion Order Is Necessary To Stop A Pattern of Section 337 Violations By Sources That Are Difficult To Identify

219. Many companies, including but not limited to the Proposed Respondents here, are violating Section 337 by importing products that infringe the Asserted Patents into the United States. Indeed, Skyworks has also identified additional entities that it believes may incorporate or may have plans to incorporate KCT wireless FEMs into their products, but for whom Skyworks has not yet been able to obtain the necessary samples and/or technical documentation needed to confirm infringement. The widespread inclusion of KCT FEMs in products both from

Respondents and non-Respondents evidences a widespread pattern of violations. Given the ubiquity of wireless FEMs in a wide cross-section of products, many more entities that are importing or are capable of importing infringing products into the United States likely exist and cannot be identified without discovery. Because determining the identity of numerous, unnamed infringers is difficult, if not impossible, a general exclusion order is necessary in order to protect Skyworks' significant domestic investments.

220. Further, KCT has already demonstrated its intent to flout domestic remedies for patent infringement, thereby rendering a limited exclusion order ineffective at stopping KCT's infringing conduct. For example, on May 8, 2024, KCT issued a press release in response to two patent infringement suits brought by Skyworks against KCT in Federal District Court concerning the patents asserted in this Investigation. *Skyworks Sols., Inc. v. Kangxi Commc'n Techs. (Shanghai) Co., Ltd. et al*, 8:24-cv-00974-FWS-ADS (C.D. Cal.); *Skyworks Sols. Canada, Inc. et al. v. Kangxi Commc'n Techs. (Shanghai) Co., Ltd. et al*, 8:24-cv-00976-FWS-ADS (C.D. Cal.).) Notably, KCT's press release does not deny infringement, and instead suggests that KCT plans to evade any remedy the District Court orders by continuing to sell its infringing products through unnamed OEM customers in Taiwan, China, and Hong Kong who incorporate the Accused KCT Products into myriad end products later imported and sold in the United States. (Ex. 12 [Machine Translated KCT Press Release].)

221. Unless a general exclusion order is issued, Skyworks will be harmed by the continued sale of Proposed Respondents' unauthorized products and continued importation and sale of unnamed parties' products that use infringing KCT wireless FEMs and by importation and sales of other infringing products that will enter the market for next-generation wireless FEMs in the future.

## XII. RELIEF REQUESTED

222. WHEREFORE, by reason of the foregoing, Skyworks requests that the United States International Trade Commission:

(a) Institute an immediate investigation, pursuant to Section 337 of the Tariff Act of 1930, as amended, 19 U.S.C. § 1337 with respect to violations of Section 337 based on Respondents' unlawful importation into the United States, sale for importation into the United States, and/or sale within the United States after importation of certain KCT wireless FEMs, devices containing the same, and components thereof, that infringe one or more claims of the Asserted Patents;

(b) Schedule and conduct a hearing on the unlawful acts and, following the hearing, determine that there has been a violation of Section 337 by each Respondent;

(c) Issue a permanent general exclusion order, pursuant to 19 U.S.C. § 1337(d), excluding from entry into the United States all KCT wireless FEMs, devices containing the same, and components thereof that infringe one or more claims of the Asserted Patents; or, in the alternative, issue a permanent limited exclusion order specifically directed to KCT and its subsidiaries and affiliates, barring from entry into the United States all wireless FEMs and components thereof that infringe one or more claims of the Asserted Patents;

(d) Issue a permanent limited exclusion order specifically directed to the D-Link and Ruijie Respondents, and their subsidiaries and affiliates, barring from entry into the United States all wireless routers, and components thereof, that contain any of the Accused KCT Products that infringe one or more claims of the Asserted Patents;

(e) Issue permanent cease and desist orders, pursuant to 19 U.S.C. § 1337(f), prohibiting Respondents, or their parents, subsidiaries, or other affiliates, from importing, admitting or withdrawing from a foreign trade zone, marketing, advertising, demonstrating,

warehousing inventory, distributing, offering for sale, selling, selling for importation into the United States, licensing, repairing, programming, or updating wireless FEMs, devices containing the same, and components thereof that infringe one or more claims of the Asserted Patents;

(f) Impose a bond upon importation or sale in the United States of infringing products, or components thereof, during the 60-day Presidential review period pursuant to 19 U.S.C. § 1337(j);

(g) Grant such other and further relief as the Commission deems just and proper based on the facts determined by the investigation and authority of the ITC Commission.

Dated: July 16, 2024

Respectfully Submitted,

**SKYWORKS SOLUTIONS INC., SKYWORKS SOLUTIONS CANADA, INC. AND SKYWORKS GLOBAL PTE LTD**

By: */s/ James M. Dowd*

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**UNITED STATES INTERNATIONAL TRADE COMMISSION**
**WASHINGTON, D.C.**

| | |
|---|---|
| **In the Matter of**<br><br>**CERTAIN WIRELESS FRONT-END MODULES, DEVICES CONTAINING THE SAME, AND COMPONENTS THEREOF** | **Inv. No. 337-TA-__** |

## VERIFICATION OF COMPLAINT

I, Miriam Hanna Ayoub, am a Senior Director, Financial Planning an Analysis for Skyworks Solutions, Inc. I am duly authorized by Skyworks Solutions, Inc., Skyworks Solutions Canada, Inc., and Skyworks Global Pte Ltd. (collectively, "Skyworks") to make this verification of the accompanying Complaint under Section 337 of the Tariff Act of 1930, as Amended, on behalf of Skyworks. I have read the Complaint and am aware of its contents. To the best of my knowledge, information, and belief and based upon a reasonably inquiry under the circumstances, I hereby certify that:

1. The allegations contained in the Complaint are well grounded in fact and have evidentiary support, or are likely to have evidentiary support after a reasonable opportunity for further investigation or discovery;

2. The claims and other legal contentions set forth in the Complaint are warranted by existing laws, or by good faith, non-frivolous argument for extension, modification, or reversal of existing law, or by the establishment of new law; and

3. The Complaint is not being filed for any improper purpose, such as to harass or to the cause unnecessary delay or needless increase in the cost of litigation.

Dated: July 16, 2024

Miriam Hanna Ayoub
Senior Director
Skyworks Solutions, Inc.