

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

RJ TECHNOLOGY LLC

Plaintiff,

v.

SAMSUNG ELECTRONICS CO., LTD. and  
SAMSUNG ELECTRONICS AMERICA, INC.

Defendants.

**Civil Action No. 2:22-cv-401**

**JURY TRIAL DEMANDED**

**COMPLAINT FOR PATENT INFRINGEMENT**

Plaintiff RJ Technology LLC brings this action for patent infringement against Defendants Samsung Electronics Co., Ltd. and Samsung Electronics America, Inc. (collectively “Samsung” or “Defendants”). Plaintiff alleges the following:

**NATURE OF THE ACTION**

1. This lawsuit is an action for patent infringement. RJ Technology LLC alleges that Samsung infringes U.S. Patent No. 7,749,641 (“the ’641 patent” or the “Asserted Patent”), a copy of which is attached hereto as **Exhibit A**.

2. Lithium-ion batteries (commonly referred to as “Li-ion batteries”) power the modern, mobile economy. These batteries are ubiquitous, supplying power to all manner of consumer electronic devices, such as mobile phones, laptops, tablets, and other portable electronic devices. As such, improvement of battery performance has been a key driver for successfully competing in the electronics market.

3. Xiaoping Ren and Jie Sun are the named inventors of the '641 patent and were early innovators in Li-ion battery technology. Their efforts culminated in the invention embodied by the Asserted Patent. In 2001, they first applied for and were subsequently awarded a patent in their native China. They then applied for and were awarded the counterpart '641 patent in the United States. The patent has now been assigned to RJ Technology LLC, which brings these claims.

4. Samsung directly infringes the claims of the Asserted Patent, including at least claims 5 and 12, by making, using, offering for sale, selling in the United States, and importing into the United States, portable electronic computing and communication devices—including smartphones, tablets, smart watches, and headphones—that use Li-ion batteries (together, “Accused Products”). Further, Samsung has indirectly infringed the claims of the Asserted Patent by inducing the direct infringement of those claims by others, including, among other things, by (i) manufacturing and selling the Accused Products, (ii) encouraging others to use the Accused Products, for example, through advertising, promoting, and instructing others to use the Accused Products, in a manner that has resulted in the direct infringement of the claims in the Asserted Patent by others, and (iii) doing the above while knowing that the acts it has encouraged constitute direct patent infringement. Samsung’s infringement has also been willful.

5. RJ Technology LLC seeks damages and other relief for Samsung’s wrongful conduct.

### **THE PARTIES**

6. RJ Technology LLC is a corporation organized and existing under the laws of Delaware, with its principal place of business in Wilmington, Delaware. Plaintiff’s founders and principals—Messrs. Xiaoping Ren and Jie Sun—are the named inventors on the '641 patent. They have transferred all of their rights, title, and interest in the '641 patent to Plaintiff.

7. Samsung Electronics Co., Ltd. (“SEC”) is a Korean corporation with a principal place of business located at 129 Samsung-Ro, Maetan-3dong, Yeongtong-gu, Suwon-si, Gyeonggi-do, 443-742, South Korea. SEC designs and manufactures products for the United States that use Li-ion batteries, including consumer electronics.

8. Samsung Electronics America, Inc. (“SEA”) is a New York corporation with a principal place of business located at 85 Challenger Road, 6th Floor, Ridgefield Park, New Jersey. SEA is responsible for the sale of electronic devices incorporating Li-ion batteries in the United States. SEA maintains a regular and established place of business in the Eastern District of Texas, including a corporate office at 6625 Excellence Way, Plano, Texas.

9. Li-ion batteries are essential to SEA’s and SEC’s ability to make and bring to market smartphones, tablets, watches, and headphones that can satisfy consumer standards and are a crucial part of their commercial success.

### **THE ASSERTED PATENT**

10. The ’641 patent, titled “Secondary Lithium Ion Cell or Battery, and Protecting Circuit, Electronic Device, and Charging Device of the Same,” which was duly and lawfully issued on July 6, 2010, is based on a U.S. patent application filed on May 6, 2004.

11. The ’641 patent discloses and claims an improved secondary (or rechargeable) Li-ion cell or battery, along with related methods, including use of a charge cutoff voltage above the then-conventionally accepted 4.2 volts and a modification to the ratio between the material used in the positive and negative electrodes of the batteries.

12. Claim 5 of the ’641 patent is exemplary:

**Claim 5:** A secondary lithium ion cell or battery, characterized in that the secondary lithium ion cell or battery has a charge cut-off voltage of greater than 4.2 V but less

than 5.8 V, and a ratio of positive electrode material to negative electrode material of the secondary lithium ion cell or battery is from 1:1.0 to 1:2.5, as calculated by a theoretic capacity with a charge cut-off voltage set at 4.2 V.

The '641 patent has now been assigned to Mr. Ren and Mr. Sun's company, RJ Technology LLC.

### **JURISDICTION AND VENUE**

13. This action arises under the patent laws of the United States, 35 U.S.C. § 1 *et seq.*, including but not limited to §§ 271, 281, 282(a), 283, 284, and 285. The Court has subject matter jurisdiction over this patent infringement action pursuant to 28 U.S.C. §§ 1331 and 1338(a).

14. The Court has personal jurisdiction over Samsung. Samsung has regularly conducted and continues to conduct business in the State of Texas, has directly or through its distribution network purposefully placed infringing products into the stream of commerce in Texas, and has committed acts of infringement in this federal judicial district, including by making, using, offering for sale, selling, or importing the Accused Products, which infringe the Asserted Patent, and by inducing others to infringe the Asserted Patent by using the Accused Products.

15. Venue is proper in this judicial district because Samsung has regular and established places of business in the Eastern District of Texas and has committed acts of infringement in this judicial district. Samsung has numerous distributors and retailers in this judicial district and maintains several physical locations throughout this state, including a dedicated retail, "Samsung Experience" store located at 2601 Preston Road, Frisco, Texas.<sup>1</sup> Samsung also maintains corporate offices at 6625 Excellence Way, Plano, Texas, a massive 85-

---

<sup>1</sup> *Samsung Experience Store: Locations*, SAMSUNG, <https://www.samsung.com/us/samsung-experience-store/locations/> (last visited Oct. 11, 2022).

acre, mixed-use facility.<sup>2</sup> Samsung is the largest tenant in the facility, leasing nearly 300,000 square feet of office space and employing over 1,000 people, many of whom design, sell, manufacture, or support the Accused Products.<sup>3</sup> Further, Samsung has committed acts of patent infringement in the Eastern District of Texas, including by advertising, offering to sell, selling, and/or distributing infringing products, and/or inducing the sale and use of infringing products in the United States, including in the Eastern District of Texas, knowing and expecting them to be purchased and used by consumers in the United States, including in this judicial district, and such infringing products have been purchased and used in the United States and in this judicial district. Samsung therefore has committed acts of patent infringement and has a regular and established place of business in this federal judicial district. Accordingly, venue is proper in this federal judicial district, pursuant to 28 U.S.C. § 1400(b).

### **THE ACCUSED PRODUCTS**

16. Samsung makes, uses, sells, and/or offers to sell in the United States, and/or imports into the United States Accused Products, all without seeking a license to the '641 patent.

#### *The Accused Smartphone Products*

17. Samsung makes, uses, sells, and/or offers to sell in the United States, and/or imports into the United States various smartphones that infringe the '641 patent, including but not limited to the Samsung Galaxy A Series, Samsung Galaxy Wide 5 Series, Samsung Galaxy Z Flip Series,

---

<sup>2</sup> *Legacy Central*, PLANO: ECONOMIC DEVELOPMENT, <https://www.planotexas.org/162/Legacy-Central> (last visited Oct. 11, 2022); Press Release, Samsung, Samsung Electronics America to Open Flagship North Texas Campus (Apr. 6, 2018), <https://news.samsung.com/us/samsung-electronics-america-open-flagship-north-texas-campus/>.

<sup>3</sup> Steve Brown, *Samsung is growing its huge Plano regional office again*, THE DALLAS MORNING NEWS (Oct. 1, 2022), <https://www.dallasnews.com/business/real-estate/2021/10/01/samsung-is-growing-its-huge-plano-regional-office/>; Press Release, Samsung, Samsung Electronics America to Open Flagship North Texas Campus (Apr. 6, 2018), <https://news.samsung.com/us/samsung-electronics-america-open-flagship-north-texas-campus/>.

Samsung Galaxy C Series, Samsung Galaxy F Series, Samsung Galaxy J Series, Samsung Galaxy Grand Prime Series, Samsung Galaxy M Series, Samsung Galaxy Note Series, Samsung Galaxy Max Series, Samsung Galaxy On Series, Samsung Galaxy S Series, Samsung Galaxy Alpha Series, Samsung Galaxy Fold Series, Samsung Galaxy X Cover Series, and Samsung Galaxy Z Fold Series (the “Accused Smartphone Products”).

18. The Samsung Galaxy S20 exemplifies the relevant functionality for each Accused Smartphone Product:



*Galaxy S20 FE* | *S20* | *S20+* | *S20 Ultra 5G*, SAMSUNG, <https://www.samsung.com/sg/smartphones/galaxy-s20/> (last visited Oct. 11, 2022).

19. The Samsung Galaxy S20 utilizes a Li-ion battery that has a charging voltage of at least 4.43V.



*How to Replace a Battery on a Samsung Galaxy S20*, YOUTUBE, <https://www.youtube.com/watch?v=RjSCmNObrPc> (last visited Oct. 11, 2022) (image at 6:49, which has been sharpened); *Galaxy Battery*, SAMSUNG, <https://www.samsung.com/us/support/galaxy-battery/about-battery/> (last visited Oct. 11, 2022).

20. The ratio of positive electrode material to negative electrode material of the secondary Li-ion battery (i.e., the “P/N ratio”) is between 1:1.0 and 1:2.5 as calculated by a theoretic capacity with a charge cut-off voltage set at 4.2 V.

21. The Galaxy S20 maintains at least 80% of its battery’s capacity after 500 complete charge cycles.

#### *The Accused Tablet Products*

22. Samsung makes, uses, sells, and/or offers to sell in the United States, and/or imports into the United States various tablets that infringe the ’641 patent, including but not limited to the Galaxy Tab A Series, Galaxy Tab E Series, Galaxy Tab S Series, and Galaxy Tab Pro Series (the “Accused Tablet Products”).

23. The Samsung Tab S7+ exemplifies the relevant functionality for each Accused Tablet Product.



Galaxy Tab S7+ 12.4”, SAMSUNG, <https://www.samsung.com/us/tablets/tab-s7/buy/?modelCode=SM-T870NDBAXAR> (last visited Oct. 11, 2022).

24. The Samsung Tab S7+ utilizes a Li-ion battery that has a charging voltage of at least 4.43V.



Internal Battery Samsung Galaxy Tab S7 Plus 12.4 10090mAh Original EB-BT975ABY, EBAY, (last visited Oct. 11, 2022), [https://www.ebay.com/itm/373882668954?chn=ps&trkparms=ispr%3D1&amdata=enc%3A1phVwrPL4T6un8ryzx4N9GA91&norover=1&mkevt=1&mkrid=711-117182-37290-0&mkcid=2&itemid=373882668954&targetid=1599090335897&device=c&mktype=&googlelo c=9031945&poi=&campaignid=15275224983&mkgroupid=131097072938&rlsarget=pla-1599090335897&abcId=9300697&merchantid=540508472&gclid=CjwKCAjwrfCRBhAXEiwAnkmKmc3YHzbEQ61h5LRoL47-6unu9blHL1ahM2\\_BXHkfYsk7mgtUyXMEEBoC7-](https://www.ebay.com/itm/373882668954?chn=ps&trkparms=ispr%3D1&amdata=enc%3A1phVwrPL4T6un8ryzx4N9GA91&norover=1&mkevt=1&mkrid=711-117182-37290-0&mkcid=2&itemid=373882668954&targetid=1599090335897&device=c&mktype=&googlelo c=9031945&poi=&campaignid=15275224983&mkgroupid=131097072938&rlsarget=pla-1599090335897&abcId=9300697&merchantid=540508472&gclid=CjwKCAjwrfCRBhAXEiwAnkmKmc3YHzbEQ61h5LRoL47-6unu9blHL1ahM2_BXHkfYsk7mgtUyXMEEBoC7-)



UQAvD\_BwE; *Galaxy Battery*, SAMSUNG, <https://www.samsung.com/us/support/galaxy-battery/about-battery/> (last visited Oct. 11, 2022).

25. The ratio of positive electrode material to negative electrode material of the secondary Li-ion battery (i.e., the “P/N ratio”) is between 1:1.0 and 1:2.5 as calculated by a theoretic capacity with a charge cut-off voltage set at 4.2 V.

26. The Samsung Tab S7+ maintains at least 80% of its battery’s capacity after 1000 complete charge cycles.

*The Accused Smart Watch Products*

27. Samsung makes, uses, sells, and/or offers to sell in the United States, and/or imports into the United States various smart watches that infringe the ’641 patent, including but not limited to the Samsung Gear Fit 2, Samsung Gear Fit 2 Pro, Samsung Gear S3, Samsung Gear Sport, Samsung Galaxy Watch, Samsung Watch Active, Galaxy Watch Active 2, Galaxy Watch 3, Galaxy Watch 4, Galaxy Watch 4 Classic, Galaxy Watch 5, and Galaxy Watch 5 Pro (the “Accused Smart Watch Products”).

28. The Galaxy Watch 4 exemplifies the relevant functionality for each Accused Smart Watch Product.



*Samsung Galaxy Watch4*, SAMSUNG, <https://www.samsung.com/us/watches/galaxy-watch4/> (last visited on Oct. 11, 2022)

29. The Samsung Galaxy Watch 4 utilizes a Li-ion battery that has a charging voltage of at least 4.47V.



Adriana Zwink, *Samsung GalaxyWatch4 Battery Replacement*, iFixit, <https://www.ifixit.com/Guide/Samsung+Galaxy+Watch4+Battery+Replacement/146399> (last visited Oct. 11, 2022); *Galaxy Battery*, SAMSUNG, <https://www.samsung.com/us/support/galaxy-battery/about-battery/> (last visited Oct. 11, 2022).

30. The ratio of positive electrode material to negative electrode material of the secondary Li-ion battery (i.e., the “P/N ratio”) is between 1:1.0 and 1:2.5 as calculated by a theoretic capacity with a charge cut-off voltage set at 4.2 V.

31. The Samsung Galaxy Watch 4 maintains at least 80% of its battery’s capacity after 1000 complete charge cycles.

#### *The Accused Headphone Products*

32. Samsung makes, uses, sells, and/or offers to sell in the United States, and/or imports into the United States various headphones that infringe the ’641 patent, including but not limited to the Samsung Gear IconX 2018, Galaxy Buds, Galaxy Buds Plus, Galaxy Buds Live, Galaxy Buds Pro, Galaxy Buds 2, and Galaxy Buds 2 Pro (the “Accused Headphone Products”).

33. The Samsung Galaxy Buds 2 exemplifies the relevant functionality for each Accused Headphone Product.



*Samsung Galaxy Buds2, Graphite, SAMSUNG,*  
[https://www.samsung.com/us/mobile/audio/headphones/galaxy-buds2-graphite-sm-r177nzkaxar/?cid=sem-mktg-pfs-aacc-us-google-na-08262021-170078-&ds\\_e=GOOGLE-cr:0-pl:310810372-&ds\\_c=FF~Core-Buds2\\_CN~GB2\\_PH~on\\_MK~usnat\\_BS~me\\_PR~wiaud\\_SB~galbud2\\_FS~lo\\_CA~kew\\_KS~ba\\_MT~exact-&ds\\_ag=AG~Core\\_MK~usnat\\_AT~ta\\_MD~h\\_PK~roah\\_PB~google\\_AI~yes\\_TG~rtg\\_SA~res~RLSA-&ds\\_k=samsung+galaxy+buds+2&gclid=Cj0KCQjwz96WBhC8ARIsAATR252UfpiEZKyAcSKPKel6O-uqH2MECKN3DJnGVQmhMY0t\\_uEIItyzGJEaAjunEALw\\_wcB&gclsrc=aw.ds](https://www.samsung.com/us/mobile/audio/headphones/galaxy-buds2-graphite-sm-r177nzkaxar/?cid=sem-mktg-pfs-aacc-us-google-na-08262021-170078-&ds_e=GOOGLE-cr:0-pl:310810372-&ds_c=FF~Core-Buds2_CN~GB2_PH~on_MK~usnat_BS~me_PR~wiaud_SB~galbud2_FS~lo_CA~kew_KS~ba_MT~exact-&ds_ag=AG~Core_MK~usnat_AT~ta_MD~h_PK~roah_PB~google_AI~yes_TG~rtg_SA~res~RLSA-&ds_k=samsung+galaxy+buds+2&gclid=Cj0KCQjwz96WBhC8ARIsAATR252UfpiEZKyAcSKPKel6O-uqH2MECKN3DJnGVQmhMY0t_uEIItyzGJEaAjunEALw_wcB&gclsrc=aw.ds) (last visited Oct. 11, 2022).

34. The Samsung Galaxy Buds 2 utilize a Li-ion battery that has a charging voltage of at least 4.4V.



Taylor Dixon, *Galaxy Buds2 Teardown: Great Buds with One Big Flaw*, iFixit (September 16, 2021) <https://www.ifixit.com/News/52635/galaxy-buds2-teardown-great-buds-with-one-big-flaw>; *Galaxy Battery*, SAMSUNG, <https://www.samsung.com/us/support/galaxy-battery/about-battery/> (last visited Oct. 11, 2022).

35. The ratio of positive electrode material to negative electrode material of the secondary Li-ion battery (i.e., the “P/N ratio”) is between 1:1.0 and 1:2.5 as calculated by a theoretic capacity with a charge cut-off voltage set at 4.2 V.

36. The Samsung Galaxy Buds 2 maintains at least 80% of its battery’s capacity after 1000 complete charge cycles.

**COUNT ONE: INFRINGEMENT OF U.S. PATENT 7,749,641**

37. Plaintiff re-alleges and incorporates by reference the allegations contained in the preceding paragraphs as if fully set forth herein.

38. The ’641 patent is valid and enforceable. Samsung does not have a license to practice any of the limitations claimed in the ’641 patent.

39. By making, using, offering for sale, and/or selling products in the United States, and/or importing them into the United States, including but not limited to the Accused Products,

Samsung has injured Plaintiff and is liable to Plaintiff for directly infringing one or more claims of the Asserted Patent pursuant to 35 U.S.C. § 271(a).

40. Samsung knowingly encourages and intends to induce infringement of the Asserted Patent by (i) making, using, offering for sale, and/or selling products in the United States, and/or importing them into the United States, including but not limited to the Accused Products and (ii) encouraging and instructing its customers on how to use the inventions claimed in the Asserted Patent, the claims of which are directly infringed by Samsung's customers. Samsung therefore also infringes the Asserted Patent under 35 U.S.C. § 271(b).

41. For example, through various marketing and advertising materials, Samsung encourages and instructs their customers on how to use the inventions claimed in the Asserted Patent, which Samsung advertises as a core feature of the Accused Products, as shown by way of a non-limiting example below:

## Understand Your Battery

Lightweight Lithium-ion Battery

Galaxy showcases an integrated state-of-the-art Lithium-ion (Li-ion) battery that is both lightweight and long-lasting. Learn more about battery life and proper use to maximize your battery's performance.

*Galaxy Battery*, SAMSUNG, <https://www.samsung.com/us/support/galaxy-battery/> (last visited Oct. 11, 2022).

42. Samsung became aware of the Asserted Patent at least as of April 21, 2021, when Mr. Ren and Mr. Sun delivered a letter to Samsung, informing it of the Patent No. ZL 01141615.7, the Chinese counterpart to the Asserted Patent.

43. Samsung's infringement of the Asserted Patent has been and continues to be deliberate and willful. Consequently, Samsung's infringement is exceptional and warrants an award of enhanced damages and attorneys' fees pursuant to 35 U.S.C. §§ 284-285.

44. Plaintiff has been harmed by Samsung's wrongful conduct and is entitled to compensatory damages, in no event less than a reasonable royalty with interest and costs.

**DEMAND FOR JURY TRIAL**

RJ Technology LLC hereby demands a jury trial on all issues triable to a jury.

**PRAYER FOR RELIEF**

WHEREFORE, RJ Technology LLC respectfully requests that the Court enter judgment and relief against Defendants, as follows:

- a) Declaring that Samsung has infringed and continues to infringe one or more claims of the '641 patent;
- b) Awarding damages sufficient to compensate Plaintiff for Samsung's infringement, including pre-and post-judgment interest and for an accounting of the same;
- c) Finding that Samsung's infringement is willful and enhancing damages pursuant to 35 U.S.C. § 284;
- d) Awarding attorneys' fees pursuant to 35 U.S.C. § 285 or as otherwise permitted by law;
- e) Awarding all costs of suit;
- f) Awarding an ongoing royalty in an amount to be determined for continued infringement after the date of judgment; and
- g) Ordering such other and further relief as the Court may deem just and proper.

Dated: October 13, 2022

Respectfully submitted,

/s/ Michael Ng by permission

Andrea L. Fair

Michael Ng  
California State Bar No. 237915  
Daniel A. Zaheer  
California State Bar No. 237118  
michael.ng@kobrekim.com  
daniel.zaheer@kobrekim.com  
KOBRE & KIM LLP  
150 California Street, 19th Floor  
San Francisco, CA 94111  
Telephone: 415-582-4800  
Facsimile: 415-582-4811

Gabriela M. Ruiz\*  
Florida State Bar No. 46844  
gabriela.ruiz@kobrekim.com  
KOBRE & KIM LLP  
201 S Biscayne Blvd #1900  
Miami, Florida 33131  
Telephone: 305-967-6100  
Facsimile: 305-967-6120

George Stamatopoulos\*  
New York State Bar No. 5163340  
Julian Pymonto\*  
New York Bar No. 5563499  
george.stamatopoulos@kobrekim.com  
julian.pymonto@kobrekim.com  
KOBRE & KIM LLP  
800 Third Avenue  
New York, New York 10022  
Telephone: 212-488-1200  
Facsimile: 212-488-1220

Zach Ruby\*  
District of Columbia Bar No. 1030640  
zach.ruby@kobrekim.com  
KOBRE & KIM LLP  
1919 M Street, NW  
Washington, DC 20036  
Telephone: 202-664-1900  
Facsimile: 202-664-1920

Hangcheng (Robert) Zhou\*  
California State Bar No. 320038  
Xue Li\*  
California State Bar No. 333826  
robert.zhou@kobrekim.com  
xue.li@kobrekim.com  
KOBRE & KIM LLP  
43RD Floor, 4302-4304 HKRI Centre One,  
HKRI Taikoo Hui  
288 Shimen Yi Road  
Shanghai, PRC, 200041  
Telephone: +86 21-3210-2100

*Of counsel:*

Andrea L. Fair  
State Bar No. 24078488  
Email: andrea@wsfirm.com  
Claire Abernathy Henry  
Texas State Bar No. 24053063  
E-mail: claire@wsfirm.com  
Charles Everingham IV  
State Bar No. 00787447  
Email: ce@wsfirm.com  
WARD, SMITH & HILL, PLLC  
PO Box 1231  
Longview, Texas 75606-1231  
(903) 757-6400 (telephone)  
(903) 757-2323 (facsimile)

*Attorneys for Plaintiff*  
*RJ TECHNOLOGY LLC*

*\*Applications for Admission forthcoming*