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15 **ATTORNEYS FOR PLAINTIFFS**
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17 UNITED STATES DISTRICT COURT
18 CENTRAL DISTRICT OF CALIFORNIA
19 WESTERN DIVISION

20 MACOM TECHNOLOGY
21 SOLUTIONS HOLDINGS, INC., a
22 Delaware corporation, and
23 NITRONEX, LLC, a Delaware limited
24 liability company,

25 Plaintiffs,

26 v.

27 INFINEON TECHNOLOGIES AG, a
28 corporation organized under the laws of
Germany, and INFINEON
TECHNOLOGIES AMERICAS
CORP., a Delaware corporation,

Defendants.

Case No. CV 16-02859 CAS (PLAx)

**THIRD AMENDED COMPLAINT
FOR BREACH OF CONTRACT
AND DECLARATORY JUDGMENT**



1 Plaintiffs MACOM Technology Solutions Holdings, Inc. (“MACOM”) and
2 Nitronex, LLC (“Nitronex”) (collectively, “Plaintiffs”) file this Third Amended
3 Complaint for Breach of Contract and Declaratory Judgment against Defendant
4 Infineon Technologies Americas Corp. (“Infineon Americas”) and for Intentional
5 Interference with Contract against Defendant Infineon Technologies AG (“Infineon
6 AG”) (collectively, “Infineon” or “Defendants”), stating as follows:¹

7 **SUMMARY OF THE CASE**

8 1. Beginning in the late 1990s, Nitronex Corporation developed and
9 pioneered the use of gallium nitride (“GaN”) in the design and manufacture of
10 semiconductor chips, focusing specifically on the use of gallium nitride-on-silicon
11 (“GaN-on-Si”) for radio frequency (“RF”) products. As a result of its innovations,
12 Nitronex was awarded approximately three dozen United States patents covering
13 the use of gallium nitride in semiconductor products.

14 2. In 2010, Nitronex Corporation (the predecessor-in-interest to
15 MACOM) and International Rectifier Corporation (the predecessor to Infineon)
16 entered into an intellectual property purchase agreement (the “2010 IP Purchase
17 Agreement”) and a license agreement (the “2010 License Agreement”) under which
18 (a) Nitronex sold its patents and patent applications relating to GaN-on-Si
19 semiconductor technology (“Nitronex Patents”) to International Rectifier, (b)
20 International Rectifier granted back to Nitronex licenses to continue to use the
21 Nitronex Patents to develop and sell GaN-on-Si RF products, including an
22

23 ¹ Plaintiffs’ original Complaint and First Amended Complaint alleged breach of
24 contract and declaratory judgment claims against both Infineon AG and Infineon
25 Americas and an alternative claim for intentional interference with contract
26 against Infineon AG. The Court’s order dated October 31, 2016, granted
27 without prejudice Infineon AG’s motion to dismiss the breach of contract and
28 declaratory judgment claims against it for lack of subject matter jurisdiction.
Plaintiffs reserve the right to further amend the complaint to add Infineon AG as
a party to the contract and declaratory judgment claims if facts later show
Infineon AG to be an appropriate party to such claims.

1 *exclusive* license to use the Nitronex Patents to develop and sell GaN-on-Si RF
2 products in certain market segments, (c) International Rectifier expressly promised
3 that it would *not* directly or indirectly market, sell or service products in
4 MACOM’s exclusive market segments; and [REDACTED]
5 [REDACTED]
6 [REDACTED]. The agreements also called for
7 International Rectifier and Nitronex [REDACTED]
8 [REDACTED] and to cooperate in [REDACTED]
9 [REDACTED] the licensing and enforcement of the Nitronex Patents.

10 3. For several years thereafter, Nitronex (and, after its acquisition of
11 Nitronex, MACOM) and International Rectifier had a cooperative working
12 relationship, with Nitronex/MACOM using the patented technology developed by
13 Nitronex for continued development and sales of GaN-on-Si RF products and
14 International Rectifier using the patented technology to develop its permitted GaN-
15 on-Si power management products.

16 4. In 2015, however, Infineon AG, a very large German semiconductor
17 company that produces both power management *and* RF products, purchased
18 International Rectifier. Almost immediately after the completion of its acquisition
19 of International Rectifier, Infineon began to try to “renegotiate” the agreements
20 between Nitronex and International Rectifier to obtain rights to use the Nitronex
21 Patents to develop GaN-on-Si RF products in MACOM’s exclusive field. Infineon
22 repeatedly demanded that MACOM give up its exclusive rights to use the Nitronex
23 Patents in certain burgeoning GaN-on-Si RF markets so that Infineon could use the
24 Nitronex Patents to enter those markets. MACOM consistently made it clear to
25 Infineon that it was unwilling to give up its exclusive rights.

26 5. Infineon was not willing to take no for an answer, however. Thus, on
27 February 2, 2016, Infineon notified MACOM that MACOM had supposedly
28 committed a “material breach” of the 2010 License Agreement because it was

1 selling an entirely different category of products than those addressed in the
2 Nitronex-International Rectifier agreements—GaN-on-silicon *carbide* (“GaN-on-
3 SiC”) products. Without identifying any specific MACOM GaN-on-SiC products,
4 Infineon further took the position that MACOM’s sales of GaN-on-SiC products
5 purportedly infringed one or more unidentified Nitronex Patents, which Infineon
6 was now broadly reading to cover products beyond just GaN-on-Si products. On
7 February 11, 2016, MACOM responded that it had not committed any breach of the
8 agreements because: (a) the agreements did not prohibit MACOM from selling
9 GaN-on-SiC; (b) even if the complained-of MACOM conduct could be considered
10 a breach, it was at most a *de minimis* breach due to the low volume of MACOM’s
11 GaN-on-SiC sales; and (c) in any event, any alleged breach had been cured because
12 the third-party supplier of the wafers for MACOM’s GaN-on-SiC products had
13 notified MACOM that it would no longer manufacture products for MACOM.
14 MACOM offered to provide Infineon with copies of its sales figures for GaN-on-
15 SiC under an NDA so that Infineon could confirm the *de minimis* sales volumes for
16 those products. Infineon never responded to MACOM’s offer. Instead, without
17 further communication or discussion with MACOM, Infineon sent MACOM a
18 letter on March 22, 2016, stating that Infineon was “terminating” the 2010 License
19 Agreement.

20 6. MACOM has not breached its agreements with Infineon. Infineon’s
21 claim of “breach” is nothing more than a bad faith pretext for Infineon to harm
22 MACOM and claim that MACOM no longer has any rights to use the Nitronex
23 Patents and that Infineon is now free to use the patents to develop GaN-on-Si RF
24 products in MACOM’s exclusive fields.

25 7. Infineon’s purported “termination” of MACOM’s rights with respect
26 to the Nitronex Patents is without cause or basis and was done in bad faith and thus
27 is itself a material breach of the agreements between MACOM/Nitronex and
28 International Rectifier. Accordingly, Plaintiffs bring this action seeking a

1 declaration that Infineon Americas’ purported termination of the 2010 License
2 Agreement is not valid and is without effect, and that the agreement is still in full
3 force and effect, including MACOM’s exclusive rights to use the patents for certain
4 GaN-on-Si RF products. Plaintiffs also seek a declaration that their development
5 and sale of GaN-on-Si RF products does not infringe the Nitronex Patents because
6 MACOM’s activities are licensed under the 2010 License Agreement. Plaintiffs
7 also bring claims for breach of contract and breach of the covenant of good faith
8 and fair dealing against Infineon Americas for Infineon Americas’ wrongful and
9 pretextual “termination” of the 2010 License Agreement. Plaintiffs also state a
10 claim for intentional interference with contract under California state law against
11 Infineon AG for causing Infineon Americas to breach the 2010 License Agreement
12 by developing and marketing GaN-on-Si RF products for base stations.

13 8. Since filing its original complaint on April 26, 2016, MACOM has
14 confirmed its suspicion that Infineon is (and has been for some time) designing and
15 developing GaN-on-Si RF products for use in cellular base station applications—
16 *i.e.*, products squarely in MACOM’s exclusive field that Infineon promised that it
17 would *not* market and sell. Moreover, on information and belief, Infineon has
18 marketed these products to key basestation customers. By developing and
19 marketing GaN-on-Si RF products for base stations, Infineon has breached the 2010
20 License Agreement.

21 9. In addition to its breach of the 2010 License Agreement through its
22 wrongful “termination” of that agreement and its development and marketing of
23 GaN-on-Si RF products for base stations, Infineon has further breached the
24 agreements between the parties by failing to take steps to address third-party
25 infringement of certain of the Nitronex Patents, as required by the agreements. By
26 the terms of the agreements, if Infineon fails to take timely action to address third-
27 party infringement, it must assign back to MACOM the relevant patents so that
28 MACOM can enforce them. MACOM has identified actual third-party

1 infringement of many of the Nitronex Patents, but Infineon has failed to address
2 that infringement within the time period required by the parties' agreements and has
3 failed to assign back to MACOM the relevant patents. Accordingly, by this
4 Complaint, MACOM also seeks specific performance by Infineon Americas of the
5 provision of the parties' agreement that requires Infineon to assign back Nitronex
6 Patents when Infineon has failed to enforce them against third-party infringers.

7 10. Not only that, but Infineon is meanwhile undermining the value of the
8 Nitronex Patents and MACOM's rights under the License and IP Purchase
9 Agreements by taking the position that many or all of the Nitronex Patents are
10 invalid, including even those patents that International Rectifier and Infineon itself
11 prosecuted from the patent applications transferred by Nitronex. Infineon's
12 predecessor paid ██████████ for these patents and applications, and it induced
13 MACOM's predecessor to part with them based on promises of exclusivity in
14 certain fields going forward. Now Infineon would rather that the patents are
15 invalid, so that it is not barred from practicing them, than to have to honor its
16 commitments to MACOM. But such attempts by Infineon to avoid its contractual
17 obligations constitute breaches of the duty of good faith and fair dealing implied in
18 every California contract.

19 **PARTIES**

20 11. Plaintiff MACOM is a Delaware corporation having its principal place
21 of business and headquarters at 100 Chelmsford Street, Lowell, Massachusetts.

22 12. Plaintiff Nitronex, LLC is a Delaware limited liability company with
23 its principal place of business at 100 Chelmsford Street, Lowell, Massachusetts.
24 Nitronex, LLC is the successor to Nitronex Corporation and is a wholly-owned
25 subsidiary of MACOM.

26 13. Defendant Infineon Technologies AG ("Infineon AG") is a type of
27 German corporation, an Aktiengesellschaft, having its headquarters and principal
28 place of business at Am Campeon 1-12 85579 Neubiberg, Bavaria, Germany.

1 14. Defendant Infineon Technologies Americas Corp. (“Infineon
2 Americas”) is a Delaware corporation having its headquarters and principal place of
3 business at the former International Rectifier Corporation (“International Rectifier”)
4 headquarters at 101 N. Sepulveda Boulevard, El Segundo, California. Infineon
5 Americas is a wholly-owned subsidiary of Infineon AG.²

6 JURISDICTION AND VENUE

7 15. This Third Amended Complaint includes a count for declaratory relief
8 under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.*

9 16. Plaintiffs seek declaratory relief under 28 U.S.C. §§ 2201 and 2202.

10 17. This Court has subject matter jurisdiction over the claims alleged in
11 this action under 28 U.S.C. §§ 1331, 1338, 1367(a), 2201, and 2202 because this
12 Court has exclusive jurisdiction over declaratory judgment claims arising under the
13 patent laws of the United States pursuant to 28 U.S.C. §§ 1331, 1338, 2201, and
14 2202. This Court has jurisdiction over the remaining claims pleaded in this action
15 that do not arise under the patent laws pursuant to 28 U.S.C. § 1367, insofar as they
16 are related to the other claims in the action and form part of the same case or
17
18

19 ² MACOM’s original complaint named another defendant, International Rectifier
20 Corporation, based on the fact that the United States Patent & Trademark Office
21 (“PTO”) assignment database showed that International Rectifier was still the
22 identified assignee/owner of most of the Nitronex Patents. Infineon has now
23 represented in its litigation filings to this Court that International Rectifier no
24 longer exists as an entity, having changed its name to Infineon Technologies
25 Americas Corp. (Dkt. No. 56 at 2:24-3:8.) The PTO records do contain an
26 assignment by International Rectifier to Infineon Americas of a fraction of the
27 Nitronex Patents. Nevertheless, as of the date of the filing of this Third
28 Amended Complaint, the PTO’s Patent and Trademark Assignment Database
continues to list International Rectifier Corporation as the assignee of many of
the Nitronex Patents. While MACOM accepts Infineon’s representations that
International Rectifier no longer exists or owns the Nitronex Patents, MACOM
also reserves its rights to amend the complaint to re-name International Rectifier
as a defendant if the facts later show that International Rectifier is still an
ongoing entity that owns any of the Nitronex Patents or maintains any rights or
obligations with respect to the Nitronex-International Rectifier agreements that
are the subject of MACOM’s claims.

1 controversy, as well as pursuant to the Declaratory Judgment Act, 28 U.S.C.
2 § 2201(a).

3 ***Infineon Americas***

4 18. This Court has personal jurisdiction over Infineon Americas because it
5 maintains a principal place of business in El Segundo, Los Angeles County,
6 California, maintains research and development offices in this District in Irvine and
7 Torrance, California and a production facility in this District in Temecula,
8 California, and has purposefully availed itself of the privilege of conducting
9 business in this District such that it should reasonably and fairly anticipate being
10 brought into court in this District. Further, based on the representation to this Court
11 by Defendants that International Rectifier changed its name to Infineon
12 Technologies Americas Corp. and succeeded to International Rectifier's rights and
13 obligations under the Nitronex-International Rectifier agreements, including the
14 2010 License Agreement and the 2010 IP Purchase Agreement, Infineon Americas
15 has consented to the personal jurisdiction and venue of the courts located in Los
16 Angeles County, California because both agreements contain provisions stating all
17 disputes relating to the agreements should be heard by the federal and state courts
18 of Los Angeles County and consenting to personal jurisdiction in those courts.

19 ***Infineon AG***

20 19. This Court has personal jurisdiction over Infineon AG because it has
21 intentionally engaged in actions within this District that form the basis of Plaintiffs'
22 claims against Infineon AG and/or has directed to this District the actions that form
23 the basis of Plaintiffs' claims against Infineon AG and intentionally caused harm it
24 knew would be felt in this District.

25 20. Infineon AG directs and controls all activities relating to the GaN
26 business of Infineon Americas and other Infineon affiliates, including the actions at
27 issue in this matter. On information and belief, Infineon AG exercises control over
28

1 Infineon Americas’ day-to-day activities, including product development, sales,
2 contracts, and intellectual property.

3 21. For example, Infineon AG’s Annual Report from 2015 (available at:
4 http://www.infineon.com/dgdl/Jahresfinanzbericht_zum_30_September_2015_%28EN%29.pdf?fileId=5546d46150cc1eda015142a4caeb04f7) states that Infineon
5 “acquired International Rectifier with the goal to systematically combine the
6 strengths of the two groups [International Rectifier and Infineon].” Infineon further
7 stated that the “sales structures of the two businesses” were merged by the end of
8 March 2015. Infineon’s annual report also states that “effective October 1, 2015,
9 International Rectifier has been fully absorbed within three segments” of Infineon’s
10 business (specifically, Automotive, Industrial Power Control, and Power
11 Management & Multimarket). Infineon went on in this report to investors to
12 highlight the role that acquiring and integrating International Rectifier’s GaN
13 technology played in the acquisition: “[A]nother important aspect of integrating
14 International Rectifier is to combine all development activities relating to GaN-
15 based power semiconductors. International Rectifier is a global leader in applying
16 GaN layers onto standard silicon wafers.”

17
18 22. In its 2015 Annual Report, Infineon AG also reports revenue, assets,
19 and liabilities for International Rectifier (now Infineon Americas) on a fully-
20 integrated basis with the revenues, assets, and liabilities for Infineon AG and all
21 other Infineon AG subsidiaries. Infineon AG similarly includes International
22 Rectifier’s employees (now Infineon Americas’ employees) in its discussion of
23 Infineon AG employees. It also states that production of some of International
24 Rectifier products will be transferred to Infineon AG plants, including plants in
25 Dresden, Germany. On information and belief, the transferred products include at
26 least some and perhaps all of International Rectifier’s GaN-on-Si power
27 management products.

28

1 23. Additionally, on January 13, 2015, Infineon AG stated in a press
2 release that International Rectifier “has become part of Infineon,” subject to
3 necessary regulatory and shareholder approvals, and prominently features a photo
4 of Infineon AG’s executive team of A. Mittal, R. Ploss, and D. Asam for use with
5 the press release (available at: [http://www.infineon.com/cms/en/about-](http://www.infineon.com/cms/en/about-infineon/press/press-releases/2015/INFXX201501-020.html)
6 [infineon/press/press-releases/2015/INFXX201501-020.html](http://www.infineon.com/cms/en/about-infineon/press/press-releases/2015/INFXX201501-020.html)). On information and
7 belief, Infineon AG’s and the former International Rectifier’s GaN business is now
8 part of Infineon AG’s Power Management and Multimarket (PMM) group. On
9 information and belief, the PMM division is headquartered in Germany and most, if
10 not all, of the PMM division’s management board members are employees of
11 Infineon AG and work in Germany. Further, in its 2015 Annual Report, Infineon
12 AG stated that it was “combin[ing] all [of Infineon AG’s and International
13 Rectifier’s] development activity relating to GaN-based power semiconductors.”

14 24. On information and belief, Infineon Americas does not have a separate
15 website or offer different products from Infineon AG. Instead, both Infineon AG
16 and Infineon Americas share the website www.infineon.com, which prominently
17 features the Infineon logo (without indication of which affiliate that it is associated
18 with) and which repeatedly and consistently refers to “Infineon” generically,
19 without differentiation between Infineon AG, on the one hand, and any of its
20 various subsidiaries and affiliates, on the other.

21 25. Infineon AG also states in its 2015 Annual Report that its patent
22 portfolio includes the patents it acquired through the acquisition of International
23 Rectifier. On information and belief, this includes the patents assigned to
24 International Rectifier by Nitronex that are the subject of MACOM’s claim for
25 declaratory judgment of noninfringement below.

26 26. On September 8, 2015, Infineon AG stated in a press release that it had
27 a “broadened patent portfolio related to GaN” due to its acquisition of International
28 Rectifier (available at: <http://www.infineon.com/cms/en/about-infineon/press/press->

1 [releases/2015/INFPMM201509-077.html](https://www.releases/2015/INFPMM201509-077.html)). On information and belief, this includes
2 the patents assigned to International Rectifier by Nitronex that are the subject of
3 MACOM's claim for declaratory judgment of noninfringement.

4 27. Moreover, on information and belief, Infineon AG directs, controls, or
5 acts in concert with Infineon Americas to control the disposition and enforcement
6 of the Nitronex Patents; Infineon AG portrays itself in the market as having such
7 direction and control; and Infineon AG does not and has not permitted Infineon
8 Americas to act unilaterally or independently with respect to the Nitronex Patents.
9 Even if Infineon AG does not formally have title to the Nitronex Patents, to the
10 extent that Infineon AG or its subsidiaries other than Infineon Americas have
11 engaged in the design and manufacture of GaN-on-Si products, [REDACTED]

12 [REDACTED]
13 [REDACTED]
14 [REDACTED].
15 28. Infineon AG employees in Germany, along with Infineon Americas
16 employees in California, participated by phone in the 2015 and 2016 negotiations
17 with MACOM regarding the Nitronex-International Rectifier agreements, and
18 Infineon Americas employees told MACOM that Infineon AG had the decision-
19 making authority regarding those agreements.

20 29. Confirming Infineon AG's interest in the Nitronex Patents and the
21 Nitronex-International Rectifier agreements as a whole, as well as Infineon AG's
22 failure to respect corporate formalities and divisions, Infineon AG—not Infineon
23 Americas—signed the parties' Common Interest Agreement in 2015 when
24 MACOM and Infineon agreed to work together, [REDACTED]
25 [REDACTED], in connection with patent
26 prosecution issues for ongoing continuation applications in the Nitronex Patent
27 families. Infineon AG stated in the Common Interest Agreement that its signature
28

1 was both “for themselves and on behalf of any affiliates involved in the prosecution
2 of the patent applications that are the subject of this Agreement.”

3 30. Infineon AG’s control over Infineon Americas is so pervasive and
4 continuous that Infineon Americas is nothing more than an agent or instrumentality
5 of Infineon AG. Consistent with Infineon AG’s direction and control over all
6 aspects of Infineon Americas’ GaN business and other Infineon affiliates, Infineon
7 AG made, directed, and/or controlled the decisions that led to the acts alleged in
8 this Third Amended Complaint, including the decisions to: (a) wrongfully and
9 pretextually terminate the 2010 License Agreement; (b) develop and market (or to
10 continue developing and marketing) GaN-on-Si RF products within MACOM’s
11 exclusive field under the 2010 License Agreement, despite International Rectifier’s
12 promise not to do so; (c) refuse to take action against third-party infringers of the
13 Nitronex Patents; (d) after failing to take such action, refuse to assign back to
14 MACOM certain of the Nitronex Patents; and (e) take the position that the Nitronex
15 Patents are invalid.

16 31. As described above, Infineon Americas functions as Infineon AG’s
17 representative/agent and performs services for Infineon AG that are sufficiently
18 important such that, if Infineon Americas did not perform them, Infineon AG’s own
19 officials would undertake to perform substantially similar services.

20 32. On information and belief, for the reasons as described above, there is
21 such unity of interest and ownership between Infineon AG and Infineon Americas
22 that the separate personalities of the two entities no longer exist.

23 33. Infineon’s actions alleged in this Third Amended Complaint were
24 taken in bad faith, with an improper purpose, and by improper means. Failure to
25 disregard Infineon AG and Infineon Americas’ purportedly separate identities
26 would result in an injustice to MACOM.

27 34. Infineon AG intentionally acquired a California corporation precisely
28 because of the very GaN products and GaN business that are the subject of

1 MACOM's claims here, renamed the entity through a merger with a subsidiary,
2 and, on information and belief, directed its new subsidiary to wrongfully terminate
3 its contracts with MACOM. On information and belief, Infineon AG's actions
4 were all intended to disrupt the promises made by International Rectifier to
5 Nitronex/MACOM.

6 35. On information and belief, based on the timing of Infineon's attempts
7 to disrupt the International Rectifier-Nitronex agreements, it appears that Infineon
8 AG must have planned to do so even before its \$3 billion acquisition of
9 International Rectifier and that, indeed, the acquisition was motivated by a
10 wrongful desire to usurp MACOM's exclusive rights and markets.

11 36. In the alternative, Infineon AG's actions described herein indicate a
12 ratification or intent by Infineon AG to be bound by the Nitronex-International
13 Rectifier agreements, including the 2010 IP Purchase Agreement and the 2010
14 License Agreement. Infineon AG ratified these agreements by taking them over,
15 attempting to renegotiate their terms, and then purporting to terminate the 2010
16 License Agreement.

17 37. Infineon AG has succeeded to the rights and obligations of Infineon
18 Americas under the 2010 License Agreement and the 2010 IP Purchase Agreement
19 through ratification and/or because Infineon Americas is merely the alter ego or
20 acting as an agent of Infineon AG. Through such succession and through all the
21 conduct described above by which Infineon AG directed Infineon AG's own or
22 Infineon Americas' actions regarding the Nitronex-International Rectifier
23 agreements (including the 2010 IP Purchase Agreement and the 2010 License
24 Agreement) into this District, Infineon AG consented to the personal jurisdiction
25 and venue of the courts located in Los Angeles County, California because both
26 agreements contain provisions stating all disputes relating to the agreements should
27 be heard by the federal and state courts of Los Angeles County and consenting to
28 personal jurisdiction in those courts.

1 38. Further, to the extent that Infineon AG has not succeeded to
2 International Rectifier's rights under the 2010 IP Purchase and License
3 Agreements, it has purposefully submitted itself to the jurisdiction of the courts of
4 this District by intentionally engaging in conduct aimed at this District and resulting
5 in harm it knew was likely to be felt in this District, including intentionally
6 interfering with contracts of Infineon Americas, who is located in this District, and
7 MACOM, who has offices in this district, which contracts Infineon AG additionally
8 knew had forum selection clauses requiring disputes about those contracts to be
9 resolved in the federal and state courts of Los Angeles County.

10 *Venue*

11 39. Venue is proper in this District pursuant to 28 U.S.C. §§ 1400(b) and
12 1391 for the reasons stated above and because the parties have consented to the
13 personal jurisdiction and venue of the courts located in the Los Angeles County,
14 California.

15 **FACTUAL BACKGROUND**

16 40. The causes of action in this Third Amended Complaint relate to
17 contractual obligations arising from the transfer of patents from Nitronex
18 Corporation to International Rectifier in 2010 and the licensing of certain rights in
19 those patents back to Nitronex Corporation.

20 41. Nitronex Corporation was formed and incorporated in February 1999
21 by graduates of the "wide bandgap" semiconductors program at North Carolina
22 State University. It was headquartered in Durham, North Carolina.

23 42. A semiconductor is a material that conducts electrical current only
24 under certain conditions, such as when a sufficient voltage is applied to a
25 semiconductor device. Semiconductors are used extensively in the electronic
26 circuits necessary for all modern electronics. Wide bandgap semiconductors
27 specifically are made from materials that have higher energy electronic "band gaps"
28 (meaning more energy is required for an electron to transition or "jump" from the

1 valence band to the conduction band, allowing the electron to “flow” through a
2 circuit) than the traditional semiconductor material: silicon.

3 43. Wide bandgap materials are useful because they can tolerate higher
4 temperatures than traditional semiconductor materials and have a higher power
5 density, meaning that they can handle more power in a smaller device and
6 effectively transmit high-frequency signals.

7 44. Some of the most important wide bandgap materials are so-called
8 III-V semiconductors. These are materials that are made from the combination of
9 an element from row III of the periodic table and an element from row V of the
10 periodic table, as well as alloys of such materials. Examples include aluminum
11 nitride (made of aluminum and nitrogen), gallium nitride (made of gallium and
12 nitrogen), and gallium arsenide (made of gallium and arsenic), as well as alloys of
13 such materials. Other high bandgap materials include silicon carbide (formed of
14 silicon and carbon) and diamond.

15 45. Gallium nitride in particular is a highly useful material for creating
16 high power and high-frequency RF devices (*i.e.*, devices that operate at radio
17 frequencies of the electromagnetic spectrum), high-power and small form factor
18 power management devices, and for creating certain types of light emitting diodes,
19 as its wide bandgap and high breakdown characteristics allow it to transmit more
20 power at a higher voltage and frequency, with a smaller form factor, and because
21 gallium nitride and its alloys can naturally emit colors between red and ultra-violet
22 wavelengths without any frequency modification.

23 46. Although wide (or “high”) bandgap semiconductors, including gallium
24 nitride, have many desirable characteristics, one significant downside to them is
25 that they are significantly more expensive to manufacture than silicon-based
26 semiconductors.

27 47. This difference in material cost is especially important for the portion
28 of semiconductor devices known as the “substrate,” or the wafer, which is the base

1 on which most electronic devices (transistors, diodes, integrated circuits, etc.) are
2 created.

3 48. While silicon substrates or wafers are a ubiquitous and relatively
4 inexpensive commodity in today's economy, wafers made of more exotic high-
5 bandgap materials, such as gallium nitride, silicon carbide, or diamond can be
6 hundreds of times more expensive than traditional silicon wafers.

7 49. Because of this difference in expense, it is highly desirable to form
8 epitaxial (*i.e.*, deposited) layers of wide bandgap materials, including gallium
9 nitride, on less expensive substrates, such as silicon, to the extent possible.

10 50. There are significant technical difficulties, however, in building certain
11 wide bandgap semiconductors (including GaN) on silicon substrates. This is
12 because the mismatch in the crystalline structure between, for example, gallium
13 nitride and silicon leads to stress between the deposited gallium nitride material and
14 the silicon substrate—and consequently the generation of crystalline lattice defects.
15 Additionally, the thermal expansion coefficients (a representation of the amount by
16 which a material expands as a function of temperature) between GaN and silicon
17 are mismatched, which can result in additional stresses in the GaN-on-Si wafers,
18 when heated or cooled, causing unacceptable wafer warp and bow or causing
19 devices to crack. These problems reduce the yield (the percentage of functioning
20 devices) for gallium nitride devices produced on silicon wafers.

21 51. One solution to the crystalline mismatch problem is to simply use a
22 substrate that has less mismatch with gallium nitride. For example, one could use
23 silicon carbide (“SiC”), which has a crystalline structure that is much closer to
24 gallium nitride's structure, as the substrate (“GaN-on-SiC”). Alternatively, one
25 could use gallium nitride as both the substrate material and the epitaxial layer
26 (“GaN-on-GaN”), so that there is no mismatch. The disadvantage of using silicon
27 carbide or gallium nitride substrates is that the cost of these materials is much
28

1 higher than the cost of silicon substrates, leading to higher overall cost devices and
2 an ultimate price point unsuited to many target markets.

3 **NITRONEX PIONEERED NUMEROUS FOUNDATIONAL**
4 **GALLIUM NITRIDE TECHNOLOGIES**

5 52. Nitronex was an innovative startup company that pioneered
6 technologies that enabled the creation of high-performance GaN-on-Si
7 semiconductor solutions. Specifically, Nitronex focused on high-performance
8 gallium nitride devices formed on silicon substrates for RF applications.

9 53. Critical to Nitronex's success in creating gallium nitride
10 semiconductor devices was the development of a method for reducing the effects of
11 the physical crystal lattice and thermal expansion mismatches between gallium
12 nitride active layers and the silicon substrates that Nitronex desired to use as the
13 base for its devices.

14 54. Rather than forming gallium nitride layers directly on the silicon
15 substrate, which had been unsuccessful, Nitronex instead placed a graded
16 "transition layer" between the silicon substrate and the active gallium nitride layers.
17 This transition layer mitigates the strain caused by the mismatch in crystalline
18 lattice spacing and thermal expansion coefficients between the gallium nitride
19 devices and the silicon substrate below.

20 55. Nitronex used this solution and developed a proprietary GaN-on-Si
21 manufacturing process, called the SIGANTIC® process, which solved many of the
22 problems associated with GaN-on-Si devices, allowing high-performance GaN
23 semiconductors to be formed on cost-effective silicon substrates. Nitronex used the
24 SIGANTIC® process to produce numerous RF GaN-on-Si devices.

25 56. Nitronex's technology was groundbreaking and ahead of its time.

26 57. Nitronex not only pioneered a solution to solve the crystalline and
27 thermal expansion mismatch between gallium nitride devices and silicon substrates,
28

1 but also developed other important technologies that improved the functionality of
2 gallium nitride RF devices.

3 58. Using its technology, Nitronex first demonstrated the capability to
4 form High Electron Mobility Transistors on 4-inch GaN-on-Si wafers in 2001.
5 This proved that Nitronex's technology worked to create transistor devices using
6 gallium nitride active layers formed on silicon substrates.

7 59. Later in 2001, Nitronex also demonstrated that its technology worked
8 for another important technology application of gallium nitride materials, producing
9 GaN-on-Si light emitting diode ("LED") devices.

10 60. Nitronex also pioneered the use of GaN-on-Si devices in high-
11 frequency RF products. Accurately predicting the future, Nitronex developed GaN-
12 on-Si RF products specifically designed for mobile communications. For example,
13 in 2003, Nitronex began sending sample GaN-on-Si RF products designed for the
14 WCDMA standard to customers. In 2004, Nitronex demonstrated the first-ever
15 GaN-on-Si monolithic microwave integrated circuit ("MMIC"), a type of circuit
16 that is often used in cellular devices to operate in a portion of the RF spectrum
17 known as the microwave range (300 MHz to 300 GHz). Following that, in 2005,
18 Nitronex introduced its GaN-on-Si product line for the WiMAX standard.

19 61. Nitronex's successes in creating GaN-on-Si devices and innovations
20 and the potential for these technologies to improve the functionality of various
21 technology fields, including RF and satellite communications, led to recognition
22 and funding from NASA and the Department of Defense. NASA and the
23 Department of Defense awarded Nitronex twenty-three grants, amounting to more
24 than \$9,000,000 in total funding between 1999 and 2012.

25 62. Nitronex also developed a significant patent portfolio based on its
26 innovations in GaN-on-Si technology.

27 63. Nitronex's first patent, U.S. Patent 6,611,002, entitled "Gallium
28 Nitride Material Devices and Methods Including Backside Vias," issued on August

1 26, 2003. Shortly thereafter, on September 9, 2003, Nitronex received its second
2 patent, U.S. Patent number 6,617,060, entitled “Gallium Nitride Materials and
3 Methods.”

4 64. To date, more than forty United States patents have issued based on
5 the foundational and groundbreaking GaN work done by Nitronex.

6 **NITRONEX AND INTERNATIONAL RECTIFIER**
7 **FORM A WORKING RELATIONSHIP**

8 65. Early in its existence, Nitronex began exploring the prospect of
9 licensing some aspects of its groundbreaking technology to raise capital.

10 66. At the same time, however, Nitronex wanted to ensure that it retained
11 exclusive rights to the GaN-on-Si technologies for applications that it believed were
12 the most critical—specifically, GaN-on-Si RF applications.

13 67. Nitronex therefore sought a licensing and collaboration partner who
14 desired rights to use GaN-on-Si technology in other fields of use besides RF.

15 68. As of 2004, International Rectifier was a well-established company in
16 the power management space. By 2004, International Rectifier was also working to
17 develop and to introduce gallium nitride power management devices specifically,
18 having recently acquired GaNRose, a company focused on gallium nitride devices,
19 but it was encountering technical challenges that limited its ability to produce
20 functioning GaN-on-Si power management products in bulk. It needed help to
21 break through these challenges to make its products successful.

22 69. In 2004, each party found what it was seeking. Nitronex found
23 funding and a partner who was focused on the power management field (not RF),
24 and International Rectifier found the expertise in executing on GaN-on-Si products
25 that it was seeking.

26 70. Specifically, in early 2004, International Rectifier approached
27 Nitronex to evaluate the Nitronex GaN-on-Si technology for potential use in the
28 GaN-based power management market. As International Rectifier had no internal

1 capability or know-how to manufacture its own GaN-on-Si wafers, Nitronex
2 provided GaN-on-Si devices to International Rectifier for evaluation.

3 71. International Rectifier and Nitronex formalized their working
4 relationship in a License Agreement (“2004 License Agreement”) and Technology
5 Transfer Agreement.

6 72. The 2004 License Agreement granted International Rectifier the
7 exclusive right to practice certain of the Nitronex Patents in only International
8 Rectifier’s field of use (power management). It also explicitly required Nitronex
9 and International Rectifier to work together to transfer much of Nitronex’s GaN-on-
10 Si technology to International Rectifier.

11 73. Throughout 2005 and into 2006, [REDACTED]
12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED].

20 74. Additionally, Nitronex [REDACTED]
21 [REDACTED]
22 [REDACTED]. Nitronex and
23 International Rectifier partnered in a working business relationship that lasted for
24 years thereafter, with each party operating in its chosen field—power management
25 for International Rectifier and RF for Nitronex. International Rectifier, and later
26 Infineon, benefitted from their relationship with Nitronex (which was later acquired
27 by MACOM). The relationship was valued so much by International Rectifier that,
28 prior to Nitronex closing on a series A-1 Preferred Stock Financing in May of 2006

1 with a new investor syndicate led by Alloy Ventures, International Rectifier made a
2 failed bid at acquiring Nitronex, which was turned down by the Nitronex Board of
3 Directors in favor of new venture financing.

4 **TRANSFER OF PATENTS FROM NITRONEX TO**
5 **INTERNATIONAL RECTIFIER IN 2010**

6 75. In 2008, with the benefit of Nitronex's patented technology and
7 knowhow, International Rectifier began commercially selling GaN-on-Si power
8 devices, announcing that they were offering this technology as their "GaNpowIR"
9 products.

10 76. By 2010, International Rectifier was producing significant quantities
11 of its GaN-on-Si power devices, its devices having won several awards in 2009 for
12 its GaNpowIR technology.

13 77. By 2010, Nitronex was producing commercial GaN-on-Si RF
14 products, with most of Nitronex's sales to aerospace and defense customers.
15 Nitronex's technology remained ahead of the mainstream, but Nitronex again
16 needed an influx of money to continue operating its business.

17 78. In 2010, Nitronex again sought to raise funding. In doing so, one of
18 Nitronex's main goals was, again, to ensure that it retained exclusive rights to RF
19 applications using GaN-on-Si technologies. It was also important to Nitronex that
20 it retain rights to enforce its patent portfolio against infringement.

21 79. With those goals expressly in mind and cognizant of the relationship it
22 had already developed with International Rectifier over the years, Nitronex
23 negotiated a series of agreements with International Rectifier that resulted in the
24 transfer of the Nitronex Patents to International Rectifier, including an IP Purchase
25 Agreement and a new License Agreement (respectively, as discussed above, the
26 "2010 IP Purchase Agreement" and the "2010 License Agreement").
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THE 2010 IP PURCHASE AGREEMENT

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80. The 2010 IP Purchase Agreement provides that in return for [REDACTED], executing the 2010 License Agreement back to Nitronex, [REDACTED] [REDACTED] Nitronex would assign to International Rectifier fifty-four U.S. and international patents and applications, as well as the right to file related applications. *See* Exhibit 1 (under seal), at Sections 1.01, 2.01, 2.02.

81. The 2010 IP Purchase Agreement requires that International Rectifier and Nitronex work together regarding enforcement of the Nitronex Patents. [REDACTED] [REDACTED] further requiring International Rectifier to proceed against the third-party infringers of which it is aware:

[REDACTED]

Exhibit 1, at Section 4.02 (emphasis added); *see id.* at Section 1.01.

82. Section 4.02 further provides that if International Rectifier fails to pursue in an infringement action or otherwise resolve third-party infringement concerns in the manner prescribed within three months of the notice, then Nitronex shall have the right to sue the third-party infringer and International Rectifier must take all actions requested by Nitronex (including assigning back to Nitronex any

1 patents that are subject to a notice of infringement) to enable Nitronex to exercise
2 its rights under Section 4.02:

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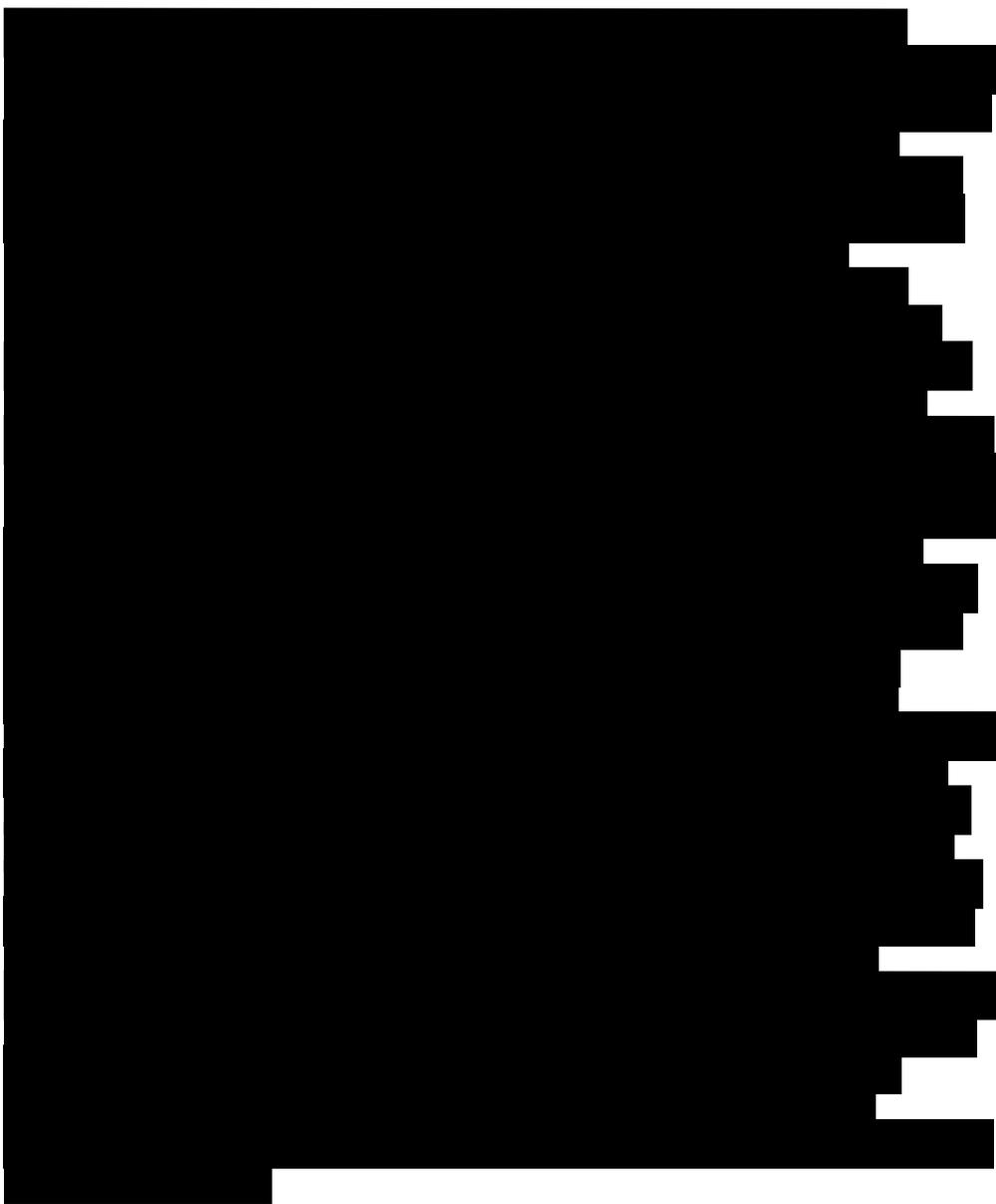


Exhibit 1 at Section 4.02 (emphasis added); *see id.* at Section 1.01.



1 [REDACTED]
2 [REDACTED]
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4 [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED]
9 [REDACTED]
10 [REDACTED]
11 [REDACTED]
12 [REDACTED]
13 [REDACTED]

14 [REDACTED]
15 [REDACTED]
16 [REDACTED]
17 [REDACTED]
18 [REDACTED]
19 [REDACTED]
20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]

27 *Id.*, at Section 4.01 (emphasis added).

28

1 85. Since the closing of the 2010 IP Purchase Agreement, International
2 Rectifier (and then Infineon) have filed at least twenty more applications related to
3 the thirty-two United States patents and applications that claim priority to such
4 Nitronex filings and has received at least fifteen patents based on the related
5 applications that it has filed.

6 86. Together, the thirty-two United States patents and applications, as well
7 as the related applications later filed by International Rectifier and Infineon, and
8 any additional patents that issued from these applications, comprise the “Nitronex
9 Patents,” including specifically at least U.S. Patents and U.S. Patent Applications
10 Nos.: 6,649,287, 6,617,060, 8,105,921, 8,344,417, 8,592,862, 8,937,335, 8,928,034,
11 8,928,035, 9,064,775, 9,437,686, 9,461,119, 9,437,687, 14/926,279, 6,611,002,
12 7,233,028, 6,956,250, 7,135,720, 7,352,016, 7,569,871, 7,994,540, 7,071,498,
13 7,361,946, 7,339,205, 7,352,015, 12/023,480, 8,748,298, 7,247,889, 7,365,374,
14 7,791,106, 7,566,913, 8,067,786, 8,343,856, 8,859,400, 8,350,288, 8,680,570,
15 8,946,765, 7,687,827, 8,368,117, 9,608,102, 8,026,596, 7,745,848, 8,026,581,
16 8,358,005, 8,343,824, 8,629,453, 11/261,942, 11/543,010, 9,318,417, 15/240,789,
17 and 15/433,473.

18 87. The 2010 IP Purchase Agreement specifies that it will be governed by
19 the laws of California, [REDACTED]

20 [REDACTED]
21 [REDACTED]
22 [REDACTED]
23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]
28 [REDACTED]

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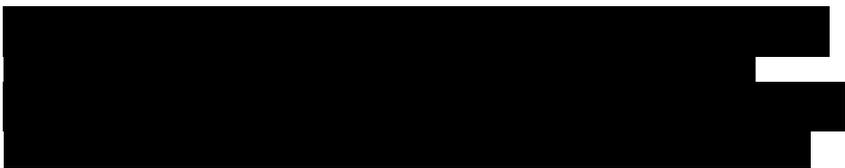
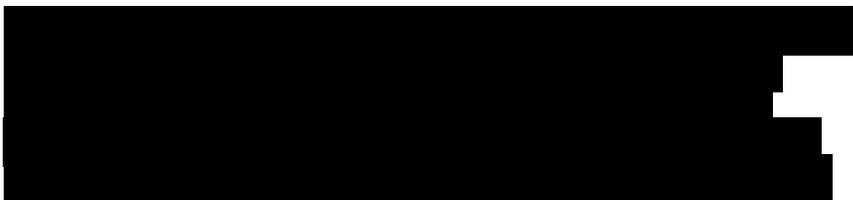
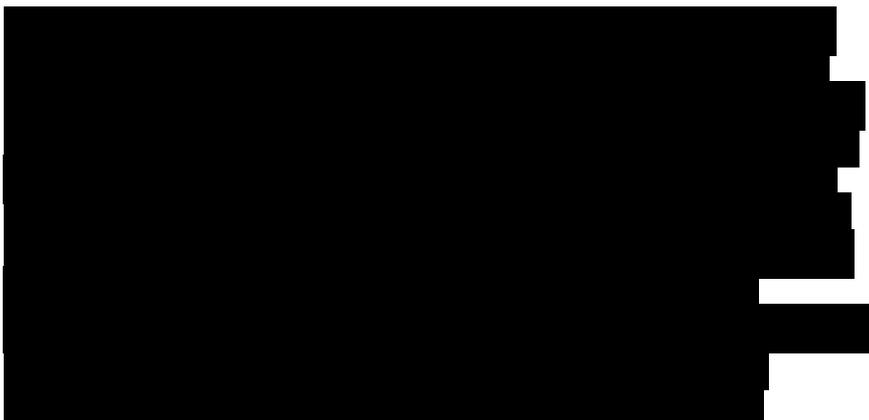


Exhibit 1, at Section 12.02 (emphasis added).

THE 2010 LICENSE AGREEMENT

88. When Nitronex sold the Nitronex Patents to International Rectifier, it negotiated for and obtained rights to continue to use the Nitronex Patents to develop, manufacture, and sell GaN-on-Si RF products, including the exclusive right to develop, manufacture, and sell GaN-on-Si RF products for certain applications, such as cellular base stations.

89. The 2010 License Agreement, which formed part of the consideration for the 2010 IP Purchase Agreement, provides to Nitronex a license back to the Nitronex Patents—with sole rights to sublicense—allowing both Nitronex and International Rectifier (but no one else) to practice in certain parts of the “Field of Use” of GaN-on-Si RF devices. “Field of Use” and “GaN on Silicon Technology” are defined by the agreement as follows:



See Exhibit 2 (under seal), at §§ 1.3, 1.4 and 2.1.

1 90. The 2010 License Agreement further provides that Nitronex would
2 have the *exclusive* right to practice the Nitronex Patents, *even against*
3 *International Rectifier*, within Nitronex’s Exclusive Field, which included most
4 RF applications in the Field of Use, except those that operate solely below 100MHz
5 in frequency:

6 2.1. IR hereby grants to Nitronex the following: a) a
7 worldwide, royalty-free, fully paid exclusive license in
8 the Field of Use only, with right to sublicense in the Field
9 of Use only, to use the Licensed Patents to design,
develop, make, have made, use, offer to sell, sell and
service Products:

[REDACTED]

18 *Id.* at § 2.1; *see also id.* at §§ 1.2 – 1.2.9 and 1.8.

19
20 91. Specifically, the 2010 License Agreement granted Nitronex exclusive
21 rights to develop and sell GaN-on-Si products for many of the most valuable RF
22 applications, including cellular telephone infrastructure base stations and repeaters:

23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]
28 [REDACTED]

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[REDACTED]

Id. at § 1.2 (emphasis added).

1 92. Notably, International Rectifier agreed in an express negative covenant
2 that MACOM’s exclusive rights in the Exclusive Field were truly exclusive, even
3 as against International Rectifier, and not just third parties, stating, “IR itself may
4 *not* directly or indirectly market, sell or service Products in the Exclusive Field.”
5 See Section 2.1 of the 2010 License Agreement.

6 93. Nowhere in the 2010 License Agreement does Nitronex expressly or
7 impliedly promise to refrain from practicing the Nitronex Patents outside of its
8 fields of use; instead, the 2010 License Agreement merely specifies the extent to
9 which Nitronex may practice the Nitronex Patents without fear of suit for
10 infringement. This stands in stark contrast to the express negative covenant
11 confirmed by International Rectifier in Section 2.1 of the 2010 License Agreement,
12 where International Rectifier agreed not to practice in MACOM’s Exclusive Field.
13 This makes it clear that the drafters of the agreement knew how to specify in a
14 negative covenant what each party was prohibited from doing by the terms of the
15 agreement, when they wanted to do so and a meeting of the minds had been reached
16 in that regard. There was no meeting of the minds as to a prohibition on Nitronex’s
17 use of GaN-on-SiC.

18 94. The licenses to Nitronex (and then MACOM) in the 2010 License
19 Agreement were put in place specifically to cover existing Nitronex GaN-on-Si RF
20 products and other such products to be developed in the future, and thus to protect
21 Nitronex (and then MACOM) from patent infringement allegations following the
22 sale of the Nitronex Patents.

23 [REDACTED]
24 [REDACTED]
25 [REDACTED]
26 [REDACTED]
27 [REDACTED]

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[REDACTED]

[REDACTED]

96. Section 7.1 provides that the 2010 License Agreement can only be terminated for a breach that is both material and which is not cured within 30 days of receipt of written notice of such a breach:

[REDACTED]

Id. at § 7.1.

97. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED].

99. Both International Rectifier and Nitronex continued to develop and manufacture devices in their chosen [REDACTED]

[REDACTED] and RF for Nitronex.

MACOM ACQUIRES NITRONEX

1
2 100. In June of 2012, Nitronex Corporation was acquired by investment
3 firm GaAs Labs, a company then having a common controlling stockholder with
4 MACOM. Nitronex Corporation was thereafter converted from a corporation to a
5 limited liability company and renamed Nitronex, LLC.

6 101. MACOM is a semiconductor company that designs and manufactures
7 custom devices, integrated circuits, components, modules, and assemblies for high-
8 performance applications, including satellite, radar, wireless networks and mobile
9 devices, and is a leading provider of high performance analog RF and photonic
10 semiconductor products.

11 102. On February 13, 2014, MACOM announced the purchase of Nitronex,
12 LLC from GaAs Labs, and Nitronex, LLC became a wholly-owned subsidiary of
13 MACOM.

14 103. MACOM acquired Nitronex because it wanted to invest its business
15 and product development efforts on the promising GaN-on-Si market. In other
16 words, MACOM recognized that GaN-on-Si RF devices have a lower cost structure
17 than other competing technologies, making them suitable for cost-sensitive
18 commercial applications, such as mobile wireless communications network base
19 stations and commercial RF applications.

20 104. MACOM expects GaN-on-Si RF devices will be a core component of
21 its business in years to come and further believes GaN-on-Si devices may be the
22 future of commercial RF applications, bringing the high-performance of gallium
23 nitride devices together with the lower cost structure of silicon substrates, providing
24 significantly improved performance as compared to the silicon LDMOS
25 technologies that currently are common in RF chips used in mobile wireless
26 communications network base stations. Industry analysts project that GaN-on-Si
27 devices will capture a significant portion of the RF market—and that this market
28 will grow to *hundreds of millions of dollars in sales per year* by 2020. Infineon

1 itself predicts that the GaN-on-Si RF cellular infrastructure market (*i.e.*, base
2 stations) will grow to \$110 million by 2020 and \$460 million by 2025. (*See*
3 [http://www.infineon.com/dgdl/2016-07-14_Infineon+to+acquire+Wolfspeed_](http://www.infineon.com/dgdl/2016-07-14_Infineon+to+acquire+Wolfspeed_Investor+Presentation.pdf?fileId=5546d46155dd90e10155e8859aae01d5)
4 [Investor+Presentation.pdf?fileId=5546d46155dd90e10155e8859aae01d5](http://www.infineon.com/dgdl/2016-07-14_Infineon+to+acquire+Wolfspeed_Investor+Presentation.pdf?fileId=5546d46155dd90e10155e8859aae01d5), at 11, last
5 visited by MACOM on July 19, 2016.)

6 105. Nitronex assigned certain of its rights under the 2010 IP Purchase
7 Agreement to MACOM. It also sublicensed its rights under the 2010 License
8 Agreement to MACOM.

9 106. After Nitronex was acquired by GaAs Labs and later MACOM,
10 Nitronex, and then MACOM, continued—without problems—to work in parallel
11 with International Rectifier toward achieving common goals with respect to the
12 Nitronex Patents and GaN-on-Si technologies. To the best of MACOM’s
13 knowledge at the time, each company continued to operate in its designated field(s)
14 of use.

15 **INFINEON ACQUIRES INTERNATIONAL RECTIFIER**

16 107. On August 20, 2014, Infineon Technologies AG and International
17 Rectifier announced that they had entered into an agreement for Infineon to acquire
18 International Rectifier.

19 108. On information and belief, Infineon historically has produced both
20 power management and RF semiconductor devices using technologies other than
21 GaN-on-Si. Infineon’s acquisition of International Rectifier signaled its desire to
22 expand its product offerings into GaN-on-Si. Indeed, Infineon’s announcement of
23 the acquisition specifically highlighted the important role of GaN-on-Si technology
24 for Infineon:

25 Integration complements Infineon’s expertise in power
26 semiconductors and adds system know-how in power
27 conversion, while expanding its expertise in compound
28 semiconductors (Gallium Nitride on Silicon) and driving
greater economies of scale in production.

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With International Rectifier, Infineon acquires an advanced manufacturer in Gallium Nitride on Silicon (GaN) based power semiconductors. This combination will accelerate and solidify Infineon's position in GaN discretes and GaN system solutions, improving its ability to pursue this strategically important technology platform with significant future growth potential.

The transaction will result in a broad range of products creating a comprehensive provider in the market for silicon-, silicon-carbide- and gallium-nitride-based power devices and integrated circuits (ICs).

See <http://www.infineon.com/cms/en/about-infineon/press/press-releases/2014/INFXX201408-056.html>.

109. Similarly, an Infineon press release related to the acquisition described International Rectifier as:

International Rectifier is highly complementary to Infineon: the combined company gains greater scope in product portfolio and regions, especially with small and medium enterprise customers in the US and Asia. The merger taps additional system know-how in power management. It expands the expertise in power semiconductors, also combining leading knowledge in compound semiconductors, namely Gallium Nitride. Furthermore, the acquisition will drive greater economies of scale in production, strengthening the competitiveness of the combined company.

See <http://www.infineon.com/cms/en/about-infineon/press/press-releases/2015/INFXX201501-020.html>.

110. On January 13, 2015, Infineon Technologies AG announced that it had closed the acquisition of International Rectifier.

111. Based on Infineon's representations, International Rectifier ceased to exist as an operating entity in mid-2015. International Rectifier manufactured power management semiconductor devices and products prior to and for at least for some time after its acquisition by Infineon, on information and belief, including GaN-on-Si power management products. Infineon has continued to produce at least

1 some of these and possibly other GaN-on-Si power management products after the
2 acquisition.

3 112. United States PTO records continue to list International Rectifier as
4 the current assignee of most of the Nitronex Patents. Based on Infineon's
5 representations, however, title to the Nitronex Patents has actually now passed to
6 Infineon Americas, regardless of what the PTO's records reflect.

7 113. On information and belief, Infineon AG spent approximately \$3 billion
8 to acquire International Rectifier not only because it wanted to continue producing
9 the GaN-on-Si power management devices that International Rectifier already had
10 in its portfolio at the time, but also to disrupt and thwart the purposes of the
11 Nitronex-International Rectifier agreements and expand into MACOM's (and
12 formerly Nitronex's) core GaN-on-Si business area, RF products, including
13 MACOM's exclusive field of cellular base stations.

14 114. [REDACTED]
15 [REDACTED]. Infineon AG knew at the time it
16 acquired International Rectifier that it was impossible to make and sell GaN-on-Si
17 in any commercially practical way without practicing the Nitronex Patents.

18 115. Infineon has stated that GaN-on-Si will be the technology having the
19 largest share of the RF power cellular infrastructure market by 2025 (\$460M,
20 compared to only \$380M for GaN-on-SiC and \$280M for Si (LDMOS)).

21 **INFINEON ATTEMPTS TO DISRUPT AND RENEGOTIATE THE**
22 **IR/NITRONEX AGREEMENTS**

23 116. Almost immediately after Infineon AG acquired International
24 Rectifier, it continued to execute on its plan to disrupt or "renegotiate" the
25 Nitronex-International Rectifier agreements in order to gain rights to use the
26 Nitronex Patents to develop GaN-on-Si products within MACOM's Exclusive
27 Field. Infineon consistently attempted to thwart the purposes of the 2010 IP
28 Purchase Agreement and the 2010 License Agreement.

1 117. For instance, just two weeks after the acquisition had closed, Infineon
2 sent MACOM a letter complaining about the contents of a year-old press release
3 that MACOM had previously issued without any protest (or even comment) by
4 International Rectifier. That press release, dated April 1, 2014, merely announced
5 that MACOM had reached an agreement with a supplier of its GaN-on-Si wafers
6 for RF applications that included a license to MACOM’s intellectual property
7 rights—exactly as permitted by the underlying 2010 License Agreement with
8 International Rectifier.

9 118. Infineon’s letter nevertheless accused MACOM of acting outside of
10 the 2010 License Agreement.

11 119. Though these accusations were completely without basis, as MACOM
12 explained in a response letter to Infineon and International Rectifier, Infineon and
13 International Rectifier also sent a letter to MACOM’s supplier, complaining of the
14 potential “proliferation of [International Rectifier’s] patented technology” and
15 asking MACOM’s supplier to discuss “the legal basis upon which [it] intends to
16 operate.” This was the first, but not the last instance, of Infineon making pretextual
17 and contrived arguments and threats in an illegitimate attempt to “chill” MACOM’s
18 legitimate practice of its rights in accordance with the terms of the Nitronex-
19 International Rectifier agreements, including the 2010 IP Purchase Agreement and
20 the 2010 License Agreement.

21 120. On information and belief, Infineon’s predominant purpose in sending
22 these letters was to interfere with MACOM’s abilities to produce GaN-on-Si RF
23 devices and to disrupt MACOM’s ongoing business relationship with its supplier.

24 121. After Infineon’s letters to MACOM and its supplier, the relationship
25 between MACOM, on the one hand, and Infineon and its subsidiaries, on the other,
26 became contentious, even though Infineon never further pursued (or even referred
27 to) the spurious allegations made in its January 2015 letters to MACOM and its
28 supplier.

1 122. For instance, later during 2015, MACOM repeatedly tried to engage
2 with Infineon regarding enforcement of the Nitronex Patents against ongoing third-
3 party infringement. The parties had several discussions on the subject, but Infineon
4 ultimately was not interested in working with MACOM in good faith on this topic.

5 123. Instead, Infineon repeatedly raised the prospect of renegotiating the
6 2010 License and IP Purchase Agreements such that MACOM would lose its
7 exclusive rights in the RF field. Although MACOM was willing to discuss possible
8 mutually-beneficial modifications to the Nitronex-International Rectifier
9 agreements, it repeatedly made clear that it was not willing to agree to any
10 modifications to the agreements that would allow Infineon rights in MACOM's
11 exclusive GaN-on-Si RF fields.

12 124. Infineon's representatives on multiple phone conversations regarding
13 the 2010 License and IP Purchase Agreements included Infineon in-house lawyers
14 in Germany, who are employed by Infineon AG. Indeed, in several instances,
15 phone calls were specifically scheduled at times early in the day Pacific time to
16 accommodate the time change so that these Infineon AG employees in Germany
17 could participate. In some instances, only MACOM's counsel and Infineon AG
18 employees were on calls to discuss issues relating to the International Rectifier-
19 Nitronex agreements, whereas both Infineon AG and Infineon Americas in-house
20 counsel joined other calls. Further, Infineon Americas in-house lawyers in the U.S.
21 indicated on several occasions when MACOM's lawyers called them directly (or
22 vice versa) that decisions regarding patent matters were controlled by Infineon in
23 Germany. MACOM understood these references to refer to Infineon AG because,
24 on information and belief, Infineon Americas does not have its own offices and
25 employees in Germany separate from Infineon AG's.

26 125. On information and belief, Infineon AG is the decision-maker with
27 respect to its subsidiaries' activities relating to the Nitronex Patents and the 2010 IP
28 Purchase and License Agreements. Neither the in-house lawyers for Infineon AG

1 nor the in-house lawyers for Infineon Americas who participated in the calls about
2 the Nitronex-International Rectifier agreements described above ever said anything
3 (or wrote anything in the parties' many exchanged letters) to suggest that the
4 Infineon AG lawyers participating in these calls were acting as counsel to Infineon
5 Americas or as agents of Infineon Americas. All of these communications directly
6 related to the conduct from which many of MACOM's claims arise.

7 126. There was one instance when MACOM and Infineon managed to
8 cooperate with respect to the Nitronex-International Rectifier agreements. In that
9 instance, MACOM and Infineon agreed to enter into a common interest agreement
10 to cooperate in the prosecution of the Nitronex Patents, [REDACTED]
11 [REDACTED]. Notably,
12 Infineon AG itself signed onto the Common Interest Agreement on behalf of itself
13 and its affiliates, confirming Infineon AG's interest in the Nitronex Patents and the
14 underlying 2010 Nitronex-International Rectifier agreements and that Infineon AG
15 controlled all matters relating to the Nitronex Patents and the 2010 Agreements. In
16 fact, two separate employees of Infineon AG—the very same people who were
17 involved for Infineon AG in all of the negotiations with MACOM relating to the
18 Nitronex-International Rectifier agreements—signed the common interest
19 agreement on behalf of Infineon AG. *See* Exhibit 3 at 5.

20 **INFINEON RAISES ALLEGED GAN-ON-SIC INFRINGEMENT TO**
21 **INCREASE ITS NEGOTIATION LEVERAGE**

22 127. On its calls with MACOM, Infineon's representatives (including
23 Infineon AG's representatives) stated, without providing any specifics or
24 identifying particular patents, that Infineon believed MACOM was infringing
25 unidentified Nitronex Patents by selling gallium nitride-on-silicon *carbide* ("GaN-
26 on-SiC")³ devices. MACOM had not previously been aware that Infineon would

27 ³ As discussed above, GaN-on-SiC must be distinguished from GaN-on-Si, which
28 is a different (although in some cases competing) technology employing a
substrate made from silicon carbide, rather than one made from silicon.

1 take the position that the Nitronex Patents could be read to cover not just GaN-on-
2 Si products, but also GaN-on-SiC products.

3 128. To the best of MACOM's knowledge, neither International Rectifier
4 nor Infineon has ever previously (or since) claimed that any company selling GaN-
5 on-SiC products infringes the Nitronex Patents other than MACOM. This is true
6 even though other sellers of these products have both far larger sales than MACOM
7 and have been making those sales publicly for many more years than MACOM.

8 129. Beginning in 2011, well before its acquisition of Nitronex—and
9 separate and apart from the GaN-on-Si product lines, technology, and know-how it
10 acquired from Nitronex—MACOM has at various times sold and offered to sell
11 GaN-on-SiC products. Those MACOM GaN-on-SiC products have historically
12 used semiconductor wafers supplied by a third party. MACOM's sales from these
13 product lines have always been low in volume and revenue, and MACOM's GaN-
14 on-SiC third-party wafer supplier notified MACOM in 2015 (completely separate
15 from any of MACOM's discussions with Infineon about the Nitronex-International
16 Rectifier agreements) that it would no longer supply the wafers necessary to the
17 manufacture of MACOM's GaN-on-SiC products.

18 130. Infineon's allegations regarding GaN-on-SiC therefore coincidentally
19 came at a time when MACOM's existing GaN-on-SiC products were being
20 discontinued anyway.

21 131. Moreover, International Rectifier never complained about MACOM's
22 limited GaN-on-SiC sales prior to being acquired by Infineon.

23 132. MACOM repeatedly informed Infineon through both legal and
24 business channels of its low sales and the fact that its current GaN-on-SiC products
25 were being discontinued due to loss of its third-party supplier. MACOM has
26 further repeatedly offered to share its sales figures with International Rectifier
27 under an NDA—and even provided a draft of an NDA to Infineon. Infineon did not
28 express any interest in reviewing MACOM's sales data.

INFINEON ATTEMPTS TO SELL A PORTION OF THE NITRONEX PATENTS TO AN UNDISCLOSED BUYER

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133. In late 2015, Infineon informed MACOM that International Rectifier and/or Infineon was contemplating assigning a small number of the Nitronex Patents (not the entire portfolio) to an undisclosed third party for an undisclosed sum.

134. Infineon took the position that International Rectifier and/or Infineon did not need MACOM’s consent to proceed with the assignment, despite MACOM’s unequivocal disagreement with that reading of the parties’ obligations under the 2010 IP Purchase and License Agreements. *See id.* Infineon further refused to identify the proposed buyer(s) or provide its position as to what would happen with respect to the provisions of the agreements [REDACTED]

[REDACTED]. Infineon also refused to respond to repeated questions about whether the buyer had been informed of Nitronex and MACOM’s rights under the 2010 IP Purchase and License Agreements. MACOM was also left wholly uncertain as to Infineon and International Rectifier’s position with respect to whether the third-party buyer would be permitted to practice in the fields of use that Nitronex and International Rectifier shared under the 2010 License Agreement, where only Nitronex (and not Defendants) had rights to sublicense.

135. Section 12.12 of the 2010 IP Purchase Agreement recites, “Neither Party may assign, sell, hypothecate or otherwise transfer any interest in or obligation under this Agreement without the prior written consent of the other Party; ... Any assignment made in violation of this Section 12.12 shall be void.” *See Exhibit 1 at Section 12.12.*

1 136. Infineon's assignment of the Nitronex Patents without MACOM's
2 consent would be a breach of the 2010 IP Purchase Agreement.

3 **MACOM PROVIDES NOTICE OF INFRINGEMENT**
4 **BY THIRD PARTIES**

5 137. After MACOM's oral requests that Infineon and MACOM work
6 together to identify third-party infringers and begin to enforce the Nitronex Patents
7 were repeatedly ignored, MACOM sent Infineon and International Rectifier letters
8 on January 15, 2016, May 19, 2016, May 25, 2016, June 10, 2016, June 17, 2016,
9 June 24, 2016, May 15, 2017, and July 14, 2017, formally notifying them under the
10 2010 IP Purchase Agreement of infringement by identified third parties' specified
11 products of twenty particular Nitronex Patents.

12 138. Specifically, MACOM provided formal notice under Section 4.02 of
13 the IP Purchase Agreement to Infineon and International Rectifier that an identified
14 third-party was infringing at least one claim of each of U.S. Patents 6,649,287,
15 6,617,060, 8,105,921, 8,344,417, 8,592,862, 9,064,775, 7,596,871, 7,071,498,
16 7,687,827, 8,368,117, 6,956,250, 8,937,335, 8,928,034, 8,928,035, 8,026,596,
17 9,461,119, 9,437,686, 7,135,720, 7,352,016, and 7,994,540 by making and selling
18 GaN-on-Si products. The MACOM letters also identified specific products made
19 by the identified third parties as infringing and provided a detailed reverse
20 engineering analysis for each identified product, unequivocally demonstrating a
21 reasonable basis for the allegation of infringement.

22 139. MACOM also stated that it would deem the January 15th, 2016, May
23 19, 2016, May 25, 2016, June 10, 2016, June 17, 2016, June 24, 2016, May 15,
24 2017, and July 14, 2017 letters from MACOM to be notice by International
25 Rectifier (which is now Infineon) as required by the first sentence of Section 4.02
26 of the 2010 IP Purchase Agreement because MACOM already knew of the
27 infringement, despite International Rectifier's or Infineon's failure to provide
28 prompt notice as required by Section 4.02 of the 2010 IP Purchase Agreement.

1 140. MACOM also reminded Infineon and International Rectifier that, if
2 they should fail to pursue an infringement suit or to settle the claims in good faith
3 within three months, then Section 4.02 of the IP Purchase Agreement requires
4 International Rectifier (which is now Infineon) to allow Nitronex (now MACOM)
5 to file suit regardless of the field of use in which the infringement occurs and
6 further requires International Rectifier (which is now Infineon) to take all actions
7 requested by Nitronex to enable Nitronex to exercise its rights to pursue
8 infringement (including assigning the patents back to Nitronex).

9 141. The three-month time period for Infineon to either (a) pursue a claim
10 of infringement against the third-parties identified in MACOM's January 15, 2016,
11 May 19, 2016, May 25, 2016, June 10, 2016, June 17, 2016, June 24, 2016, May
12 15, 2017, and July 14, 2017 letters, (b) successfully persuade the identified third-
13 party infringers to stop infringing, or (c) to enter a settlement agreement with the
14 identified third-party infringers has expired.

15 142. On April 15, 2016, August 23, 2016, August 26, 2016, September 12,
16 2016, September 19, 2016, September 26, 2016, September 12, 2017, and October
17 16, 2017, MACOM wrote letters to Infineon concerning Defendants' failure to
18 satisfy any of the three conditions set forth above and demanded that Defendants
19 comply with their obligations under Section 4.02 and assign U.S. Patents
20 6,649,287, 6,617,060, 8,105,921, 8,344,417, 8,592,862, 9,064,775, 7,596,871,
21 7,071,498, 7,687,827, 8,368,117, 6,956,250, 8,937,335, 8,928,034, 8,928,035,
22 8,026,596, 9,461,119, 9,437,686, 7,135,720, 7,352,016, and 7,994,540 back to
23 MACOM. Absent that, MACOM would not have standing to bring suit against
24 infringing third parties.

25 143. Defendants have not assigned U.S. Patents 6,649,287, 6,617,060,
26 8,105,921, 8,344,417, 8,592,862, 9,064,775, 7,596,871, 7,071,498, 7,687,827,
27 8,368,117, 6,956,250, 8,937,335, 8,928,034, 8,928,035, 8,026,596, 9,461,119,
28 9,437,686, 7,135,720, 7,352,016, and 7,994,540 to MACOM.

INFINEON PURPORTS TO TERMINATE THE 2010 LICENSE AGREEMENT

1
2 144. In response to MACOM’s notice of third-party infringement, Infineon
3 again raised MACOM’s GaN-on-SiC sales, now in a formal letter to MACOM
4 dated February 2, 2016.

5 145. Infineon still did not identify any specific MACOM products that it
6 alleged were infringing, any specific patents it alleged were infringed (much less
7 any specific claims in those patents), leaving its allegations of infringement vague
8 and ambiguous.

9 146. Infineon further asserted for the first time that MACOM’s sales of
10 GaN-on-SiC products were a material breach of the 2010 License Agreement that,
11 if not remedied within 30 days, would allow Infineon to terminate that agreement
12 for material breach pursuant to its Section 7.1. In other words, Infineon in this
13 communication for the first time took the position that MACOM’s GaN-on-SiC
14 activities not only were an alleged patent infringement, but also a breach of
15 contract.

16 147. Prior to Infineon’s 2015 attempts to renegotiate the 2010 License
17 Agreement, neither Infineon nor International Rectifier had previously complained
18 regarding MACOM’s manufacture of limited quantities of GaN-on-SiC devices
19 during the over four years MACOM had provided them, including before
20 MACOM’s acquisition of Nitronex, as well as the entire time after Nitronex’s
21 acquisition, showing that neither Infineon nor International Rectifier considered this
22 activity as either infringing, material, or prohibited by the License Agreement.
23 Indeed, neither Infineon nor International Rectifier had ever suggested previously
24 that they intended to enforce the Nitronex Patents against any GaN-on-SiC sellers,
25 much less MACOM, which was a relatively small player in a GaN-on-SiC market
26 that was already mature and which already had multiple other competitors when
27 MACOM temporarily joined it.
28

1 148. MACOM responded to Infineon promptly, stating that Infineon's
2 allegations were not specific enough to allow MACOM to respond on the merits,
3 but that, even assuming infringement for the sake of argument, practicing licensed
4 patents beyond the scope of one's license was generally (and here) not a breach of
5 the license agreement, but instead simple patent infringement. In other words,
6 MACOM's sales of GaN-on-SiC products could not, as a matter of law, be a breach
7 of the 2010 License Agreement, much less a material one.

8 149. Furthermore, MACOM emphasized that its sales of GaN-on-SiC
9 devices were *de minimis*, such that they could not constitute a material breach of the
10 2010 License Agreement (even if such sales were a breach in the first place), and
11 that the MACOM products had further been end-of-lifed (referring to the supply cut
12 off by MACOM's third party supplier), which cured the breach in any case.

13 150. Rather than engaging with MACOM regarding these issues, Infineon
14 simply purported to terminate the 2010 License Agreement. Notably, in Infineon's
15 purported termination letter, dated March 22, 2016, Infineon for the first time
16 finally identified specific patents and a single MACOM product that Infineon
17 alleged to be infringing, a move seemingly calculated to allow MACOM no time
18 for evaluation and response before Infineon's pretextual "termination" had already
19 been effected.

20 151. Infineon's purported termination was without basis or cause, was done
21 in bad faith, and was pretextual. Its purpose was to attempt to wrongfully harm
22 MACOM by (i) rescinding MACOM/Nitronex's exclusive license to GaN-on-Si RF
23 products and allowing Infineon to itself engage in GaN-on-Si RF activities
24 prohibited by the 2010 License Agreement, (ii) escaping its obligations to jointly
25 enforce the Nitronex patents against third-party infringers [REDACTED]
26 [REDACTED], and (iii) making it easier for Infineon to sell a portion of the
27 Nitronex portfolio with less encumbrance.
28

1 152. On information and belief, Infineon AG directed Infineon Americas to
2 terminate or controlled Infineon Americas' termination of the 2010 License
3 Agreement.

4 153. MACOM responded to Infineon's purported termination letter on
5 April 1, 2016, explaining that Infineon's purported termination of the 2010 License
6 Agreement was without any basis and without effect. MACOM further informed
7 Infineon that it would continue to exercise its full rights under the 2010 License
8 Agreement.

9 154. MACOM has been and continues to produce and offer to sell, or is on
10 the cusp of producing and/or offering to sell, GaN-on-Si products with the
11 following MACOM part numbers: NPT1004D, NPT25015D, NPT35015D,
12 NPTB00050B, NPTB00025B, NPTB00025AB, NPTB00004D, NPTB00004A,
13 NPT35050AB, NPT25100P, NPT25100B, NPT2024, NPT2022, NPT2021,
14 NPT2020, NPT2018, NPT2010, NPT1015B, NPT1012B, NPT1010P, NPT1010B,
15 NPT1007B, NPA1008, NPA1007, NPA1006, NPA1003QA, MATR-GSHC03-
16 160150, MAGx-0011086, MAGe-102425-300, MAGX-100027-002, MAGX-
17 100027-005, MAGX-100027-010, MAGX-100027-015, MAGX-100027-050,
18 MAGX-100027-055, MAGX-100027-100, MAGX-100027-300, MAGe-102425-
19 030, MAGe-102425-050, MAGe-102425-100, MAGe-102425-200, MAGe-
20 102425-300, MAGe-102425-300G, MAGe-102425-300G0P, MAGe-100809-030,
21 MAGe-100809-500, MAGe-100809-600, MAGe-100809-1K0, MAGX-100912-
22 500, MAGX-100914-125, MAGX-100914-250, MAGX-100914-500, MAGX-
23 100914-650, MAGX-101214-1K1, MAGX-101214-500, MAMG-102933-060,
24 MAMG-102735-085, MAGX-103135-145, MAGX-103135-180, MAGX-102730-
25 400, MAGX-102731-180, MAGX-100027-010, MAMG-102733-085, MAMG-
26 102933-030, MAMG-103135-085, MAPG-10102729-400, MAGB-102527-
27 220A0P, MAGB-100025-080B0S, MAGB-100710-030S0P, MAGB-100710-
28 550S0S, MAGB-101819-750A0S, MAGB-101822-020S0P, MAGB-101822-

1 025B0P, MAGB-101822-090A0P, MAGB-101822-160A0P, MAGB-101822-
2 170B0P, MAGB-101822-220S0S, MAGB-101822-240B0P, MAGB-101822-
3 240B0S, MAGB-101822-270A0P, MAGB-101822-360A0P, MAGB-101822-
4 360S0P, MAGB-101822-380A0P, MAGB-101822-720S0S, MAGB-102122-
5 550A0S, MAGB-102324-220A0P, MAGB-102324-240B0S, MAGB-102324-
6 270A0P, MAGB-102324-300A0S, MAGB-102324-360A0P, MAGB-102324-
7 750A0S, MAGB-102325-025B0P, MAGB-102327-020S0P, MAGB-102327-
8 025B0P, MAGB-102527-025S0M, MAGB-102527-030S0P, MAGB-102527-
9 050B0P, MAGB-102527-050B0S, MAGB-102527-050S0P, MAGB-102527-
10 110S0S, MAGB-102527-180B0P, MAGB-102527-180B0S, MAGB-102527-
11 270A0P, MAGB-102527-270A0S, MAGB-102527-360A0P, MAGB-102527-
12 360A0S, MAGB-102527-450A0S, MAGB-102527-750A0S, MAGB-103436-
13 025B0P, MAGB-103436-025S0M, MAGB-103436-030S0P, MAGB-103436-
14 100B0S, MAGB-103436-110S0S, MAGB-103438-020B0S, MAGB-103438-
15 020S0P, MAGB-103537-100B0S, MAGB-200710-550S0S, MAGB-200910-
16 750A0S, MAGB-201822-550A0S, MAGB-202527-110S0S, MAGM-101822-
17 050A0P, MAGM-103436-040A0P, MAGM-103438-003B0P, and MAGM-103438-
18 040A0P.

19 155. MACOM's GaN-on-Si products are discrete RF power transistors and
20 RF amplifiers that are based on GaN-on-Si HEMT technology—the very types of
21 technologies that are the subject of the foundational Nitronex Patents. When it sold
22 the Nitronex Patents to International Rectifier, Nitronex secured continuing rights
23 to use the Nitronex Patents specifically to ensure that its GaN-on-Si RF products
24 would never be the subject of infringement allegations by International Rectifier or
25 any successor to International Rectifier. The same GaN-on-Si technologies
26 developed by Nitronex continue to be used in MACOM's products today.
27 Plaintiffs' license was put in place specifically to cover such products and protect
28 them from patent infringement allegations (which was an obvious concern in the

1 context of the sale of a company's entire patent portfolio), so Infineon's termination
2 of the 2010 License Agreement necessarily puts MACOM and its current products
3 at risk of an infringement suit and puts MACOM's customers in the apprehension
4 that they may be sued for patent infringement if they purchase and use MACOM's
5 products. Infineon's purported termination of the 2010 License Agreement in these
6 circumstances constitutes an express or implied threat to MACOM that it is at risk
7 of a patent infringement suit. MACOM's business, including its sales of all of the
8 GaN-on-Si products identified above, hangs under a cloud of uncertainty because of
9 the possibility of an infringement suit by Infineon.

10 156. MACOM and Nitronex spent millions of dollars and invested the time
11 and attention of key employees on the development and design of GaN-on-Si
12 products and in equipment and processes for the production of its GaN-on-Si RF
13 products.

14 157. MACOM considers its GaN-on-Si RF product lines to be of the
15 highest importance for its growth as a company and to open new and expand
16 existing customer relationships. It has long been MACOM's intent to make GaN-
17 on-Si RF products, especially in the wireless communications field, one of the
18 principal focuses of its business.

19 **INFINEON'S ATTEMPTS TO STEAL MARKET SHARE BY**
20 **MARKETING GAN-ON-SI RF PRODUCTS TO MACOM CUSTOMERS**

21 158. After Infineon purported to terminate the 2010 License Agreement,
22 causing MACOM to file its Original Complaint, dated April 26, 2016, MACOM
23 obtained confirmation that Infineon intends to enter the GaN-on-Si RF market and
24 has been working towards that goal [REDACTED] or even earlier.

25 159. As set forth above, the 2010 License Agreement prohibits Infineon
26 from directly or indirectly marketing or selling GaN-on-Si RF products within the
27 Exclusive Field reserved for Nitronex/MACOM, including GaN-on-Si RF products
28 for cellular base stations.

1 160. After MACOM filed its Original Complaint, MACOM learned from
2 several of its base station customers, and then confirmed through discovery, that
3 Infineon has been promoting and marketing GaN-on-Si RF products for use in
4 cellular base station applications. These activities by Infineon are prohibited by the
5 2010 License Agreement. Moreover, these customers have informed MACOM that
6 Infineon was, at one point, promising to provide them with samples of its GaN-on-
7 Si RF base station products before the end of 2016, although it since appears that
8 timeline has been delayed.

9 161. Upon initial receipt of a customer report that Infineon was promoting
10 GaN-on-Si RF base station products, MACOM contacted Infineon in May of 2016
11 to ask if Infineon was “designing and/or manufacturing GaN-on-Si RF base station
12 products, or discussing, demonstrating, sampling or otherwise communicating with
13 customer or potential customers regarding such products.” After several letters
14 back-and-forth, Infineon still had not provided MACOM the assurance it sought
15 that Infineon was not engaging in most of these activities.

16 162. Despite its refusal to engage in meaningful discussion with MACOM
17 on this topic, Infineon made public statements on July 14, 2016 indicating that it is
18 in the process of developing GaN-on-Si products for cellular applications (*i.e.*, base
19 stations).

20 163. Specifically, in the context of a July 14, 2016 announcement of an
21 acquisition of a GaN-on-SiC company, Infineon released investor presentation
22 slides where it stated that “Infineon [is] the only player with the full suite of RF
23 power technologies necessary for 5G” and that it has “GaN-on-Si” RF products in
24 development for this market. Infineon further stated that, in the future, Infineon
25 will be the “Cost-performance leader in GaN RF components” and will have the
26 “Most comprehensive portfolio.” Infineon predicted that the GaN-on-Si RF cellular
27 infrastructure market (*i.e.*, base stations) will grow to \$110 million by 2020 and
28 \$460 million by 2025. The slides for the July 14, 2016 presentation are currently

1 accessible at https://www.infineon.com/dgdl/2016-07-14_Infineon+to+acquire+Wolfspeed_Investor+Presentation.pdf?fileId=5546d46155dd90e10155e8859aae01d5.

4 164. Infineon intends to enter the GaN-on-Si RF market.

5 165. Infineon has been working towards the goal of entering the GaN-on-Si
6 RF market since before it sent the March 22, 2016 letter stating that Infineon was
7 terminating MACOM's license. Indeed, it turns out that [REDACTED]

8 [REDACTED]
9 [REDACTED], long before it acquired International Rectifier.

10 166. Infineon has been promoting and/or marketing GaN-on-Si RF products
11 for use in cellular base station applications since before it sent the March 22, 2016
12 letter stating that Infineon was terminating MACOM's license.

13 167. Based on the above-described customer reports, as confirmed by
14 Infineon's public statements and discovery, it is clear that Infineon has engaged and
15 is engaging in activities within MACOM's Exclusive Field that are expressly
16 prohibited by the 2010 License Agreement, that Infineon began those activities well
17 before it purported to terminate the 2010 License Agreement, and that Infineon's
18 termination of the 2010 License Agreement was a pretext that it hoped would allow
19 to continue with unauthorized activities in violation of its obligations to Plaintiffs.

20 168. To the extent that Infineon Americas itself has not performed any of
21 the activities described in Paragraphs 158 to 167 above, it has expressly or
22 impliedly authorized its affiliates to do so, in breach of the License Agreement
23 provisions that give MACOM the sole right to sublicense the Nitronex Patents in
24 the Field of Use.

INFINEON’S ATTEMPTS TO ESCAPE ALLEGATIONS OF BREACH BY CLAIMING THAT THE NITRONEX PATENTS ARE INVALID

169. Since the filing of this litigation, Infineon Americas has filed counterclaims of patent infringement against MACOM that are premised on Infineon’s theory that the License Agreement is terminated.

170. But Infineon Americas has also simultaneously defended against MACOM’s claims that it has breached its promises of exclusivity (*i.e.*, the claims that Infineon has practiced the Nitronex Patents in MACOM’s Exclusive Field) by taking the position that one or more of the Nitronex Patents are invalid and so cannot be subject to promises of exclusivity. Infineon AG has likewise taken the position that the supposed invalidity of the Nitronex Patents is a full defense to the claim that it intentionally interfered with Infineon Americas’ performance under the License and IP Purchase Agreements.

171. When Nitronex and International Rectifier entered into the License Agreement and IP Purchase Agreement in 2010, it was with the understanding that the parties would collaborate on enforcement of the Nitronex Patents, as evidenced by [REDACTED]

172. Prior to this litigation, neither International Rectifier nor Infineon ever took the position that the Nitronex Patents are invalid. To the contrary, the premise of the 2010 agreements was that International Rectifier wanted to obtain the foundational Nitronex Patents—and paid [REDACTED] to do so, even though they were to be subject to an exclusive license to MACOM in some fields of use—because of their value.

173. Nitronex would not have agreed to transfer the Nitronex Patents to International Rectifier but for the promises of exclusivity provided to Nitronex in its Exclusive Field.

1 174. Further, Infineon paid billions of dollars to acquire International
2 Rectifier, at least in part to obtain access to Nitronex technology and patents and as
3 part of its plan to launch GaN-on-Si RF power products for base stations.

4 175. Moreover, as described above, International Rectifier and Infineon
5 both continued to prosecute applications in the Nitronex Patent families after the
6 2010 transfer of those applications by Nitronex.

7 176. But now it has become strategically inconvenient for Infineon to
8 consistently acknowledge the validity of the foundational Nitronex Patents,
9 including even the validity of patents that it has itself prosecuted. Infineon
10 therefore undercuts the value of the promises and licenses that International
11 Rectifier gave to Nitronex by claiming that one or more Nitronex Patents are
12 invalid. This is not consistent with the promise of exclusivity to Nitronex (now
13 MACOM) for these patents.

14 177. Infineon's attempts to invalidate the Nitronex Patents (including
15 patents that International Rectifier and/or Infineon itself prosecuted) so as to avoid
16 allegations of breach are also inconsistent with its obligations of fair dealing under
17 California law and represent an attempt by Infineon to avoid its obligations under
18 its agreements with MACOM. Those attempts devalue the patents, which cannot
19 be reconciled with Infineon's implied promise to perform on the express
20  promises in the 2010 agreements in
21 good faith.

22 **FIRST CLAIM FOR RELIEF – Against Infineon Americas**
23 **(Breach of Contract – Wrongful Termination of 2010 License Agreement)**

24 178. The allegations contained in the preceding Paragraphs are incorporated
25 by reference herein.

26 179. Nitronex Corporation and International Rectifier Corporation entered
27 into the 2010 License Agreement.
28

1 180. The 2010 License Agreement is a valid contract, supported by
2 consideration under California Civil Code Sections 1550, *et seq.*

3 181. Nitronex Corporation and its successors-in-interest Nitronex, LLC and
4 MACOM have fully and/or substantially performed their duties under the 2010
5 License Agreement.

6 182. MACOM has not breached the 2010 License Agreement by selling
7 GaN-on-SiC devices.

8 183. In the alternative, MACOM has not materially breached 2010 License
9 Agreement by selling GaN-on-SiC devices.

10 184. Further in the alternative, MACOM cured any alleged breach.

11 185. Infineon Americas has breached the 2010 License Agreement by
12 purporting to terminate it.

13 186. Infineon Americas' purported termination of the 2010 License
14 Agreement was wrongful, pretextual, and made in bad faith.

15 187. As a direct and proximate result of Infineon Americas' breach of the
16 contract, Plaintiffs have suffered and will continue to suffer irreparable harm, as
17 well as damages, including in the form of diminished value and lost profits from
18 potential sublicensees and/or customers, uncertainty regarding MACOM's strategic
19 business activities, and increased legal and other fees.

20 188. Additionally, MACOM's damages for unwarranted loss of its
21 exclusive rights to the burgeoning GaN-on-Si RF devices market, which industry
22 analysts and even Defendants themselves estimate will grow to hundreds of
23 millions of dollars per year by the expiration of the Nitronex Patents, would be
24 substantial. MACOM would suffer significant lost revenues if Infineon is allowed
25 to enter this market segment as a competitor to MACOM.

26 189. Plaintiffs are entitled to relief, including damages, specific
27 performance and preliminary and permanent injunctive relief, as set forth below.,
28 or, in the alternative, rescission of the 2010 License Agreement and 2010 IP

1 Purchase Agreement and Nitronex Patent assignments, such that Plaintiffs retain
2 title to the Nitronex Patents and Infineon has no rights to or under them.

3 **SECOND CLAIM FOR RELIEF – Against Infineon Americas**
4 **(Breach of Contract – Marketing and Preparations for Sale of GaN-on-Si**
5 **Products within MACOM’s Exclusive Field of the 2010 License Agreement)**

6 190. The allegations contained in the preceding Paragraphs are incorporated
7 by reference herein.

8 191. Nitronex Corporation and International Rectifier Corporation entered
9 into the 2010 License Agreement.

10 192. The 2010 License Agreement is valid contract, supported by
11 consideration under California Civil Code Sections 1550, *et seq.*

12 193. Nitronex Corporation and its successors-in-interest Nitronex, LLC and
13 MACOM have fully and/or substantially performed their duties under the 2010
14 License Agreement.

15 194. MACOM has not breached the 2010 License Agreement by selling
16 GaN-on-SiC devices.

17 195. In the alternative, MACOM has not materially breached 2010 License
18 Agreement by selling GaN-on-SiC devices.

19 196. Further in the alternative, MACOM cured any alleged breach.

20 197. Infineon Americas, directly or indirectly, has breached the 2010
21 License Agreement by wrongfully engaging in activities to market and sell (or at
22 least prepare to sell) GaN-on-Si RF devices within MACOM’s Exclusive Field.

23 198. Infineon Americas has breached the 2010 License Agreement by
24 wrongfully authorizing, expressly or impliedly, its affiliates to engage in activities
25 in the Field of Use in breach of the License Agreement provisions that give
26 MACOM the sole right to sublicense the Nitronex Patents in the Field of Use.

27 199. As the direct and proximate result of Infineon Americas’ breach of the
28 contract, Plaintiffs have suffered and will continue to suffer irreparable harm, as

1 well as damages, including in the form of diminished value and lost profits from
2 potential sublicensees and/or customers, uncertainty regarding MACOM's strategic
3 business activities, and increased legal and other fees. If Infineon Americas is
4 allowed to directly or indirectly continue their activities and to enter the GaN-on-Si
5 RF market in MACOM/Nitronex's Exclusive Field (including producing and
6 selling GaN-on-Si cellular base station products), this harm and damage will
7 become more severe.

8 200. Additionally, MACOM's damages for unwarranted loss of its
9 exclusive rights to the burgeoning GaN-on-Si RF devices market, which industry
10 analysts and even Defendants themselves estimate will grow to hundreds of
11 millions of dollars per year by the expiration of the Nitronex Patents, would be
12 substantial. MACOM would suffer significant lost revenues and irreparable harm if
13 Infineon is allowed to enter this market segment as a competitor to MACOM.

14 201. Plaintiffs are entitled to relief, including damages, specific
15 performance, and preliminary and permanent injunctive relief, as set forth below,
16 or, in the alternative, rescission of the 2010 License Agreement and 2010 IP
17 Purchase Agreement and Nitronex Patent assignments, such that Plaintiffs retain
18 title to the Nitronex Patents and Infineon has no rights to or under them.

19 **THIRD CLAIM FOR RELIEF – Against Infineon Americas**
20 **(Declaratory Judgment – 2010 License Agreement Not Terminated)**

21 202. The allegations contained in the preceding Paragraphs are incorporated
22 by reference herein.

23 203. An actual and justiciable case or controversy exists between Plaintiffs
24 and Infineon Americas regarding the 2010 License Agreement and its purported
25 termination by Infineon Americas.

26 204. Infineon Americas has purported to terminate the 2010 License
27 Agreement.
28

1 205. Plaintiffs have not breached the 2010 License Agreement, much less
2 materially breached it. And, in any event, any breach has been cured. Thus,
3 Infineon Americas had no right to terminate the 2010 License Agreement.

4 206. Plaintiffs are entitled to a judgment declaring that Infineon Americas
5 (a) was not entitled to terminate the 2010 License Agreement, (b) the purported
6 termination of the 2010 License Agreement is null and void, and (c) that the 2010
7 License Agreement is still valid and binding as to Plaintiffs and Infineon Americas,
8 as set forth below, including to the extent that it limits Defendants' rights to
9 practice in fields that are exclusive to Nitronex and MACOM.

10 207. As a direct and proximate result of Infineon Americas' wrongful
11 termination of the 2010 License Agreement, Plaintiffs have suffered and will
12 continue to suffer irreparable harm, including in the form of diminished value and
13 lost profits from potential sublicenses and/or customers, uncertainty regarding
14 MACOM's strategic business activities, and increased legal and other fees.

15 208. Additionally, MACOM's damages for unwarranted loss of its
16 exclusive rights to the burgeoning GaN-on-Si RF devices market, which industry
17 analysts and even Defendants themselves estimate will grow to hundreds of
18 millions of dollars per year by the expiration of the Nitronex Patents, would be
19 substantial. MACOM would suffer significant lost revenues if Infineon is allowed
20 to enter this market segment as a competitor to MACOM.

21 209. Plaintiffs are entitled to preliminary and permanent injunctive relief, as
22 set forth below, including a preliminary and permanent injunction ordering Infineon
23 Americas, its officers, agents, servants, employees, attorneys, and any other person
24 or entity in active concert or participation with Infineon Americas to cease all
25 development, marketing, and sales activities for GaN-on-Si products in MACOM's
26 Exclusive Field.

27
28

1 **FOURTH CLAIM FOR RELIEF – Against Infineon Americas**
2 **(Breach of Covenant of Good Faith and Fair Dealing – 2010 License and IP**
3 **Purchase Agreements)**

4 210. The allegations contained in the preceding Paragraphs are incorporated
5 by reference herein.

6 211. Nitronex Corporation and International Rectifier Corporation entered
7 into the 2010 License Agreement.

8 212. The 2010 License Agreement is a valid contract, supported by
9 consideration under California Civil Code Sections 1550, *et seq.*

10 213. Nitronex Corporation and International Rectifier Corporation entered
11 into the 2010 IP Purchase Agreement.

12 214. The 2010 IP Purchase Agreement is a valid contract, supported by
13 consideration under California Civil Code Sections 1550, *et seq.*

14 215. Nitronex Corporation and its successors-in-interest Nitronex, LLC and
15 MACOM have fully and/or substantially performed their duties under the 2010 IP
16 Purchase and License Agreements.

17 216. Infineon Americas has breached the implied covenant of good faith
18 and fair dealing governing the 2010 License Agreement by wrongfully,
19 pretextually, and in bad faith attempting to terminate the 2010 License Agreement,
20 thus unfairly and prejudicially interfering with Plaintiffs' rights under the 2010
21 License Agreement.

22 217. Infineon Americas has also breached the implied covenant of good
23 faith and fair dealing governing the 2010 License Agreement by wrongfully and in
24 bad faith designing, developing, marketing, and preparing to sell GaN-on-Si RF
25 products within MACOM's Exclusive Field, thus unfairly and prejudicially
26 interfering with Plaintiffs' exclusive rights under the 2010 License Agreement.

27 218. Infineon Americas has breached the implied covenant of good faith
28 and fair dealing governing the 2010 IP Purchase Agreement by wrongfully refusing
to cooperate with MACOM in connection with patent enforcement matters and by

1 refusing to assign Nitronex Patents back to Plaintiffs so that Plaintiffs can enforce
2 those patents themselves.

3 219. Infineon Americas has breached the implied covenant of good faith
4 and fair dealing by taking the position that one or more of the Nitronex Patents are
5 invalid.

6 220. As a direct and proximate result of Infineon Americas' breach of these
7 contracts, Plaintiffs have suffered and will continue to suffer irreparable harm, as
8 well as damages, including in the form of diminished value and lost profits from
9 potential sublicenses and/or customers, uncertainty regarding MACOM's critical
10 and strategic business activities, and increased legal and other fees.

11 221. Additionally, MACOM's damages for unwarranted loss of its
12 exclusive rights to the burgeoning GaN-on-Si RF devices market, which industry
13 analysts and even Defendants themselves estimate will grow to hundreds of
14 millions of dollars per year by the expiration of the Nitronex Patents, would be
15 substantial. MACOM would suffer significant lost revenues if Infineon is allowed
16 to enter this market segment as a competitor to MACOM.

17 222. Plaintiffs are entitled to relief, including damages, specific
18 performance and preliminary and permanent injunctive relief, as set forth below.

19 **FIFTH CLAIM FOR RELIEF – Against Infineon Americas**
20 **(Declaratory Judgment – Non-Infringement of the Nitronex Patents by**
21 **MACOM's GaN-on-Si RF Products)**

22 223. The allegations contained in the preceding Paragraphs are incorporated
23 by reference herein.

24 224. When Nitronex agreed to sell the foundational Nitronex Patents to
25 International Rectifier in 2010, it negotiated for and obtained rights to continue to
26 use the Nitronex Patents to develop, manufacture, and sell GaN-on-Si RF products,
27 including the exclusive right to develop, manufacture, and sell GaN-on-Si RF
28 products for certain applications, including cellular base stations, and to ensure that

1 its GaN-on-Si RF products would never be the subject of infringement allegations
2 by International Rectifier or any successor to International Rectifier.

3 225. MACOM acquired Nitronex in 2014 to: provide MACOM with access
4 to Nitronex's fundamental and innovative GaN-on-Si technologies for use in RF
5 applications; enhance MACOM's development of GaN-on-Si RF products and
6 process technology; obtain rights to use (and for certain applications, exclusively
7 use) the foundational Nitronex Patents in its GaN-on-Si RF products and
8 manufacturing processes; and ensure that its GaN-on-Si RF products would never
9 be the subject of infringement allegations under the Nitronex Patents.

10 226. Since its acquisition of Nitronex, MACOM has continued to use the
11 foundational Nitronex GaN-on-Si technology and to invest in the development of
12 GaN-on-Si RF products, particularly for cellular base stations within its Exclusive
13 Field. MACOM has been actively marketing, offering for sale, and selling GaN-
14 on-Si RF products and plans to continue to do so.

15 227. After Infineon AG acquired International Rectifier, Infineon almost
16 immediately began to demand that MACOM relinquish its exclusive rights to use
17 the Nitronex Patents to develop and sell GaN-on-Si products for certain
18 applications, including the cellular base station market that MACOM is targeting.
19 When MACOM refused to relinquish those rights, Defendants purported to
20 terminate the 2010 License Agreement based on a pretextual claim that other
21 MACOM products infringed the Nitronex Patents.

22 228. According to Infineon, Infineon's purported termination of MACOM's
23 rights to use Nitronex Patents leaves MACOM's GaN-on-Si RF products
24 unlicensed. This has put MACOM in a position where it must either: abandon its
25 GaN-on-Si RF business, which it cannot do in view of the investment it has made in
26 GaN-on-Si and the importance of GaN-on-Si products to the company's future; or
27 pursue arguably infringing behavior, which puts MACOM at risk of an
28

1 infringement suit and puts MACOM's customers in the apprehension that they may
2 be sued for patent infringement if they purchase and use MACOM's products.

3 229. Infineon's purported termination of the 2010 License Agreement in
4 these circumstances constitutes an express or implied threat to MACOM that it is at
5 risk of a patent infringement suit. This threat is made worse by the fact that
6 Infineon is actively developing and marketing GaN-on-Si RF products to
7 MACOM's base station customers.

8 230. As a result, there is an actual, justiciable, substantial, and immediate
9 controversy between Plaintiffs and Infineon Americas regarding whether
10 MACOM's GaN-on-Si RF products infringe the Nitronex Patents.

11 231. MACOM is entitled to a judgment declaring that its activities in
12 designing, testing, use, manufacture, having manufactured, offering for sale, selling
13 and/or importing MACOM's GaN-on-Si RF products, including those identified
14 above, do not infringe the Nitronex Patents.

15 232. Plaintiffs are also entitled to preliminary and permanent injunctive
16 relief barring Infineon Americas from taking any action or making any statement
17 that asserts that the 2010 License Agreement has been terminated or that
18 MACOM's GaN-on-Si products are not licensed under the 2010 License
19 Agreement.

20 **SIXTH CLAIM FOR RELIEF – Against Infineon Americas**
21 **(Breach of Contract – Breach of 2010 IP Purchase Agreement)**

22 233. The allegations contained in the preceding Paragraphs are incorporated
23 by reference herein.

24 234. Nitronex Corporation and International Rectifier Corporation entered
25 into the 2010 IP Purchase Agreement.

26 235. The 2010 IP Purchase Agreement is a valid contract, supported by
27 consideration under California Civil Code Sections 1550, *et seq.*
28

1 236. Nitronex Corporation and its successors-in-interest Nitronex, LLC and
2 MACOM have fully and/or substantially performed their duties under the 2010 IP
3 Purchase Agreement, including by transferring the Nitronex Patents to International
4 Rectifier [REDACTED]. Neither Infineon nor
5 International Rectifier has claimed that MACOM or Nitronex have breached the
6 2010 IP Purchase Agreement in any way.

7 237. Infineon Americas has breached the 2010 IP Purchase Agreement by
8 failing to assign U.S. Patents 6,649,287, 6,617,060, 8,105,921, 8,344,417,
9 8,592,862, 9,064,775, 7,596,871, 7,071,498, 7,687,827, 8,368,117, 6,956,250,
10 8,937,335, 8,928,034, 8,928,035, 8,026,596, 9,461,119, 9,437,686, 7,135,720,
11 7,352,016, and 7,994,540 to Plaintiffs pursuant to its obligations under Section 4.02
12 of the 2010 IP Purchase Agreement, when, at least three months after MACOM
13 provided a detailed notice showing a reasonable basis for the allegation of
14 infringement of U.S. Patents 6,649,287, 6,617,060, 8,105,921, 8,344,417,
15 8,592,862, 9,064,775, 7,596,871, 7,071,498, 7,687,827, 8,368,117, 6,956,250,
16 8,937,335, 8,928,034, 8,928,035, 8,026,596, 9,461,119, 9,437,686, 7,135,720,
17 7,352,016, and 7,994,540, MACOM demanded that Infineon Americas assign U.S.
18 Patents 6,649,287, 6,617,060, 8,105,921, 8,344,417, 8,592,862, 9,064,775,
19 7,596,871, 7,071,498, 7,687,827, 8,368,117, 6,956,250, 8,937,335, 8,928,034,
20 8,928,035, 8,026,596, 9,461,119, 9,437,686, 7,135,720, 7,352,016, and 7,994,540
21 back to MACOM, and Infineon did not do so.

22 238. As a direct and proximate result of Infineon Americas' breach of the
23 contract, Plaintiffs have suffered irreparable harm and damages in the form of
24 diminished value and lost profits from potential sublicenses and/or customers,
25 uncertainty regarding MACOM's critical and strategic business activities, and
26 increased legal and other fees.

27 239. Plaintiffs are entitled to relief, including damages, specific
28 performance, and preliminary and permanent injunctive relief, as set forth below,

1 or, in the alternative, rescission of the 2010 License Agreement and 2010 IP
2 Purchase Agreement and Nitronex Patent assignments, such that Plaintiffs retain
3 title to the Nitronex Patents and Infineon has no rights to or under them.

4 **SEVENTH CLAIM FOR RELIEF – Against Infineon Americas**
5 **(Declaratory Judgment – No Sale of Nitronex Patents By Infineon Americas)**

6 240. The allegations contained in the preceding Paragraphs are incorporated
7 by reference herein.

8 241. An actual and justiciable case or controversy exists between Plaintiffs
9 and Infineon Americas regarding the 2010 IP Purchase Agreement and its
10 requirements regarding assignment of the Nitronex Patents.

11 242. Infineon Americas has attempted to, without Plaintiffs' consent, enter
12 into a transaction whereby Infineon Americas would transfer some of the Nitronex
13 Patents to a third party. It has additionally taken the position that they can proceed
14 with a transfer at any time that they wish, without MACOM's consent, under the
15 terms of the 2010 IP Purchase and License Agreements.

16 243. Such a transfer without Plaintiffs' consent would violate Section 12.12
17 of the 2010 IP Purchase Agreement and would be inconsistent with the obligations
18 owed by Infineon Americas to MACOM, [REDACTED]

19 [REDACTED]
20 [REDACTED].
21 244. Such a transfer would also subject Plaintiffs to a cloud of uncertainty
22 as to their rights with respect to the Nitronex Patents, impair the value of those
23 rights, and impose unnecessary legal expense on Plaintiffs.

24 245. MACOM has advised Infineon Americas of its position that Infineon
25 cannot assign any of the Nitronex Patents without MACOM's consent and
26 requested assurances from Infineon that it would not assign any Nitronex Patents
27 without that consent. Infineon has stated that it does not believe that MACOM's
28 consent is necessary and declined to agree to seek such consent from MACOM.

1 246. MACOM is entitled to a judgment declaring that Infineon Americas
2 cannot transfer any of the Nitronex Patents to a third party without Plaintiffs'
3 consent. In the alternative, if Infineon Americas is entitled to transfer the Nitronex
4 Patents without MACOM's consent, MACOM is entitled to a declaration as to the
5 effect that such a transfer has on the obligations owed by Infineon Americas and
6 any purchaser of the Nitronex Patents to MACOM under the 2010 IP Purchase and
7 License Agreements, the rights of any third-party purchaser under those
8 agreements, and the effect of such a transfer on the field of use restrictions of the
9 2010 License Agreement.

10 247. If Infineon Americas transfers any of the Nitronex Patents without
11 MACOM's consent, the value of MACOM's rights under the 2010 IP Purchase
12 Agreement may be irreparably diminished and harmed. Plaintiffs are therefore also
13 entitled to preliminary and permanent injunctive relief barring Infineon Americas
14 from transferring any of the Nitronex Patents without MACOM's consent.

15 **EIGHTH CLAIM FOR RELIEF – Against Infineon AG**
16 **(Intentional Interference With Contractual Relations)**

17 248. The allegations contained in the preceding Paragraphs are incorporated
18 by reference herein.

19 249. Plaintiffs had valid contracts with International Rectifier, including the
20 2010 IP Purchase Agreement and 2010 License Agreement.

21 250. Infineon AG has either succeeded to those contracts or, alternatively,
22 is the parent corporation to Infineon Americas, and therefore had the ability to
23 control and direct Infineon Americas' performance or non-performance under those
24 Agreements.⁴

25 ⁴ To the extent that Infineon Americas is an agent or alter ego of Infineon AG
26 and/or Infineon AG ratified the Nitronex-International Rectifier agreements,
27 including the 2010 License Agreement and the 2010 IP Purchase Agreement,
28 Infineon AG succeeded to International Rectifier's contracts and is subject to
MACOM's claims of breach of contract. To the extent that Infineon AG did not
succeed to those contracts, it has intentionally interfered with them and is
subject to this alternative eighth claim for relief.

1 251. Infineon AG was and is fully aware of the 2010 IP Purchase and
2 License Agreements and their terms. Indeed, Infineon AG representatives
3 participated in numerous phone conferences with MACOM in which they discussed
4 in detail the provisions of the 2010 IP Purchase and License Agreements.

5 252. On information and belief, after it acquired International Rectifier,
6 Infineon AG embarked on an intentional and wrongful course of conduct to
7 interfere with and disrupt Infineon Americas' performance of the 2010 IP Purchase
8 and License Agreements through its instructions to Infineon Americas to, among
9 other things: try to force MACOM to give up its exclusive rights under the 2010
10 License Agreement; when MACOM refused to give up its rights, make baseless
11 and pretextual claims that MACOM had breached the Agreements; send MACOM
12 a "notice of termination" of the 2010 License Agreement, when, in fact, there was
13 no basis to terminate the 2010 License Agreement; and refuse to take action with
14 respect to third-party infringers of the Nitronex Patents.

15 253. Infineon AG's actions and instructions to Infineon Americas
16 wrongfully induced them to claim that MACOM had breached the 2010 License
17 Agreement and to purport to terminate it. Infineon Technologies AG's actions were
18 improper, without justification, and taken in bad faith and via improper means.

19 254. Furthermore, Infineon AG caused one or more of its subsidiaries to
20 interfere with MACOM's exclusive rights under the 2010 License Agreement to
21 design, develop, and/or market and to make preparations to sell products within the
22 Exclusive Field reserved to MACOM/Nitronex alone, by causing one or more of its
23 subsidiaries to design, develop, and/or market and to make preparations to sell
24 GaN-on-Si RF products for cellular base station products that invade MACOM's
25 Exclusive Field.

26 255. Additionally, Infineon AG's actions and instructions to Infineon
27 Americas wrongfully induced it to fail to pursue third-party infringers of the
28

1 Nitronex Patents and to take the position that one or more of the Nitronex Patents
2 are invalid.

3 256. On information and belief, Infineon AG's actions were taken with the
4 predominant intent to harm Plaintiff's contractual rights.

5 257. Infineon AG's intentional interference with the 2010 License
6 Agreement and 2010 IP Purchase Agreement has damaged Plaintiffs.

7 258. Plaintiffs have suffered and will continue to suffer irreparable harm, as
8 well as damages, including in the form of diminished value and lost profits from
9 potential sublicenses and/or customers, uncertainty regarding MACOM's critical
10 and strategic business activities, and increased legal and other fees.

11 259. Additionally, MACOM's damages for unwarranted loss of its
12 exclusive rights to the burgeoning GaN-on-Si RF devices market, which industry
13 analysts and even Defendants themselves estimate will grow to hundreds of
14 millions of dollars per year by the expiration of the Nitronex Patents, would be
15 substantial. MACOM would suffer significant lost revenues if Infineon is allowed
16 to enter this market segment as a competitor to MACOM.

17 260. Plaintiffs are entitled to relief, including damages, specific
18 performance, and preliminary and permanent injunctive relief, as set forth below.

19 **PRAYER FOR RELIEF**

20 Wherefore, Plaintiffs MACOM Technology Solutions Holdings, Inc. and
21 Nitronex, LLC respectfully request that this Court enter judgment against
22 Defendants Infineon Technologies AG and Infineon Technologies Americas Corp.
23 as follows:

- 24 A. A declaration that (a) Infineon Americas was not entitled to terminate
25 the 2010 License Agreement, (b) the purported termination of the 2010
26 License Agreement is null and void, and (c) the 2010 License
27 Agreement is still valid and binding as to Plaintiffs and Defendants;
28 B. A declaration that MACOM's GaN-on-Si RF products and activities

- 1 do not infringe the Nitronex Patents because all of those activities are
2 licensed under the 2010 License Agreement;
- 3 C. An order requiring Infineon Americas to specifically perform their
4 obligations pursuant to the 2010 License Agreement;
- 5 D. A preliminary and permanent injunction preventing Infineon
6 Americas, its officers, agents, servants, employees, attorneys, and any
7 other person or entity in active concert or participation with Infineon
8 Americas from terminating the 2010 License Agreement for actions
9 that do not constitute material breaches, including MACOM's sales of
10 GaN-on-SiC devices;
- 11 E. A preliminary and permanent injunction preventing Infineon
12 Americas, its officers, agents, servants, employees, attorneys, and any
13 other person or entity in active concert or participation with Infineon
14 Americas from taking any action or making any statement that asserts
15 that the 2010 License Agreement has been terminated or that
16 MACOM's GaN-on-Si products are not licensed under the 2010
17 License Agreement.
- 18 F. A preliminary and permanent injunction preventing Infineon
19 Americas, its officers, agents, servants, employees, attorneys, and any
20 other person or entity in active concert or participation with Infineon
21 Americas from, directly or indirectly, developing, marketing, or selling
22 GaN-on-Si products in MACOM's Exclusive Field;
- 23 G. Damages to compensate the losses suffered by Plaintiffs due to
24 Infineon Americas' breaches of contract and breach of the covenant of
25 good faith and fair dealing and Infineon's AG's intentional
26 interference with the 2010 License Agreement and 2010 IP Purchase
27 Agreement;
- 28 H. In the alternative to damages to compensate the losses suffered by

- 1 Plaintiffs due to Infineon Americas' breaches of contract, rescission of
2 the 2010 License Agreement and 2010 IP Purchase Agreement and
3 Nitronex Patent assignments, such that Plaintiffs retain title to the
4 Nitronex Patents and Infineon has no rights to or under them;
- 5 I. An order requiring Infineon Americas to specifically perform their
6 obligations pursuant to the 2010 IP Purchase Agreement;
- 7 J. An order requiring Infineon Americas to assign U.S. Patents
8 6,649,287, 6,617,060, 8,105,921, 8,344,417, 8,592,862, 9,064,775,
9 7,596,871, 7,071,498, 7,687,827, 8,368,117, 6,956,250, 8,937,335,
10 8,928,034, 8,928,035, 8,026,596, 9,461,119, 9,437,686, 7,135,720,
11 7,352,016, and 7,994,540 to Plaintiffs;
- 12 K. A declaration that Infineon Americas cannot transfer any Nitronex
13 Patent without MACOM's consent;
- 14 L. A preliminary and permanent injunction preventing Infineon AG's
15 continued interference with MACOM's contractual relationships with
16 Infineon AG's affiliates;
- 17 M. To the extent that the Court rules that the 2010 License Agreement is
18 void, invalid, or unenforceable as violative of the antitrust laws, or for
19 any other reason, an order that both the 2010 License Agreement and
20 the 2010 IP Purchase Agreement and Nitronex Patent assignments are
21 rescinded under Cal. Civ. Code § 1689, such that Nitronex retains title
22 to the Nitronex Patents and Infineon has no rights to or under them.
- 23 N. For attorney's fees and costs;
- 24 O. For pre-judgment interest on liquidated sums;
- 25 P. For post-judgment interest on any money judgment until paid in full;
26 and
- 27 Q. Such other and further relief as this Court or a jury may deem just and
28 proper.

1 DATED: February 16, 2018

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2
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