

United States Court of Appeals for the Federal Circuit

2007-1063, -1141, -1165

INTERNATIONAL RECTIFIER CORPORATION,

Plaintiff-Cross Appellant,

v.

IXYS CORPORATION,

Defendant-Appellant.

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Appealed from: United States District Court for the Central District of California

Judge Manuel L. Real

United States Court of Appeals for the Federal Circuit

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INTERNATIONAL RECTIFIER CORPORATION,

Plaintiff-Cross Appellant,

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Defendant-Appellant.

Appeals from the United States District Court for the Central District of California in case no. 00-CV-6756, Judge Manuel L. Real.

DECIDED: February 11, 2008

Before LINN, DYK, and PROST, Circuit Judges.

LINN, Circuit Judge.

This patent case comes to us on appeal for a second time. Following our vacatur-in-part and reversal-in-part of a summary judgment of infringement, the district court held a jury trial. IXYS Corporation (“IXYS”) now appeals from the resulting final judgment of infringement. International Rectifier Corporation (“IR”) conditionally cross-appeals, asserting that the district court erred in its jury instructions. Because the judgment of infringement as to each asserted claim is foreclosed either by the combination of our mandate in the prior appeal and the jury verdict or by prosecution history estoppel, we reverse. We dismiss the cross-appeal as moot because the purported error in jury instructions does not affect the final judgment of non-infringement that our decision today requires.

I. BACKGROUND

A detailed description of the technologies and patent claims at issue may be found in our prior opinion in this case, International Rectifier Corp. v. IXYS Corp., 361 F.3d 1363 (Fed. Cir. 2004) (“IR I”). To summarize briefly, IR asserted against IXYS various claims of three patents, U.S. Patent Nos. 4,959,699 (“the ‘699 patent”), 5,008,725 (“the ‘725 patent”), and 5,130,767 (“the ‘767 patent”). All three patents disclose metal-oxide-semiconductor field effect transistors (MOSFETs). IXYS’s accused devices are MOSFETs and insulated gate bipolar transistors (IGBTs). These transistors are manufactured, in part, by doping the surface of a silicon wafer with a pattern of impurities so as to create multiple regions with different electrical properties.

As in the prior appeal, there are three claim terms at issue, each of which relates to the shape and configuration of these regions. One set of claims, found only in the ‘699 patent, requires that the semiconductor wafer include a “lightly doped” region that is “adjoining” a “region of opposite conductivity type.” E.g., ‘699 patent, claim 19 (emphasis added). A second set of claims, with substantially similar claim language across all three patents, requires both a “first base region” of “polygonal” shape and a “first source region” “having the shape of an annular ring.” E.g., ‘699 patent, claim 1 (emphases added). See generally IR I, 361 F.3d at 1367 (quoting claim language in full).

The prior appeal was taken from a set of summary judgment opinions in which the district court held that IXYS’s devices infringed all three claim limitations. We articulated revised interpretations of each term. See id. at 1369–74. As to the claims requiring “adjoining” regions, we held that “there can be no infringement,” and we

reversed-in-part and remanded “with instructions to enter a judgment of non-infringement of these claims in favor of IXYS.” Id. at 1375. As to the remaining disputed claims, we held that there were disputed issues of material fact regarding both the terms “polygonal” and “annular” under the proper claim interpretations, and so we vacated-in-part and remanded for further proceedings. Id.

On remand, the district court concluded that our mandate with respect to the term “adjoining” pertained only to literal infringement, and that it was free to consider infringement under the doctrine of equivalents. The issue was tried to a jury, and the jury found that the accused devices infringe the “adjoining” claims by equivalents.

The district court also submitted to a jury the infringement issues regarding the remaining claims, with one exception. The district court concluded that IXYS had admitted that its accused devices possessed annular source regions as claimed in the '699 patent because, in its Memorandum of Contentions of Fact and Law, filed in April 2001, and in its amended Memorandum of November 11, 2001, IXYS did not list the “annular” limitation as a disputed claim term in that patent. This omission, the court held, constituted an admission under C.D. Cal. Local Rule 16-3.1 (formerly Local Rule 9-5) that survived our mandate in IR I. The jury was therefore allowed to consider whether the accused devices possessed annular sources only with respect to the claims of the '725 and '767 patents.

The jury considered infringement of the “polygonal” limitation—which, as mentioned, is found in the same set of claims—with respect to all three patents. The jury found that IXYS’s accused devices possessed base regions that were insubstantially different from the recited “polygonal” regions and therefore met that

limitation under the doctrine of equivalents. The jury found, however, that the IXYS devices did not possess any “annular” source regions. Accordingly, the district court entered a judgment of non-infringement as to the '725 and '767 patents, consistent with the jury verdict, but a judgment of infringement, with concomitant money damages and permanent injunctive relief, as to the '699 patent.

On appeal, IXYS contends that the district court erred with respect to all three claim limitations. First, it contends that it is inconsistent with our mandate in IR I for the court to have considered infringement by equivalents of the “adjoining” claims; in the alternative, it argues that prosecution history estoppel acts as a bar to the finding of infringement. Second, it challenges the district court’s decision that IXYS had admitted that its devices possess annular source regions as claimed in the '699 patent; it argues that our prior mandate compelled the district court to treat the “annular” limitation the same way in all three patents. Third, it challenges the district court’s decision to admit into evidence scanning capacitance microscopy (SCM) images that purported to show that IXYS’s base regions were polygonal. Undisputed expert testimony, IXYS argues, demonstrates that such images are unreliable. Finally, it argues that the district court erred in failing to instruct the jury explicitly that “polygonal” regions may not have rounded corners. In response, IR argues on cross-appeal, conditionally on a decision not to affirm, that the district court erred in failing to instruct the jury that “polygonal” regions may have rounded corners.

II. JURISDICTION

Before we turn to the merits, we must first consider a threshold question of our own appellate jurisdiction. See Thompson v. Microsoft Corp., 471 F.3d 1288, 1291

(Fed. Cir. 2006). “Whether this court has jurisdiction over an appeal taken from a district court decision is a question of law which we address in the first instance.” Pause Tech. LLC v. TiVo Inc., 401 F.3d 1290, 1292 (Fed. Cir. 2005). We apply our own law, not that of the regional circuit, to resolve this question. Id.

It is undisputed that IXYS failed to timely file a document styled as a notice of appeal. However, it is also undisputed that within the thirty-day time period for filing a notice of appeal specified by Fed. R. App. P. 4(a)(1)(A), IXYS filed with the district court a motion to stay the permanent injunction pending appeal. Our jurisdiction thus depends on whether this document qualifies as a notice of appeal.

We conclude that it so qualifies. In Smith v. Barry, the Supreme Court held that “[i]f a document filed within the time specified by Rule 4 gives the notice required by Rule 3, it is effective as a notice of appeal.” 502 U.S. 244, 248–49 (1992). Under Rule 3, an adequate notice must meet three requirements. It must “(A) specify the party or parties taking the appeal . . . ; (B) designate the judgment, order, or part thereof being appealed; and (C) name the court to which the appeal is taken.” Fed. R. App. P. 3(c)(1). IXYS’s motion to stay sets forth all three pieces of information: “[(A)] [D]efendant IXYS Corporation (‘IXYS’) will, and hereby does, move the Court for an order staying the execution of [(B)] its September 14, 2006, Final Judgment and enforcement of the permanent injunction entered on the same date pending resolution of IXYS’s appeal to the [(C)] Federal Circuit Court of Appeals.” Mot. to Stay, Int’l Rectifier Corp. v. IXYS Corp., No. 00-CV-6756 (C.D. Cal. Sept. 28, 2006) (Dckt. No. 720) (emphases added). Under Smith, both IR and the district court were therefore on notice of IXYS’s intent to appeal. We thus construe the motion as a notice of appeal.

Acting through a motions panel, we tentatively came to the same conclusion in our order of January 18, 2007, denying IXYS's stay pending appeal. IR responds, however, that since that time, the Supreme Court's decision in Bowles v. Russell undermines our holding and cabins the leniency required by Smith. In Bowles, the Supreme Court emphasized the jurisdictional nature of notices of appeal and held that the jurisdictional rules lack equitable exceptions. 127 S. Ct. 2360 (2007). However, Bowles concerned the timing requirements of Rule 4 rather than the form requirements of Rule 3. Id. at 2362. The petitioner in Bowles had sought and been granted an extension of time to file a notice of appeal from an order denying his petition for habeas corpus relief. Id. Because the district court's order incorrectly set a deadline beyond the fourteen-day window authorized by the relevant statute, Bowles filed his notice of appeal—which undisputedly complied with the requirements of Rule 3, as well as with the deadline purportedly set by the district court—two days later than was authorized by statute. Id. The Supreme Court upheld the court of appeals' dismissal of his appeal for lack of subject-matter jurisdiction. Id. at 2367. This strict application of Rule 4 has no bearing on the issue before us today. As mentioned, IXYS's motion for a stay was undisputedly filed within the time limit for a notice of appeal. IXYS does not seek an equitable exception to a requirement of the rules. Rather, the only question is whether its motion to stay meets the requirements to be a notice of appeal, an inquiry dependent on Smith and the language of Rule 3, not Bowles or Rule 4. It does.

Accordingly, we have jurisdiction, and we proceed to the merits.

III. ANALYSIS

A. “Adjoining” Claims

IXYS contends that the district court overstepped its authority under our mandate in IR I when it conducted a jury trial as to infringement under the doctrine of equivalents of the claims containing the “adjoining” limitation, i.e., independent claim 19 and dependent claims 22, 24, and 27 of the ’699 patent. In the alternative, it argues that IR is foreclosed by prosecution history estoppel from resorting to the doctrine of equivalents. Because the latter argument is squarely presented for the first time and its resolution may affect future cases, we conclude that the most prudent course of action is to decide the case on this basis. In so doing, we expressly decline to decide the scope of our prior mandate with respect to the doctrine of equivalents.

“[P]rosecution history estoppel limits the broad application of the doctrine of equivalents by barring an equivalents argument for subject matter relinquished when a patent claim is narrowed during prosecution.” Conoco, Inc. v. Energy & Envtl. Int’l, L.C., 460 F.3d 1349, 1363 (Fed. Cir. 2006). “[W]e review issues relating to the application of prosecution history estoppel de novo.” Id. at 1357.

During the prosecution of the ’699 patent, IXYS argues, IR added the “adjoining” limitation in order to overcome rejections under 35 U.S.C. § 112, paras. 1–2. IXYS argues that the examiner rejected claim 43 (which later issued as claim 19) because the applicants claimed, but failed to disclose, an IGBT mode of operation for the device. The addition of an “adjoining” limitation, in IXYS’s view, limits the claimed structure to one that can operate as a MOSFET, and prosecution history estoppel therefore applies

to prevent claim 19 and its dependent claims from reaching IGBTs under the doctrine of equivalents.*

IR makes two arguments in response. First, it asserts that prosecution history estoppel does not apply to its addition of the term “adjoining” because the resulting change in claim language was broadening, not narrowing. The claims, IR argues, are directed to structure rather than function, and the “adjoining” limitation simply clarified what structure was claimed. Second, IR argues that prosecution history estoppel does not apply because the amendment in question is only tangentially related to the asserted equivalent. See Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co., 535 U.S. 722, 740 (2002) (“There are some cases . . . where the amendment cannot reasonably be viewed as surrendering a particular equivalent. . . . [T]he rationale underlying the amendment may bear no more than a tangential relation to the equivalent in question.”).

We agree with IXYS that these arguments fail. As to IR’s first argument, IR is correct that the amendment broadened the claim in certain respects—for instance, it eliminated the requirement that the “conductive electrode” at the bottom of the wafer be “coupled” to the drain conductive region, a requirement that the examiner described as

* The relevant text of the claim, before and after amendment, is as follows, with ~~deletions~~ and additions indicated:

~~. . . a drain conductive region remote from said common region and separated therefrom by said relatively lightly doped major body portion; said wafer including a further region of opposite conductivity type adjoining said lightly doped major body portion; and an electrode coupled to said further region having a support body for supporting said lightly doped major body portion; said support body being of said opposite conductivity type; and a conductive electrode formed on the surface of said support body disposed opposite to said lightly doped major body portion; said conductive electrode coupled to said drain conductive region.~~

“unsupported by neither [sic] the technology nor the specification.” At the same time, however, IR chose to introduce the term “adjoining.” This term excludes structures that might have been covered by the original claim language, because the “support body” of the old claim—apparently the “further region of opposite conductivity type” of the amended claim—was only required to “support[] said lightly doped major body portion,” not necessarily to touch it. The amendment therefore narrowed the scope of the claim, at least with respect to the addition of the term “adjoining.” Under such circumstances, IR cannot argue that the amendment was broadening merely because it eliminated some claim limitations.

As to IR’s second argument, we disagree with IR that the purpose of the amendment was tangential to the asserted equivalent. It is true that the reason given by the examiner for the rejection was that not all of the limitations in the original claim 43 were supported by the specification, and that IR overcame the rejection by amending the claim to contain only the structural limitations disclosed in the text of the specification and the drawing that became ’699 patent figure 8. In this regard, IR is correct that the claim is not necessarily limited to a particular mode of operation, but rather covers a particular structure that, in practice, may or may not function in unexpected ways. However, IR’s decision to claim that structure using the limiting term “adjoining,” whether or not required to overcome the rejection, cannot be described as only tangentially related to the equivalency of a structure with non-adjoining regions. With the amended language, IR recited precisely the structure it disclosed, and thereby overcame the examiner’s § 112 rejection. See Schwarz Pharma, Inc. v. Paddock Labs., Inc., 504 F.3d 1371, 1377 (Fed. Cir. 2007) (“The fact that the inventors may have

thought after the fact that they could have relied on other distinctions in order to defend their claims is irrelevant and speculative . . .”).

Accordingly, we hold that prosecution history estoppel bars IR from asserting infringement of the “adjoining” limitation under the doctrine of equivalents, and we reverse the district court’s entry of judgment as to the “adjoining” claims.

B. “Annular” and “Polygonal” Claims

The remaining claims on appeal also present issues of the interpretation of our mandate. As mentioned above, IR argued to the district court on remand, and reiterates on appeal, that IXYS is precluded from contesting the presence of annular source regions in its accused devices because it failed to contest that claim limitation in the submissions required under the Central District of California’s Local Rules. Indeed, IR describes IXYS’s conduct with regard to this claim limitation as “non-compliance” with the rules, and implies that the district court’s decision to enter judgment against IXYS on this issue amounts to a discretionary sanction.

We disagree with IR because it raised, and we rejected, the same issue during the last appeal. “[O]nce a case has been decided on appeal, the rule adopted is to be applied, right or wrong, absent exceptional circumstances, in the disposition of the lawsuit.” Gindes v. United States, 740 F.2d 947, 949 (Fed. Cir. 1984) (quoting Schwartz v. NMS Indus., Inc., 575 F.2d 553, 554 (5th Cir. 1978)). In its brief as appellee in IR I, IR specifically raised, as an alternative basis for affirmance, the argument it reiterates today that IXYS had failed to contest the presence of “annular” source regions with respect to the ’699 patent. Br. for Appellee IR at 25–26, IR I, 361 F.3d 1363 (Nos. 02-1414, 02-1554) (filed Nov. 27, 2002). IXYS responded by describing this technical

argument as “sophistry,” because it was undisputed that the term “annular” has the same meaning in all three patents. Repl. Br. for Appellant IXYS at 12 n.14, IR I, 361 F.3d 1363 (Nos. 02-1414, 02-1554) (filed Dec. 16, 2002).

In IR I, we explicitly vacated and remanded as to the “annular” limitation found in all three patents, including the ’699 claims that IXYS allegedly failed to contest. IR I, 361 F.3d at 1375 (“Because factual issues exist as to whether IXYS’s devices include the ‘polygonal’ and ‘annular’ limitations of the claims, as properly construed, we vacate-in-part the district court’s grant of partial summary judgment of infringement in favor of IR that IXYS’s devices infringe claims 1, 7–8, 20, 23, 25–26, and 28–29 of the ’699 patent; . . . and remand the same for consideration consistent with this opinion.”). In so doing, although we did not discuss the issue explicitly, we necessarily rejected all of IR’s procedural arguments as to why the “annular” limitation should be treated differently in the three patents-in-suit. See Exxon Chem. Patents, Inc. v. Lubrizol Corp., 137 F.3d 1475, 1478 (Fed. Cir. 1998) (“[I]n some cases issues not explicitly addressed by an appellate court may nonetheless be decided by necessary implication.”). IR presents no argument as to why we should find exceptional circumstances and revisit this issue.

Accordingly, we conclude that our mandate in IR I required the district court to treat the “annular” limitation the same way as to the ’699, ’725, and ’767 patents. The jury verdict of non-infringement as to the “annular” limitation of the ’725 and ’767 patents carries over to the corresponding limitation in the asserted claims of the ’699 patent and compels a judgment of non-infringement of that patent, just as of the other two.

C. Other Issues

The terms “annular” and “polygonal” are found in the same set of claims. Thus, the above discussion in Part III.B compels a judgment of non-infringement with respect to all claims not already disposed of by Part III.A, supra. We therefore need not reach IXYS’s arguments regarding evidentiary rulings or jury instructions that might alter the jury finding that the accused products meet the “polygonal” limitation. Similarly, IR’s arguments on cross-appeal pertain only to the jury instructions respecting the “polygonal” limitation and are moot.

IV. CONCLUSION

Because prosecution history estoppel precludes consideration of infringement by equivalents of the asserted claims containing the term “adjoining,” and because the combination of our mandate in IR I and the jury verdict finding non-infringement as to the “annular” limitation compels a judgment of non-infringement as to the remaining asserted claims, we reverse. The damages award and permanent injunction are vacated. IXYS is entitled to entry of final judgment in its favor as to all claims. There shall be no further proceedings in this case regarding any questions of infringement, either literally or under the doctrine of equivalents.

2007-1063, -1141: REVERSED; 2007-1165: DISMISSED