

United States District Court,  
C.D. California.

**TDK SEMICONDUCTOR CORP,**  
Plaintiff.

v.

**SILICON LABORATORIES, INC,**  
Defendant.

No. SA CV 01-737-GLT (MLGx)

**Nov. 4, 2002.**

Gary A. Hecker, James M. Slominski, Hecker Law Group, Los Angeles, CA, for Plaintiff.

Bryan J. Vogel, Joseph J. Richetti, Fish & Neave, Laurence Rogers, Marta E. Gross, Staci L. Julie, New York, NY, for Plaintiff. Craig N. Hentschel, Dykema Gossett LLP, John R. Danos, Arnold & Porter, Los Angeles, CA, for Defendant.

## **ORDER DENYING DEFENDANT'S MOTION FOR CLAIM CONSTRUCTION AND SUMMARY JUDGEMENT**

GARY L. TAYLOR, **District Judge.**

Defendant's Motion for Claim Construction and Summary Judgment is DENIED.

### **I. BACKGROUND**

Plaintiff TDK Semiconductor Corporation holds United States Patent No. 5,654,984 ('984 patent). The '984 patent describes a method and apparatus for communicating signals between two or more electrical circuits operating at different voltages. The invention uses a capacitor serving as an "isolation barrier" that allows the transmission of signals, but prevents the transmission of harmful or damaging voltages exceeding the intended operational voltage ranges of the circuits. The invention is used to provide voltage isolation between a telephone line and a powered electronic device such as an answering machine or computer modem.

Plaintiff brought suit against Defendant Silicon Laboratories, Inc., alleging Defendant's products infringe Plaintiff's '984 patent. Defendant's products connect and facilitate communication between two circuits, one connected to a telephone line and another to an electronic device, through a capacitor that forms a high voltage barrier between the two.

Defendant brings a Motion for Claim Construction and Summary Judgment of Noninfringement as to products alleged to infringe claims 12 and 13 of Plaintiff's '984 patent. FN1

FN1. The text of claims 12 and 13 of the '984 patent is reproduced in the Appendix. Defendant's products alleged to infringe claims 12 and 13 are Si2400, Si2414, Si2433 Si3034, Si3035, Si 3036, Si3038, Si3044, Si3046, and Si3048.

## II. *DISCUSSION*

Summary judgment is proper if "there is no genuine issue as to any material fact and the moving party is entitled to a judgment as a matter of law." Fed.R.Civ.P. 56(c). A fact is material if it "might affect the outcome of the suit under the governing law." *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 248, 106 S.Ct. 2505, 91 L.Ed.2d 202 (1986). A factual dispute is genuine "if the evidence is such that a reasonable jury could return a verdict for the nonmoving party." *Id.*

The moving party in a summary judgment motion bears the initial burden of proving the absence of a genuine issue of material fact. *Celotex Corp. v. Catrett*, 477 U.S. 317, 323, 106 S.Ct. 2548, 91 L.Ed.2d 265 (1986). If the moving party makes this initial showing, the burden shifts to the nonmoving party to "designate specific facts showing that there is a genuine issue for trial." *Celotex*, 477 U.S. at 324 (citation omitted). In other words, the non-moving party must produce evidence that could cause reasonable jurors to disagree as to whether the facts claimed by the moving party are true.

In making a summary judgment determination, the Court must view the evidence presented in the light most favorable to the non-moving party, drawing "all justifiable inferences ... in his favor." *Anderson*, 477 U.S. at 255. If the non-moving party fails to present a genuine issue of material fact, the Court must grant summary judgment. *Celotex*, 477 U.S. at 323-24.

Summary judgment in a patent infringement case involves two steps. First, the claims of the patent must be interpreted and construed. *See Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 976 (Fed.Cir.1995). Second, the construed claims must be compared to the accused products to determine whether each claim is found in the accused product. *Id.*

Defendant presents to the Court construction of the term "isolation barrier" and the "capacitor coupling" element of claim 12 based on the prosecution history and on the specification, or written description, of the '984 patent. Defendant argues, based solely on its construction of the claim language, its products do not infringe claims 12 and 13 of Plaintiff's '984 patent because its products lack the claimed "isolation barrier" and the "capacitor coupling" element. Defendant does not argue noninfringement based on other possible constructions of the two claim terms.

### A. *Claim Construction*

The construction of the patent claims at issue is a question of law. *See Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372, 116 S.Ct. 1384, 134 L.Ed.2d 577 (1996). In order to properly construe a patent claim, the court must first consider such "intrinsic evidence" as the claim language, the specification of the patent, and the prosecution history. *See Markman*, 52 F.3d at 979. While the court may also consider such "extrinsic evidence" as expert testimony, inventor testimony, and other reference materials, this evidence is used "for the court's understanding of the patent, not for the purpose of varying or contradicting the terms of the claims." *Id.* at 986.

Terms used in a claim bear a "heavy presumption" of having their ordinary and customary meaning. *Texas Digital Systems, Inc. v. Telegenix, Inc.*, 308 F.3d 1193, 2002 WL 31307212 (Fed.Cir.2002). This presumption may be rebutted, however, if the intrinsic record shows the specification uses the terms in a manner "clearly inconsistent with the ordinary meaning." *Id.* The presumption may also be overcome when a patentee "clearly set [s] forth an explicit definition of the term different from its ordinary meaning," or uses "words or expressions of manifest exclusion or restrictions, representing a clear disavowal of claim scope." *Id.*

### 1. "Isolation Barrier"

Claim 12 of the '984 patent describes "a circuit for communicating a signal across an isolation barrier." (18:31-32). FN2

FN2. "(a:b-c)" refers, for example, to column "a," lines "b" through "c" of the '984 patent.

It is undisputed "isolation barrier" is ordinarily defined as "a barrier separating two or more circuits that prevents harmful or interfering high voltages from crossing the barrier, but allows data signals to cross." *See* Def's Motion, 1:12-14; Pl's Opp., 6:1-3.

Defendant argues "isolation barrier" as used in the '984 patent is narrower than the ordinary definition, and offers the following as the proper construction:

A barrier separating two electronic circuits, which prevents interfering or damaging high voltages *as well as operating power* from crossing the barrier from one circuit to the other, while allowing a data signal to cross.

*See* Def. Motion 21:21-27 (emphasis added). Defendant claims the prosecution history of the '984 patent shows Plaintiff disclaimed the ordinary meaning of "isolation barrier."

The pertinent claims of the '984 patent was initially rejected by the Patent Office as being unpatentable over a prior art Adams patent, which the Patent Office determined to include an isolation barrier that prevented unwanted interference while permitting communication of signals. *See* Gross Decl., Exh. E., p. 4.

In an effort to distinguish its claims from Adams, Plaintiff argued:

Applicant respectfully disagrees that Adams teaches two-way communication across a capacitive isolation barrier. The Examiner cites capacitors 703 and 705 of Adams as providing a capacitive isolation barrier... Since the same power supply provides power to both the master and slave circuits and since transmission line 100 is used to carry power from the master circuit to the slave circuit, *it is clearly impossible for an isolation barrier to exist between the master and slave circuits of Adams, as an isolation barrier would prevent power from reaching the slave circuit, and the slave circuit would remain unpowered and inoperative. Thus, Adams teaches away from the provision of an isolation barrier between the master and slave circuits.*

*See* Gross Decl., Exh. G, pp. 7, 8 (emphasis added). Following Plaintiff's argument, the Patent Office dropped Adams as prior art preventing patentability.

Based on the emphasized portion of Plaintiff's statement, Defendant argues Plaintiff disclaimed the ordinary meaning of "isolation barrier" in the '984 patent and narrowed the use of the term to mean an isolation barrier that not only prevents the transmission of interfering or damaging high voltages, but also prevents the transmission of operating power.

Defendant's interpretation of Plaintiff's statement is not supported by the context of Plaintiff's overall argument to the Patent Office. Contrary to Defendant's contention, Plaintiff was not distinguishing its claims from the Adams patent based on the type of isolation barrier, but on the existence thereof. Plaintiff argued an isolation barrier did not exist in the Adams invention because the presence of such a barrier would have prevented the operation of the Adams invention.

Defendant's proposed construction of "isolation barrier" is also not supported by the '984 patent specification, which describes the isolation barrier as "minimizing" and "reducing" the flow of power supply. (4:56, 57). Contrary to Defendant's construction, the flow of power supply is not prevented or eliminated by the isolation barrier; it is merely reduced.

Defendant's construction of "isolation barrier" is contrary to the ordinary meaning of the term, the prosecution history, and the patent specification. Defendant's Motion for Claim Construction is DENIED as to its proposed construction of "isolation barrier."

## **2. "Capacitor Coupling ..." Element**

The second element of claim 12 of the '984 patent is "a capacitor coupling said modulated signal [described by the first element] across an isolation barrier." (18:35-36).

Plaintiff claims, and Defendant does not dispute, "capacitor" is ordinarily defined as "a device for accumulating and holding a charge of electricity." *See* Pl's Opp. 15:12-13. It is undisputed "coupling" is ordinarily defined as "a connection or mutual relation between two circuits that permits the transfer of energy from one to another." *See* Def's Motion, 26:13-15; Pl's Opp., 6:10-12. *See also* Neomagic Corp. v. Trident Microsystems, Inc., 287 F.3d 1062, 1071 (Fed.Cir.2002).

Defendant offers the following as the proper construction of the "capacitor coupling" element:

A capacitor forming a one-way path for carrying only one signal across an isolation barrier. The one signal carried by the capacitor is the modulated signal produced by the sigma delta modulator of the previous element.

*See* Def's Motion, 26:1-5. In other words, Defendant argues this element is a limitation requiring a capacitor carrying a single signal in only one direction, and claims its construction of the element is supported by the claim language and the patent specification.

### **a. One Signal**

Claim 12 describes the transmission of "a" signal of "a" capacitor, and claim 14, a dependent claim, describes the transmission of "a second" signal on "a second capacitor." (18:31-32, 56-58). Defendant reads the two claims together to mean the capacitor described in claim 12 can carry only one signal because claim 14 requires a second capacitor to carry an additional signal.

An ordinary reading of claims 12 and 14 does not support Defendant's construction. The Federal Circuit has emphasized an indefinite article "a" in patent parlance means "one or more" or "at least one." *KJC Corp. v. Kinetic Concepts, Inc.*, 223 F.3d 1351, 1356 (Fed.Cir.2000) ("the article 'a' receives a singular interpretation only in rare circumstances when the patentee evinces a clear intent to so limit the article").

The "capacitor coupling" element of claim 12 describes a capacitor that can carry a signal across the isolation barrier, but does not contain language such as "only" to suggest the capacitor is limited to carrying a single signal. The relevant element of claim 14 describes the existence of another capacitor, independent and separate from the claim 12 capacitor, also capable of carrying a signal across the isolation barrier. The language of claims 12 and 14 describes the presence of two separate capacitors, but does not define or limit the number of signals in a way that shows a clear intent to give the article "a" a singular interpretation.

Defendant also argues a singular interpretation of the article "a" in claim 12 is proper because the patent specification describes the transmission of "a" signal through the system. The patent specification traces the path or the order in which each capacitor or node is reached by a signal traveling through the system, but does not clearly limit the number of signals to one.

#### **b. *One Direction***

Defendant derives the second part of its construction of the "capacitor coupling" element, requiring a uni-directional transmission, from (1) claim 14's description of a second capacitor; and (2) the phrase "from one to another" in the ordinary definition of "coupling."

Defendant argues the description of "a" capacitor carrying "a" signal in claim 12, together with the description of a "second" capacitor carrying a "second" signal in claim 14, shows the capacitors are intended to encompass only one-way communication.

Defendant argues its reading of the claim language is supported by *Bell Atlantic Network Serv. v. Covad Communications*, 262 F.3d 1258 (Fed.Cir. 2 001). In *Bell Atlantic*, the Federal Circuit found the description of a system as "transmitting or receiving signals ... on a first channel, and transmitting or receiving signals ... on a second channel" to support the construction of "channels" to mean only one-way communication to the exclusion of bi-directional or two-way communications. *Id.* at 1275.

In *Bell Atlantic*, the Court found the claim language supported the exclusion of bi-directional communication because "transmitting" signals were distinguished from "receiving" signals. *Id.* The Court also found "the use of the word 'or' demonstrates that each transceiver either transmits *or* receives on a single channel, but not both simultaneously." *Id.* (emphasis in original). The Court found further support for its construction in the patent specification, which "discusses the data channels as either 'upstream' or 'downstream' channels," and expressly notes the channels are "unidirectional." *Id.* at 1275-1276.

The reasons the *Bell Atlantic* Court provided for its conclusion do not exist in this case. Claims 12 and 14 describe only one type of signal traveling on the capacitors, a "modulated signal," and do not suggest the transmission of one modulated signal precludes the transmission of another. The '984 patent specification, unlike the one in *Bell Atlantic*, does not distinguish between types of capacitors so as to connote direction, and does not expressly describe the capacitors as "unidirectional." In fact, the invention is described to provide "bidirectional" communication and coupling of signals across the isolation barrier. *See e.g.* (4:32,

41).

Defendant also argues its construction of the "capacitor coupling" element is supported by the ordinary definition of "coupling" as a "mutual relation between two circuits that permits energy transfer from one to another." Defendant reads "from one to another" to mean from one side of the isolation barrier to the other, in one direction.

"Coupling" ordinarily describes an energy transfer between two circuits, and does not describe the direction of the energy transfer. *See* Neomagic Corp. v. Trident Microsystems, Inc., 287 F.3d at 1071 (" 'coupling' refers to electrical communication *between* the two specified components") (emphasis added). Neither the claim language nor the patent specification shows a clear intent to deviate from this ordinary meaning so as to limit the use of "coupling" in claim 12 to a one-way, uni-directional transfer.

Defendant's Motion for Claim Construction is DENIED as to its proposed construction of the "capacitor coupling" element of claim 12.

### **B. Infringement**

A patent claim is not infringed if an element of the claim is not present in the accused device. *Digital Biometrics, Inc. v. Indentix, Inc.*, 149 F.3d 1335, 1349 (Fed.Cir.1998). If the accused product does not meet one or more limitations in a claim, then the claim cannot be infringed as a matter of law. *See* *Netword, LLC v. Central Corp.*, 242 F.3d 1347, 1353-54 (Fed.Cir.2001).

The parties agree claim 13 depends on claim 12, and if claim 12 is not infringed, neither is claim 13. Defendant argues its products do not infringe claim 12 because its products do not have isolation barriers that prevent the flow of operating power, and because its products do not carry a single signal in a one-way path, but carry multiple signals bi-directionally. Defendant's argument for noninfringement, for the absence of elements of claim 12, depends entirely on the Court's adoption of its construction of "isolation barrier" and the "capacitor coupling" element. Defendant does not argue for noninfringement based on alternative construction of the relevant claim terms.

Since the Court does not adopt Defendant's construction of the relevant claim terms, Defendant's Motion for Summary Judgment of Noninfringement is DENIED.

### **III. DISPOSITION**

Defendant's Motion for Claim Construction and Summary Judgment is DENIED.

### **APPENDIX**

Claim 12 of the '984 patent reads:

A circuit for communicating a signal across an isolation barrier, said circuit comprising:

a sigma delta modulator for receiving an analog input signal and for providing a modulated signal;

a capacitor coupling said modulated signal across an isolation barrier;

a sigma delta demodulator coupled to said isolation barrier for providing a digital output signal; and

a filter circuit coupled to a telephone line and to said modulator for providing an analog input signal to said modulator, said filter circuit and said modulator powered from said telephone line.

(18:30-43).

Claim 13 of the '984 patent reads:

The circuit of claim 12 wherein said digital output signal is provided to a digital signal processing (DSP) circuit.

(18:44-46).

Claim 14 of the '984 patent reads, in pertinent part:

The circuit if claim 13 further comprising:

... a second capacitor coupled to said second modulator for coupling said second modulated signal across said isolation barrier.

(18:57-59).

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