

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
TYLER DIVISION**

**DSS TECHNOLOGY MANAGEMENT,
INC.,**

Plaintiff,

vs.

INTEL CORPORATION, et al.,

Defendants.

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CIVIL ACTION NO. 6:15-cv-130

MEMORANDUM OPINION AND ORDER

This Memorandum Opinion construes the disputed claim terms in United States Patent Nos. 6,784,552 (“the ’552 Patent”) and 5,965,924 (“the ’924 Patent”) asserted in this suit by Plaintiff DSS Technology Management (“DSS”). On February 9, 2016, the parties presented oral arguments on the disputed claim terms at a *Markman* hearing. For the reasons stated below, the court **ADOPTS** the following constructions.

BACKGROUND

The asserted patents generally relate to semiconductor devices and the processes for making those devices. Both patents claim semiconductor structures that allow for higher transistor densities. As transistor density increases, so does performance. But that increase in density can cause problems, especially when transistor components are misaligned during the semiconductor fabrication process. Misalignment can cause electrical shorts between transistor components, thus rendering the transistor inoperable. The patents-in-suit seek to prevent these types of problems using various semiconductor processes.

The ’552 Patent relates to improved methods for etching openings in insulating layers and creating semiconductor devices with well-defined contact openings. ’552 Patent at 1:9–12.

The '924 Patent relates to metal plug interconnects, which connect gates with diffusion regions in a semiconductor device. '924 Patent at 1:7–8. The method for making the local interconnect of the '924 Patent saves processing steps and reduces layout area of traditional prior art methods, such as a conventional buried contact method. '924 Patent at 2:33–41.

APPLICABLE LAW

“It is a ‘bedrock principle’ of patent law that ‘the claims of a patent define the invention to which the patentee is entitled the right to exclude.’” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (quoting *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1115 (Fed. Cir. 2004)). The Court examines a patent’s intrinsic evidence to define the patented invention’s scope. *Id.* at 1313–1314; *Bell Atl. Network Servs., Inc. v. Covad Commc’ns Group, Inc.*, 262 F.3d 1258, 1267 (Fed. Cir. 2001). Intrinsic evidence includes the claims, the rest of the specification and the prosecution history. *Phillips*, 415 F.3d at 1312–13; *Bell Atl. Network Servs.*, 262 F.3d at 1267. The Court gives claim terms their ordinary and customary meaning as understood by one of ordinary skill in the art at the time of the invention. *Phillips*, 415 F.3d at 1312–13; *Alloc, Inc. v. Int’l Trade Comm’n*, 342 F.3d 1361, 1368 (Fed. Cir. 2003).

Claim language guides the Court’s construction of claim terms. *Phillips*, 415 F.3d at 1314. “[T]he context in which a term is used in the asserted claim can be highly instructive.” *Id.* Other claims, asserted and unasserted, can provide additional instruction because “terms are normally used consistently throughout the patent.” *Id.* Differences among claims, such as additional limitations in dependent claims, can provide further guidance. *Id.*

“[C]laims ‘must be read in view of the specification, of which they are a part.’” *Id.* (quoting *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995)). “[T]he

specification ‘is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best guide to the meaning of a disputed term.’ ” *Id.* (quoting *Vitronics Corp. v. Conceptoronic, Inc.*, 90 F.3d 1576, 1582 (Fed. Cir. 1996)); *Teleflex, Inc. v. Ficosa N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). In the specification, a patentee may define his own terms, give a claim term a different meaning that it would otherwise possess, or disclaim or disavow some claim scope. *Phillips*, 415 F.3d at 1316. Although the Court generally presumes terms possess their ordinary meaning, this presumption can be overcome by statements of clear disclaimer. *See SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337, 1343–44 (Fed. Cir. 2001). This presumption does not arise when the patentee acts as his own lexicographer. *See Irdeto Access, Inc. v. EchoStar Satellite Corp.*, 383 F.3d 1295, 1301 (Fed. Cir. 2004).

The specification may also resolve ambiguous claim terms “where the ordinary and accustomed meaning of the words used in the claims lack sufficient clarity to permit the scope of the claim to be ascertained from the words alone.” *Teleflex, Inc.*, 299 F.3d at 1325. For example, “[a] claim interpretation that excludes a preferred embodiment from the scope of the claim ‘is rarely, if ever, correct.’” *Globetrotter Software, Inc. v. Elam Computer Group Inc.*, 362 F.3d 1367, 1381 (Fed. Cir. 2004) (quoting *Vitronics Corp.*, 90 F.3d at 1583). But, “[a]lthough the specification may aid the court in interpreting the meaning of disputed language in the claims, particular embodiments and examples appearing in the specification will not generally be read into the claims.” *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 1571 (Fed. Cir. 1988); *see also Phillips*, 415 F.3d at 1323.

Although “less significant than the intrinsic record in determining the legally operative meaning of claim language,” the Court may rely on extrinsic evidence to “shed useful light on

the relevant art.” *Phillips*, 415 F.3d at 1317 (quotation omitted). Technical dictionaries and treatises may help the Court understand the underlying technology and the manner in which one skilled in the art might use claim terms, but such sources may also provide overly broad definitions or may not be indicative of how terms are used in the patent. *Id.* at 1318. Similarly, expert testimony may aid the Court in determining the particular meaning of a term in the pertinent field, but “conclusory, unsupported assertions by experts as to the definition of a claim term are not useful.” *Id.* Generally, extrinsic evidence is “less reliable than the patent and its prosecution history in determining how to read claim terms.” *Id.*

I. Agreed Terms

Term	Agreed Construction
“contact region” (‘739 Patent, claims 1, 11, 20)	“contact openings and/or vias”

II. Claim Construction of Disputed Terms

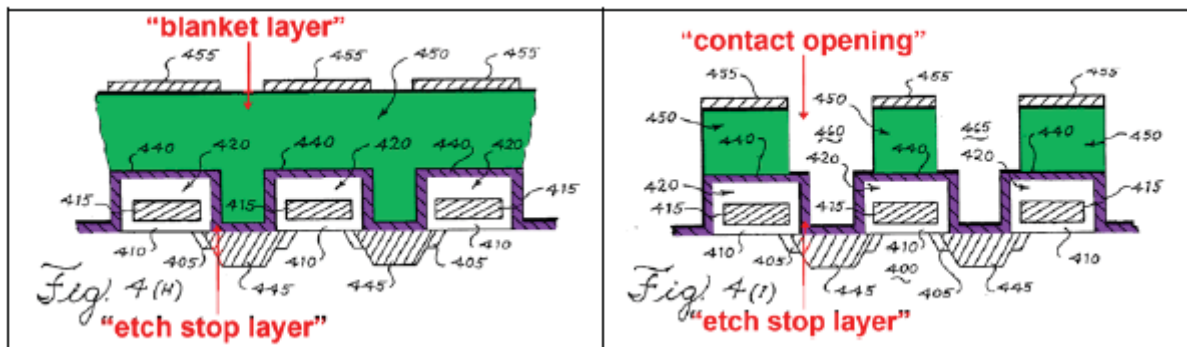
1. “an etch stop material over said first insulating layer and adjacent to the insulating spacer” (‘552 Patent, claim 1)

DSS’s Proposed Construction	Defendants’ Proposed Construction
<p>“an etch stop material around and/or above said first insulating layer”</p> <p>Generally, an etch stop material has an etch rate that is relatively lower than an adjacent or underlying material exposed to a specific etch process and effectively prevents etching of the adjacent or underlying material.</p>	<p>“a material overlying the first insulating layer that is not effectively etched by the etchant used to create the contact region”</p>

The parties initially had two disputes with this term. First, Defendants argue that the etch stop material must be over, rather than around, the first insulating layer. Docket No. 195 at 1. At the hearing, DSS clarified that it is not arguing that an etch stop material that is exclusively to the side of an insulating material is “over” that insulating material. Docket No. 222 at 23:22–25:3. Ultimately, the parties agreed that the claim language mandates the etch stop material is

over the first insulating layer and adjacent to the insulating spacer. Docket No. 222 at 10:18–21, 22:16-19.

Next, the parties dispute whether the recited etch stop material's etching rate is relative to the material to be etched away (as DSS proposes), or the etchant used in creating the contact openings (as Defendants propose). DSS argues that "an etch stop material has an etch rate that is relatively lower than an adjacent or underlying material exposed to a specific etch process and may prevent etching of the adjacent or underlying material." Docket No. 206-1 at 1. Defendants, relying on Figs. 4(H) and 4(I) below, argue that "the only etchant that the etch stop material is described as stopping in the patent is the etchant used to form the contact opening." Docket No. 90 at 12. At the hearing, Defendants clarified this further by stating that an etch stop material can only be defined "with respect to a particular etching process." Docket No. 222 at 28:20–21.



'552 Patent at 12:35-43 (color and labels added). Figures 4(H) and 4(I), where the etching process removes the blanket layer to create the contact openings, yet does not etch away the etch stop layer.

The parties' positions are fairly close. Defendants are correct that the etch stop material in Figs. 4(H) and 4(I) are defined relative to the etch process used to make the contact opening, but DSS's proposed construction accounts for that because the etch stop material lies under the blanket layer, which is the material etched to create the contact openings. That is, in Figs. 4(H) and 4(I), the etch stop material can be defined by either the etchant being used in the specific

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