

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28E-FILED on 11/16/2010

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION

HALO ELECTRONICS, INC.,

Plaintiff,

v.

BEL FUSE INC., ELEC & ELTEK (USA)
CORPORATION, WURTH ELECTRONICS
MIDCOM, INC., XFMRS, INC., E & E
MAGNETIC PRODUCTS LIMITED,

Defendants.

No. C-07-06222 RMW

CLAIM CONSTRUCTION ORDER

[Re Docket No. 323]

Halo Electronics, Inc. ("Halo") alleges that defendants' products infringe United States Patent No. 5,656,985 ("985 Patent"), United States Patent No. 6,344,785 ("785 Patent"), United States Patent No. 6,297,720 ("720 Patent"), and United States Patent No. 6,297,721 ("721 Patent"). The parties seek construction of claim terms in the asserted patents. The court held a claim construction hearing on October 27, 2010. After consideration of the claims, specification, prosecution history, and other relevant evidence, and after hearing the arguments of the parties, the court construes the disputed language of the patents-in-suit as set forth below.

I. BACKGROUND

The asserted patents claim an electronic surface mount package having a one-piece construction and an open bottom and containing a soft silicone filling to protect the toroid

1 transformers inside the package. *See* '985 Patent 3:18-20. In the past, manufacturers often used a
 2 two-piece construction, including a base and a cover, that was filled with a hard epoxy. *See id.* 3:12-
 3 14. Due to expansion of the epoxy and the toroid transformers when exposed to high temperatures,
 4 the two-piece construction would sometimes crack. *See id.* 3:14-18. The open bottom design and
 5 the soft silicone used in the claimed invention fix this problem by allowing room for expansion. *See*
 6 *id.* 3:20-21.

7 All four asserted patents stem from a single patent application, which issued as the '985
 8 Patent. The '785 Patent is a continuation of the '985 Patent and has the same specification as the
 9 '985 Patent. The '720 Patent is a continuation-in-part of the '985 Patent, and the '721 Patent is a
 10 division of the '720 Patent. The '720 Patent and '721 Patent share the same specification. Because
 11 the asserted patents derive from the same parent application and share many common terms, the
 12 parties agree that the claim terms must be construed consistently across the patents. *See NTP, Inc. v.*
 13 *Research in Motion, Ltd.*, 418 F.3d 1282, 1293 (Fed. Cir. 2005).

14 **II. ANALYSIS**

15 **A. "Electronic surface mount package"**

16 Halo argues that "electronic surface mount package" need not be construed because it only
 17 appears in the preambles to the claims. However, the term "package" appears in the body of the
 18 claims, and the parties have agreed that "package" refers to an electronic surface mount package.
 19 Dkt. No. 323 Appendix A. Accordingly, it is necessary to construe the term "electronic surface
 20 mount package." The parties' proposed constructions are as follows:

| CLAIM LANGUAGE | HALO'S PROPOSED CONSTRUCTION | DEFENDANTS' PROPOSED CONSTRUCTION |
|------------------------------------|---|--|
| "electronic surface mount package" | Plain meaning, or An electronic device configured to attach to the surface of a printed circuit board. | An electronic device configured to attach to the surface of a DC voltage only printed circuit board, or A surface mount package that is for DC voltages only. |

26 The parties agree that an electronic surface mount package is an electronic device configured
 27 to attach to the surface of a printed circuit board. Defendants contend that the term should be further
 28 limited either: (1) to an electronic device configured to attach to printed circuit boards powered by

1 DC voltage only, or (2) to an electronic device configured for DC voltages only. Halo concedes that
2 defendants' first proposed construction is an accurate description of the claimed invention but argues
3 that defendants' second proposed construction, which limits "electronic surface mount package" to
4 devices configured for DC voltages only, is wrong.

5 The court thus considers the evidence presented on this issue. Both the claims and the
6 specification, which the Federal Circuit has identified as "the single best guide to the meaning of a
7 disputed term," *Phillips v. AWH Corp.*, 415 F.3d 1303, 1321 (Fed. Cir. 2005), state that the present
8 invention is an electronic surface mount package. *See, e.g.*, '985 Patent 1:4-5, 17-18. The '720 and
9 '721 Patent specifications further state that "the present invention is directed toward applications for
10 packages mounted on a printed circuit board in an electronic device, which requires very low current
11 and voltages, and *is for DC voltages only.*" '720 Patent 4:47-50 (emphasis added). The patentee
12 also made this representation throughout the prosecution history of the patents-in-suit. *See* Dkt. No.
13 324 Ex. I at 5. The phrase "is for DC voltages only" could be read as modifying either the present
14 invention or the printed circuit board. In light of this ambiguity, Halo has offered expert testimony
15 regarding how one of ordinary skill in the art would understand the above statement.

16 Although extrinsic evidence, such as expert testimony, is generally less reliable than intrinsic
17 evidence, a district court may admit and use such evidence when it is helpful to educate the court
18 regarding the field of the invention and to aid the court in determining the meaning that a person of
19 ordinary skill in the art would ascribe to particular terms. *Phillips*, 415 F.3d at 1319. The court
20 therefore considers the expert testimony of Mr. Ian Crayford, who has a Bachelors of Science in
21 Electrical/Electronic Engineering and almost thirty years of experience in the communication and
22 networking industries. Dkt. No. 337 Ex. 6 ¶¶ 2-3. Mr. Crayford testified that a person of ordinary
23 skill in the art would understand that the preferred embodiment described in the patents-in-suit is a
24 device known as a "signal transformer" or "isolation transformer," which is intended to be used in
25 applications with two circuits that operate on different DC voltages and where AC voltages are
26 transferred between the two circuits. *Id.* ¶¶ 10-12. When two circuits operate at different DC
27 voltage supply levels, exposure of one circuit to the supply voltage of the other circuit can damage
28 the device or cause it to malfunction. *Id.* ¶ 12. Thus, an "isolation transformer" is used to create a

1 barrier that isolates the DC voltages in the two circuits while allowing AC voltages to pass from one
2 circuit to another. *Id.* The AC voltages contain the signals being transferred from one circuit to
3 another in an electronic communication. *Id.*

4 In light of the undisputed evidence showing that the function of the preferred embodiment is
5 to isolate DC voltages while allowing AC voltages to pass through, the court concludes that one of
6 ordinary skill in the art would not think that the claimed invention is limited to devices configured
7 for DC voltages only. Instead, a person having ordinary skill in the art, upon reading the
8 specification (or the prosecution history), would understand the patentee's statement – "the present
9 invention is directed toward applications for packages mounted on a printed circuit board in an
10 electronic device, which requires very low current and voltages, and is for DC voltages only," '720
11 Patent 4:47-50 – to refer to the fact that the printed circuit board on which the invention is mounted
12 is powered by DC voltages only.

13 As previously noted, Halo admits that the claimed invention is limited to electronic devices
14 configured to attach to printed circuit boards powered by DC voltages only. Its only argument for
15 why this construction should not be adopted is that it would unnecessarily confuse the jury. The
16 court fails to see why such a construction would be confusing to the jury, particularly since it would
17 clarify a limitation of the claimed invention that the parties agree exists. The court therefore
18 construes "electronic surface mount package" as an electronic device configured to attach to printed
19 circuit boards powered by DC voltages only.

20 **B. "Toroid transformer"**

21 Halo contends that "toroid transformer" need not be construed because it is a term with a
22 widely accepted and commonly understood meaning. Even if the meaning of "toroid transformer"
23 may be plain to one of ordinary skill in the art, it is a technical term that a jury would not necessarily
24 understand. Moreover, since the parties disagree as to the meaning of "toroid transformer,"
25 construction of this term by the court is necessary. The parties' proposed constructions are as
26 follows:

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

| CLAIM LANGUAGE | HALO'S PROPOSED CONSTRUCTION | DEFENDANTS' PROPOSED CONSTRUCTION |
|---|--|---|
| "toroid transformer" | Plain meaning, or A ring-shaped conductor that provides the electrical characteristics of a transformer. | A device, including an annular ferromagnetic core and at least two windings, that employs electromagnetic induction to transfer electrical energy from one circuit to another, i.e. without direct connection between them. When an alternating current flows through a primary coil, the resulting magnetic flux in the core induces an alternating voltage across a secondary coil. |
| "toroid transformers each having wires wrapped/wound thereon" | Plain meaning, or A ring-shaped conductor wrapped or wound with wires to provide the electrical characteristics of a transformer. | Wire wound on a toroid transformer, exclusive of the wires that form the windings of the toroid transformer. |

The parties agree that "toroid" means ring-shaped. It is also undisputed that the ordinary and customary meaning of "transformer" is a device having a core made of conductive material that is wrapped with at least two coils of wire, allowing the transfer of electrical energy from one circuit to another without a direct connection between them. The parties' disagreement centers around whether "transformer," as used in the patents-in-suit, refers to its ordinary and customary meaning (which requires both the core and the windings) or may refer only to the core.

When a specification "reveal[s] a special definition given to a claim term by the patentee that differs from the meaning it would otherwise possess . . . the inventor's lexicography governs." *Phillips*, 415 F.3d at 1316. This special definition may be express or implicit from the way that the term is used in the specification. *See id.* at 1321. In this case, the way the patentee used the word "transformer" in the specifications implies that windings are not necessarily an inherent characteristic of a "transformer." The specifications describe Figure 2 as showing "a wound toroid transformer." '985 Patent 1:41. The fact that the transformer is described as "wound" strongly suggests that a transformer could be unwound, meaning it could lack windings. *See Phillips*, 415 F.3d at 1314 (phrase "steel baffles" "strongly implies that the term 'baffles' does not inherently mean objects made of steel"). The specifications thus reveal that the patentee used the term "transformer" in a manner somewhat different from its ordinary and customary meaning. Accordingly, the court

1 construes "toroid transformer" as a ring-shaped core made of conductive material that may be
2 wrapped with coils of wire to allow the transfer of electrical energy from one circuit to another
3 without a direct connection between them.

4 The parties initially disagreed as to whether "toroid transformers each having wires
5 wrapped/wound thereon" needs to be separately construed. However, the parties have come to an
6 agreement that the term has its ordinary meaning. Having already construed the term "toroid
7 transformers," the court finds that the plain meaning of the phrase "toroid transformers each having
8 wires wrapped/wound thereon" is clear and needs no further construction.

9 **C. "Soft silicone"**

10 The parties agree that "silicone" is a polymeric material characterized by a recurring
11 chemical group containing oxygen and silicon atoms in the main chain as links. Dkt. No. 323
12 Appendix A at 1. They disagree as to whether "soft" is indefinite, and if not, how it should be
13 construed. The parties' proposed constructions are as follows:

| CLAIM LANGUAGE | HALO'S PROPOSED CONSTRUCTION | DEFENDANTS' PROPOSED CONSTRUCTION |
|-----------------|--|--|
| "soft silicone" | Plain meaning, or A silicone material that is resilient so as to allow expansion of the toroid when heated. | Indefinite, or A polymer that includes silicone, and having sufficient softness to distinguish it from both a hard silicone material and a medium-hardness silicone material. |

19 Defendants argue that "soft" is subjective and thus fails to meet the definiteness requirement
20 of 35 U.S.C. § 112. The Patent Act requires claims that "particularly point[] out and distinctly
21 claim[] subject matter which the applicant regards as his invention." 35 U.S.C. § 112 ¶ 2. A claim
22 is sufficiently definite to satisfy this statutory requirement when "one skilled in the art would
23 understand the bounds of the claim when read in light of the specification." *Exxon Research &*
24 *Eng'g Co. v. United States*, 265 F.3d 1371, 1375 (Fed. Cir. 2001). A claim is not indefinite simply
25 because it is difficult to construe; rather, it must be "insolubly ambiguous" such that "no narrowing
26 construction can properly be adopted" in order to be held indefinite. *Id.* In particular, a claim
27 containing subjective terms is not indefinite if "the patent's specification supplies some standard for
28

1 measuring the scope of the phrase." *Hearing Components, Inc. v. Shure Inc.*, 600 F.3d 1357, 1367
2 (Fed. Cir. 2010).

3 The court thus considers whether the patent specifications provide an objective standard for
4 measuring the scope of the term "soft." The '720 and '721 Patent specifications compare the "soft"
5 silicone filling used in the claimed invention with the "hard" epoxy used in the prior art. *See* '720
6 Patent 4:5-15, 60-67. The "hard" epoxy is described as not providing sufficient room for the toroid
7 transformers to expand, resulting in cracking of the old, two-piece construction, while the "soft"
8 silicone filling allows the toroid transformers inside the case to expand without any cracking. *See*
9 *id.*; *see also* '720 Patent 5:1-6 (transformers are supported by soft silicone "such that when the wires
10 are wound around and soldered to the pin-posts, the cracking and expansion problems described
11 above are avoided"). Hence, the specifications make clear that "soft silicone" must allow expansion
12 of the toroid transformers when heated such that cracking of the package would not result. This is
13 sufficient to provide an objective standard for determining when silicone is "soft." *See Bausch &*
14 *Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc.*, 796 F.2d 443, 450 (Fed. Cir. 1986) (holding that
15 "smooth means smooth enough to serve the inventor's purposes"). Hence, the claim term "soft
16 silicone" is amenable to construction and is not indefinite.¹

17 Defendants' proposed construction defines "soft" as different from "hard" and "medium-
18 hard," which does not provide useful clarification to the jury. Halo's proposed construction is
19 supported by the specifications, as discussed above, and provides the jury with an objective standard
20 for measuring the scope of the claims. Accordingly, the court construes "soft silicone" as silicone
21 that is resilient so as to allow expansion of the toroid transformer(s) when heated such that cracking
22 of the package does not ordinarily occur.

23 **D. "Carried within the/said package by a soft silicone material" and "within said**
24 **package in a soft silicone material"**

25 Defendants contend that "carried within the/said package by a soft silicone material" and
26 "within said package in a soft silicone material" have the same meaning, while Halo argues that
27 these two terms should be construed differently. The parties' proposed constructions are as follows:

28 ¹ Defendants claim that every silicone, including the most rock-hard silicone, allows for expansion
of toroid transformers when heated but provide no evidence to support this assertion.

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

| CLAIM LANGUAGE | HALO'S PROPOSED CONSTRUCTION | DEFENDANTS' PROPOSED CONSTRUCTION |
|---|--|--|
| "carried within the/said package by a soft silicone material" | Situated inside the package and supported by a soft silicone material. | The embedding of a circuit or component in a solid mass of plastic or wax to protect against the environment and/or against the effects of physical vibration. |
| "within said package in a soft silicone material" | Situated inside the package in contact with a soft silicone material. | The embedding of a circuit or component in a solid mass of plastic or wax to protect against the environment and/or against the effects of physical vibration. |

The court first considers the claim term "carried within the/said package by a soft silicone material." Defendants primarily base their proposed construction on a dictionary definition of "encapsulate." However, the claim term at issue is "carried within," not "encapsulate." The fact that the claims in the '785 Patent contain both the term "carried within" and the term "encapsulating" suggests that these two terms have distinct meanings, in the absence of evidence to the contrary. *See CAE Screenplates, Inc. v. Heinrich Fiedler GmbH & Co.*, 224 F.3d 1308, 1317 (Fed. Cir. 2000) ("In the absence of any evidence to the contrary, we must presume that the use of . . . different terms in the claims connotes different meanings.").

Defendants argue that "carried within" requires "encapsulating" because the embodiments shown in Figures 4 and 5 of the specifications show the toroid transformers encapsulated within the silicone. *See '985 Patent Figs. 4, 5.* However, the Federal Circuit has repeatedly warned against reading limitations from embodiments in the specification into the claims and has "expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment." *Phillips*, 415 F.3d at 1323. Moreover, contrary to defendants' assertions, the specifications of the asserted patents do not demonstrate that the patentee considered "carried within" as a synonym for "encapsulate." The '720 and '721 Patent specifications define "carried by a soft silicone material" as "encapsulated *or supported*" by a soft silicone material. '720 Patent 2: 56-57, 5:3-4 (emphasis added); *see also* '720 Patent 4:43-45 ("[t]he use of a soft silicone material . . . to carry the toroid transformers within the case or package acts to encapsulate *or support* the toroid transformer") (emphasis added). Accordingly, the specifications

1 suggest that the patentee contemplated "carrying within" as including both encapsulating *and* merely
2 providing support.

3 The court agrees with defendants that the specifications require the soft silicone material to
4 protect the toroid transformers. The specifications for each of the asserted patents describe the
5 present invention as having "silicone filling to protect the toroid." '985 Patent 3:18-20; '720 Patent
6 4:10-13. Defendants claim that silicone cannot protect the toroid transformer unless it completely
7 encapsulates the transformer but provide no evidence to support this assertion. The court thus
8 construes "carried within the/said package by a soft silicone material" as situated inside the package
9 and encapsulated or supported by a soft silicone material sufficient to protect the toroid
10 transformer(s).

11 The claim term "carried within the/said package by a soft silicone material" appears in the
12 '985 Patent and the '785 Patent, while the claim term "within said package in a soft silicone material"
13 appears only in the '720 Patent. The court finds that a person of ordinary skill in the art reading the
14 asserted patents would understand the two claim terms to have the same meaning. In describing the
15 present invention, the '720 Patent specification describes how the toroid transformers are
16 "encapsulated or supported ('carried by a soft silicone material') such that when the wires are wound
17 around and soldered to the pin-posts, the cracking and expansion problems described above are
18 avoided." '720 Patent 5:1-6. Accordingly, the claimed invention in the '720 Patent requires the soft
19 silicone material to encapsulate or support the toroid transformers to provide protection for the
20 transformers. The court therefore construes "within said package in a soft silicone material" as
21 situated inside the package and encapsulated or supported by a soft silicone material sufficient to
22 protect the toroid transformer(s).

23 **E. "Standoff"**

24 The parties agree that a "standoff" serves the purpose of maintaining a distance between the
25 bottom of the inner terminal pins and the printed circuit board. *See* '985 Patent 2:41-43. They
26 disagree as to whether a "standoff" must come in contact with the printed circuit board once the
27 electronic surface mount package is attached. Defendants contend that a "standoff" inherently must
28 be a structure that is in contact with the printed circuit board after mounting, while Halo argues that

1 a "standoff" only comes in contact with the circuit board when there is an over-forced pick and place
2 operation. The parties' proposed constructions are as follows:

| CLAIM LANGUAGE | HALO'S PROPOSED CONSTRUCTION | DEFENDANTS' PROPOSED CONSTRUCTION |
|----------------|---|--|
| "standoff" | A portion of the case that extends below the solder posts that is capable of preventing the solder posts from contacting the printed circuit board. | Any structure that terminates at the foot seating plane. |

3
4
5
6
7
8 The court begins by considering the words of the claims themselves. *See Vitronics Corp. v.*
9 *Conceptronic*, 90 F.3d 1576, 1582 (Fed. Cir. 1996). Claim 9 of the '785 Patent requires "a standoff,
10 the standoff defining a foot seating plane for the surface mount of the package." '785 Patent 4: 5-6.
11 The parties agree that the foot seating plane is the plane of contact between the package and the
12 printed circuit board. The fact that a "standoff" can define this plane of contact with the printed
13 circuit board demonstrates that a "standoff" *may* come directly in contact with the printed circuit
14 board after mounting. However, it does not establish that a "standoff" is a structure that *must* come
15 in contact with the printed circuit board.

16 Claim 18 of the '785 Patent requires "a standoff for surface mounting the package to the
17 circuit board." '785 Patent 4:44-45. Defendants argue that this means that a "standoff" must touch
18 the circuit board in order to mount the package to the circuit board. However, "for surface
19 mounting" may simply refer to the fact that a "standoff" serves its purpose (maintaining a distance
20 between the bottom of the inside terminal pins and the circuit board) during the process of mounting
21 the package to the circuit board. Accordingly, the claim language does not by itself provide
22 sufficient guidance as to whether a "standoff" necessarily must come in contact with the printed
23 circuit board when mounted.

24 The written specifications, however, make clear that a "standoff" need not come in contact
25 with the printed circuit board once the package is mounted. The specifications describe Figure 6 as
26 showing "the distance in relationship between the end of the post 12 and where the PC board 36 is
27 located and also where the standoff 34 ends." '985 Patent 2:44-46. The PC board 36 is described as
28 being located at the base of the foot seating plane, and there is a "typical clearance of 0.015 inches

1 from the safe guard 34 to the seating plane . . . to avoid interference to the coplanarity of the
2 package." *Id.* 2:46-50. Since the specifications use the terms "standoff" and "safe guard"
3 interchangeably, *see id.* 2:34-35, this description clearly contemplates a distance, typically of 0.015
4 inches, between the standoff and the printed circuit board.

5 The actual drawing for Figure 6, however, shows 36 (the number representing the PC board)
6 as being at the same height as 34 (the number representing the standoff), rather than being 0.015
7 inches below it. '985 Patent Fig. 6. This apparent inconsistency does not mean that the patentee
8 intended there to always be contact. The parties agree that if the labeling of PC board 36 in Figure 6
9 were intended as literally drawn, the drawing would make no sense because the end of terminal post
10 14 would be located below the printed circuit board, which is not possible. In light of the fact that
11 such an interpretation would render Figure 6 nonsensical and the unambiguous written description
12 that contemplates a "typical clearance of 0.015 inches" between the standoff and the circuit board,
13 one of ordinary skill in the art would view the labeling of PC board 36 in Figure 6 to be a mistake.
14 The court therefore disregards the apparent clerical error in the labeling of PC board 36 in Figure 6
15 in construing the claim term "standoff." *See Novo Indus., L.P. v. Micro Molds Corp.*, 350 F.3d
16 1348, 1357 (Fed. Cir. 2003) (courts may "correct obvious minor typographical and clerical errors in
17 patents").

18 A "standoff" serves its purpose of maintaining a distance between the bottom of the inside
19 terminal pins and the circuit board only when it actually comes in contact with the circuit board.
20 However, the specifications explain that a "standoff" "prevent[s] the solder joints from touching the
21 circuit board *due to an over forced pick and place operation.*" '985 Patent 2:51-53 (emphasis
22 added). This is consistent with Halo's contention that a "standoff" only comes in contact with the
23 circuit board when there is an over-forced pick and place operation and not under normal
24 circumstances. Accordingly, the court concludes that a "standoff" need not terminate at the foot
25 seating plane and adopts Halo's proposed construction.

26 **F. "Means for encapsulating the plurality of toroid transformers within the**
27 **package"**

28 The parties agree that "means for encapsulating the plurality of toroid transformers within
the package" is a means-plus-function limitation. The Patent Act provides that:

[a]n element in a claim for a combination may be expressed as a means or step for performing a specified function without the recital of structure, material, or acts in support thereof, and such claim shall be construed to cover the corresponding structure, material, or acts described in the specification and equivalents thereof.

35 U.S.C. § 112 ¶ 6. In construing a means-plus-function limitation, a court must first determine the claimed function and then identify the corresponding structure in the written description that performs the function. *See AllVoice Computing PLC v. Nuance Commc'ns, Inc.*, 504 F.3d 1236, 1240 (Fed. Cir. 2007). The parties' proposed constructions are as follows:

| CLAIM LANGUAGE | HALO'S PROPOSED CONSTRUCTION | DEFENDANTS' PROPOSED CONSTRUCTION |
|---|--|---|
| "means for encapsulating the plurality of toroid transformers within the package" | Function: Embedding the plurality of toroid transformers within the package. Corresponding structure: A silicone compound, a silicone filling, or a soft silicone material and their equivalents. | Function: Encapsulating (i.e., the embedding of a circuit or component in a solid mass of plastic or wax to protect against the environment and/or against the effects of physical vibration) the plurality of toroid transformers within the package. Corresponding structure: A solid mass of soft silicone. |
| "encapsulating . . . toroid transformers within the package" | Plain meaning, or Embedding the toroid transformers within the package. | Encapsulating while the transformers are already in place within the package. |

The parties agree that the claimed function is encapsulating the plurality of toroid transformers within the package. The question that remains is whether "encapsulating" needs to be further construed. Halo contends that the plain meaning of "encapsulating" is clear and needs no construction, but if it were to be construed, that the proper definition of "encapsulate" is embed. Defendants appear to agree that "embed" could be used as part of the definition for "encapsulate" but argue that the construction should specify that the purpose is to protect the toroid transformers.

In describing the present invention, the '785 Patent specification states that the invention has "silicon filling to protect the toroid." '785 Patent 3:17-19. The court thus agrees with defendants that the encapsulation of the toroid transformers must be sufficient to protect the transformers. However, the court finds no basis in the intrinsic evidence to support the various other limitations contained in defendants' proposed construction. The dictionary definition which defendants rely

1 upon imposes limitations that appear to contradict the '785 Patent specification, such as requiring a
 2 solid mass of plastic or wax rather than any silicone filling. The court therefore declines to adopt
 3 defendants' construction and instead finds that the claimed function is encapsulating the plurality of
 4 toroid transformers within the package such that the transformers are protected.

5 The next step in construing a means-plus-function limitation is to identify the corresponding
 6 structure in the written description that performs the claimed function. *See AllVoice Computing*, 504
 7 F.3d at 1240. The parties have come to an agreement as to the corresponding structure, and the
 8 court thus finds that the corresponding structure is a silicone compound, a silicone filling, or a soft
 9 silicone material and their equivalents.

10 The parties originally disputed whether "encapsulating . . . toroid transformers within the
 11 package" should be separately construed. The parties have come to an agreement that to the extent
 12 any construction is necessary, this claim term should be construed as having the same meaning as
 13 the function in the means-plus-function limitation discussed above. Having already construed the
 14 claimed function in the above means-plus-function limitation, the court adopts the same construction
 15 for this claim term.

16 **G. "Reinforcement beam located laterally along the bottom of said package"**

17 The parties' proposed constructions are as follows:

| CLAIM LANGUAGE | HALO'S PROPOSED CONSTRUCTION | DEFENDANTS' PROPOSED CONSTRUCTION |
|---|------------------------------|-----------------------------------|
| "reinforcement beam located laterally along the bottom of said package" | Plain meaning. | Indefinite. |

22 Halo contends that "reinforcement beam located laterally along the bottom of said package"
 23 has its ordinary and customary meaning, which is non-technical and would be clear to a jury without
 24 any construction. Defendants argue that this claim term is indefinite because the described package
 25 has no "bottom" and thus cannot possibly have a reinforcement beam placed laterally along its
 26 "bottom." Neither side's position is persuasive.

27 The '721 Patent specification does state that "with the open construction, the present
 28 invention has no bottom at all." '721 Patent 2:53-54, 4:67-5:1. When "bottom" is used in this

1 context, however, it is clear that the patentee is comparing the prior art two-piece construction which
2 had a base piece closing the package at the bottom with the claimed invention which has a one-piece
3 construction which is open at the bottom. "Bottom" as used in the specification refers to a location.
4 Other parts of the specification show that the patentee uses the word "bottom" to refer to the location
5 of a plane connecting the lowest points on the package. See '721 Patent 1:39 ("open bottom"), 1:46
6 ("case is open at the bottom"), 3:17 ("case has been placed bottom side up"), 4:14 ("case is open at
7 the bottom"), 4:16 ("bottom view"). Referring to this plane as the "bottom" of the package is
8 consistent with ordinary usage of the word "bottom."² Accordingly, the reinforcement beam must be
9 located laterally along the plane connecting the lowest points on the package.

10 What the patentee means by the requirement that the reinforcement beam is "located laterally
11 along the bottom" is clarified by the specification which describes and shows the beam running from
12 one side of the case across to the other. See 1:47-49: ("The present invention also includes a
13 reinforcement beam that is disposed laterally or sidewise across the bottom of the package"; 4:17-
14 19: "a reinforcement beam **36** laterally disposed across the bottom of the case or package **30**; Figs.
15 10 and 11 show the beam running from one side of the case to the other.) "Importantly, the person of
16 ordinary skill in the art is deemed to read the claim term not only in the context of the particular
17 claim in which the disputed term appears, but in the context of the entire patent, including the
18 specification." *Phillips*, 415 F3d. at 1313.

19 Defendants argue that Figure 11, which shows an embodiment of the reinforcement beam,
20 fails to meet the requirement of being "located laterally along the bottom." Figure 11 shows a beam
21 that does not physically touch the plane connecting the lowest points on the package. However, as
22 Halo points out, the ordinary usage of the word "along" does not require contact.

23 Claims are often drafted using terminology that is not as precise or specific as
24 it might be. As long as the result complies with the statutory requirement to
"particularly point[] out and distinctly claim[] the subject matter which the applicant

25 ² Just as one would commonly refer to the plane connecting the highest points on a drinking glass as
26 the "top" of the glass, one would commonly refer to the plane connecting the lowest points of an
27 object as the "bottom" of the object. Both parties reject defining "bottom" as used in the subject
28 limitation as the underside of the case or package despite the first definition of "bottom" given in
Merriam-Webster's online dictionary, specifically "the underside of something." *Definition of*
"Bottom," MERRIAM-WEBSTER.COM, (<http://www.merriam-webster.com/dictionary/bottom> (last
visited November 3, 2010)).

1 regards as his invention," 35 U.S.C. § 112, para. 2, that practice is permissible. . . .
 2 Rather, after the court has defined the claim with whatever specificity and precision
 3 is warranted by the language of the claim and the evidence bearing on the proper
 construction, the task of determining whether the construed claim reads on the
 accused product is for the finder of fact.

4 *PPG Industries v. Guardian Industries Corp.*, 156 F.3d 1351, 1355 (Fed. Cir. 1998).

5 The court finds that "reinforcement beam located laterally along the bottom of said package"
 6 is not indefinite and construes this claim language as requiring the reinforcement beam to run from
 7 one side of the case to the other across the plane connecting the lowest points on said package. A
 further or more precise location of the reinforcement beam than its running "along" or
 8 "across the plane" is not warranted.³

9
 10 **III. ORDER**

11 For the foregoing reasons, the court construes the disputed claim language as follows:


| CLAIM LANGUAGE | CONSTRUCTION |
|---|--|
| "electronic surface mount package" | An electronic device configured to attach to printed circuit boards powered by DC voltages only. |
| "toroid transformer" | A ring-shaped core made of conductive material that may be wrapped with coils of wire to allow the transfer of electrical energy from one circuit to another without a direct connection between them. |
| "toroid transformers each having wires wrapped/wound thereon" | Plain meaning (no construction needed). |
| "soft silicone" | Silicone that is resilient so as to allow expansion of the toroid transformer(s) when heated such that cracking of the package does not ordinarily occur. |
| "carried within the/said package by a soft silicone material" | Situated inside the package and encapsulated or supported by a soft silicone material sufficient to protect the toroid transformer(s). |
| "within said package in a soft silicone material" | Situated inside the package and encapsulated or supported by a soft silicone material sufficient to protect the toroid transformer(s). |
| "standoff" | A portion of the case that extends below the solder posts that is capable of preventing the solder posts from contacting the printed circuit board. |

12
 13
 14
 15
 16
 17
 18
 19
 20
 21
 22
 23
 24
 25
 26
 27 ³ It would be error to impose a more precise construction when the intrinsic evidence provides no
 28 basis for such additional precision. *See Acumed LLC v. Stryker Corp.*, 483 F.3d 800, 806 (Fed. Cir. 2007) (holding that "a sound claim construction need not always purge every shred of ambiguity. The resolution of some line-drawing problems . . . is properly left to the trier of fact").

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

| CLAIM LANGUAGE | CONSTRUCTION |
|---|---|
| "means for encapsulating the plurality of toroid transformers within the package" | Function: Encapsulating the plurality of toroid transformers within the package such that the transformers are protected. Corresponding structure: A silicone compound, a silicone filling, or a soft silicone material and their equivalents. |
| "encapsulating . . . toroid transformers within the package" | Encapsulating toroid transformers within the package such that the transformers are protected. |
| "reinforcement beam located laterally along the bottom of said package" | Reinforcement beam that runs from one side of the case to the other across the plane connecting the lowest points on the package or case. |

DATED: 11/16/2010



RONALD M. WHYTE
United States District Judge