DECISION
of 9 December 1999

Case Number: T 0169/98 - 3.4.3
Application Number: 92305051.2
Publication Number: 0518544
IPC: H01L 21/316

Language of the proceedings: EN

Title of invention:
Anisotropic deposition of dielectrics

Applicant:
AT&T Corp.

Opponent:
-

Headword:
Anisotropic deposition/AT&T

Relevant legal provisions:
EPC Art. 108

Keyword:
"Form of appeal - admissible (yes)"

Decisions cited:
G 0010/93, T 0069/96

Catchword:
-
Case Number: T 0169/98 - 3.4.3

DECISION
of the Technical Board of Appeal 3.4.3
of 9 December 1999

Appellant: AT&T Corp.
32 Avenue of the Americas
New York, NY 10013-2412 (US)

Representative: Johnston, Kenneth Graham
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Woodford Green
Essex, IG8 OTU (GB)

Decision under appeal: Decision of the Examining Division of the European Patent Office posted 9 October 1997 refusing European patent application No. 92 305 051.2 pursuant to Article 97(1) EPC.

Composition of the Board:
Chairman: R. K. Shukla
Members: G. L. Eliasson
W. Moser
Summary of Facts and Submissions

I. European patent application No. 92 305 051.2 was refused by the decision of the examining division dated 9 October 1997. The ground for the refusal was that the subject-matter of claim 1 filed with the letter of 1 August 1996, received by the EPO on 1 August 1996, lacked an inventive step in view of the prior art document


According to the decision, however, an independent claim formulated with one or both of the features of claims 5 and 6 would appear to be inventive. The applicant had also been invited in the official communication dated 30 January 1996 to file such a claim but had instead chosen to pursue the subject matter as originally claimed.

II. The appellant (applicant) lodged an appeal on 28 November 1997, payed the appeal fee on 27 November 1997, and filed new claims 1 to 9 on 3 February 1998 and stated in the accompanying letter that "We have been advised that the revision of the claims is in alignment with the claims suggested by the Examiner and that such revision will answer all of the objections raised."

III. In response to communications by the Board, the appellant filed new claims 1 to 5 together with amended pages 1a and 2 of the description on 6 September 1999, and filed a new claim 2 on 17 November 1999. The
appellant requested that the decision under appeal be set aside and a patent be granted on the basis of the following documents:

Claims: No. 1 and 3 to 5 with the letter dated and filed on 6 September 1999
No. 2 with the letter dated and filed on 17 November 1999

Description: pages 1 and 5 of the application as filed
pages 2a, 3, and 4 with the letter dated and filed on 3 October 1995
pages 1a and 2 with the letter dated and filed on 6 September 1999

Drawings: Sheet 1/1 with the letter dated and filed on 1 August 1996

IV. Claim 1 of the above request reads as follows:

"A method of semiconductor integrated circuit fabrication comprising:
depositing a dielectric (119) upon a substrate (111) in a plasma reactor (11) from a gas mixture comprising a precursor gas (19) and oxygen (23), said mixture flowing in said reactor (11) and being capable of depositing said dielectric (119) conformally, AND CHARACTERIZED BY maintaining the total pressure of said gas mixture to less than the total pressure required for conformal deposition and by maintaining the oxygen/precursor gas flow ratio at 1/3 or less than the flow ratio required for conformal deposition, thereby anisotropically forming a dielectric (119), and in
which said substrate (e.g., 17) has an edge and is supported by a susceptor (15) which has an edge extending beyond the said edge of said substrate."

Reasons for the Decision

1. **Admissibility**

The appeal complies with Articles 106 to 108 and Rule 64 EPC, and is therefore admissible.

In particular, the Board is satisfied that the statement in the letter dated and filed on 3 February 1998, referred to in section II above, contains sufficient matter to be regarded as a statement of grounds of the appeal in accordance with Article 108, third sentence EPC. Thus, it is clear that the appellant no longer wishes a patent to be granted based on the claim refused in the decision under appeal, but requests the grant of a patent based on claims containing subject matter which was considered by the examining division to be inventive. Thus, the appellant has requested that the examination of the application should be continued on the basis of a new text of the claims which is intended to meet the objections of the examining division (cf. T 69/96, unpublished, Reasons, point 1.2).

2. **Amendments (Article 123(2) EPC)**

Claim 1 contains the subject matter of claims 1, 3, and
6 of the application as filed. Dependent claims 2 to 5 are based on claims 2, 4, 10, and 11 of the application as filed, respectively.

Although claims 2 and 6 of the application as filed both directly refer to claim 1, it is evident from page 5, lines 7 to 13 of the application as filed that no new subject-matter is introduced by the combination of the features of these claims as in claim 1 of the appellant's request.

The application therefore meets the requirements of Article 123(2) EPC.

3. Clarity (Article 84 EPC)

There were no objections raised under Article 84 EPC against claim 1 in the decision under appeal. The objection against claims 7 and 8 in the decision under appeal that these claims are not supported by the description (Article 84 EPC) have been overcome by the deletion of these claims. The Board is also satisfied that the present claims meet the requirements of Article 84 EPC.

4. Novelty and inventive step (Articles 54 and 56 EPC)

According to point 2.0 of the decision under appeal, the feature of claim 6 of the set of claims forming the basis of the contested decision ("in which said substrate has an edge and is supported by a susceptor which has an edge extending beyond the said edge of said substrate") was not disclosed in the prior art and an independent claim incorporating this feature could
have been considered to be inventive.

With respect to claim 1 forming the basis of the decision under appeal, present claim 1 in addition has not only the feature of former claim 6 mentioned above, but also that of claim 2 of the set of the claims. In other words, present claim 1 contains subject matter which was regarded by the examining division as involving an inventive step having regard to the cited prior art. As the above-mentioned feature in question is neither disclosed in document D1 nor in any of the other documents cited in the search report, and the objections under Article 84 EPC in the decision under appeal having been met by the present set of claims, the Board has no reason to question or reexamine on its own motion the examining division's finding that the present set of claims would meet the requirements of Article 52(1) EPC (cf. G 10/93, OJ EPO 1995, 172, Reasons, item 4).
Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the first instance with the order to grant a patent on the basis of the following documents:

   **Claims:**
   - No. 1 and 3 to 5 with the letter dated and filed on 6 September 1999
   - No. 2 with the letter dated and filed on 17 November 1999

   **Description:**
   - pages 1 and 5 of the application as filed
   - pages 2a, 3, and 4 with the letter dated and filed on 3 October 1995
   - pages 1a and 2 with the letter dated and filed on 6 September 1999

   **Drawings:**
   - Sheet 1/1 with the letter dated and filed on 1 August 1996

The Registrar: The Chairman:

D. Spigarelli R. K. Shukla