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**Datasheet for the decision
of 3 April 2009**

Case Number: T 1786/06 - 3.4.01

Application Number: 03290841.0

Publication Number: 1465283

IPC: H01P 1/208

Language of the proceedings: EN

Title of invention:
Dielectric resonator filter

Applicant:
Alcatel Lucent

Headword:
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Relevant legal provisions:
-

Relevant legal provisions (EPC 1973):
EPC Art. 56

Keyword:
"Inventive step (no)"

Decisions cited:
-

Catchword:
-



Case Number: T 1786/06 - 3.4.01

D E C I S I O N
of the Technical Board of Appeal 3.4.01
of 3 April 2009

Appellant: Alcatel Lucent
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Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 24 April 2006
refusing European application No. 03290841.0
pursuant to Article 97(1) EPC 1973.

Composition of the Board:

Chairman: B. Schachenmann
Members: F. Neumann
P. Fontenay

Summary of Facts and Submissions

- I. The appeal lies from the decision of the examining division to refuse the European patent application number 03290841.0.
- II. The appellant requested that the decision under appeal be set aside and a patent be granted on the basis of claims 1 to 11 filed with the letter of 01 September 2006.

Oral proceedings were requested as an auxiliary measure. However, on receipt of a summons to oral proceedings and a communication setting out the preliminary opinion of the Board, the representative of the appellant informed the Board that he would not appear at the oral proceedings.

- III. During the appeal proceedings, the following citation was taken into account:

D1: US-A-5 805 033.

- IV. Independent **claim 1** reads as follows:

"Direct coupled resonator filter having a plurality of resonant cavities (15) such that an inner (18) wall separates two adjoining resonant cavities (15) coupled by means of a coupling (16) means, characterised in that the inner (18) wall is configured to include a slot (20) defining a vertical plane, such that the coupling (16) means makes electrical contact with, and is rigidly connected with at least a horizontal edge

surface of the slot (20), and such coupling means are perpendicular to said vertical plane."

Claims 2 to 11 are dependent claims.

- V. The arguments of the appellant, insofar as they are pertinent to the present decision, are set out below in the reasons for the decision.

Reasons for the Decision

1. Inventive step - Article 56 EPC 1973:

- 1.1 D1 discloses, in Figures 4 and 5, a direct coupled resonator filter 100 having a plurality of resonant cavities 104 such that an inner wall 105 separates two adjoining resonant cavities coupled by means of a coupling means 503 (Figure 4; column 3, lines 52-54, 58-59). The inner wall 105 is configured to include a slot 106 defining a vertical plane (Figures 4 and 5; column 3, lines 45-50 in conjunction with column 3, lines 14-17). The coupling means 503 is perpendicular to said vertical plane (Figures 4 and 5; column 3, line 66 to column 4, line 2).

As explained below, D1 further discloses that the coupling means is rigidly connected with a horizontal edge surface of the slot.

In D1 the slot 106 is provided in the inner wall 105 and is bounded at its upper and lower edges by the housing top-portion 501 and the housing bottom-portion 113 respectively (Figures 1 and 5). Thus, the

horizontal edge surfaces of the slot are defined by the interior surfaces of the housing top and bottom portions.

The coupling disc 503 of D1 is connected to the horizontal edge surface 501 of the slot by means of an adjustable screw 502 which is provided in D1 to permit tuning of the filter.

The appellant was of the opinion that the adjusting screw 502 was, by its very nature, moveable and cannot be considered to rigidly connect the coupling means 503 to the horizontal edge surface 501 of the slot 106. The Board does not contest that the adjustable nature of the screw 502 means that the coupling disc 503 is not fixed in a stationary position with respect to the horizontal edge surface 501 in the configuration of Figure 5. In spite of this, the Board considers that the connection between the coupling disc 503 and the horizontal edge surface 501 is provided by a rigid element, namely the screw 502, and that the connection may therefore be considered to be rigid in the sense of inflexible or stiff.

1.2 D1 contains no explicit disclosure concerning the material of the adjusting screw 502. Claim 1 is therefore distinguished from the disclosure of D1 in that the coupling means makes electrical contact with a horizontal edge surface of the slot.

1.3 However, this feature cannot be considered to contribute to an inventive step.

The Board is of the opinion that the skilled person would instinctively select a screw of conductive material unless compelling reasons persuaded him otherwise. No such reasons are apparent. In particular, in the context of the conductive nature of the cavity walls and coupling disc (column 3, lines 45-50 in conjunction with column 2, line 67 to column 3, line 14), it is to be expected that if the adjusting screw were to be formed of a non-conductive material then this would be explicitly mentioned in D1. It is not. Moreover, in the embodiment of Figures 1 to 3 in D1, the coupling means takes the form of an adjustable, conductive screw 109 which is in direct contact with the conductive housing 101 (column 3, lines 18-21). This embodiment confirms that electrical isolation of the coupling means is not required.

The selection of a screw of electrically conductive material would provide an electrical contact between the coupling means 503 and the horizontal edge surface 501 of the slot.

- 1.4 Consequently, the subject matter of claim 1 lacks an inventive step (Article 56 EPC 1973).

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

R. Schumacher

B. Schachenmann