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**Datasheet for the decision  
of 5 May 2015**

**Case Number:** T 2251/10 - 3.4.01

**Application Number:** 06253854.1

**Publication Number:** 1840802

**IPC:** G06K19/077, H01Q1/22

**Language of the proceedings:** EN

**Title of invention:**

RFID tag and manufacturing method thereof

**Applicant:**

FUJITSU LIMITED

**Headword:**

**Relevant legal provisions:**

EPC 1973 Art. 84

EPC Art. 123(2)

**Keyword:**

clarity (no);  
added subject-matter (yes)

**Decisions cited:**

**Catchword:**



**Beschwerdekammern  
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Case Number: T 2251/10 - 3.4.01

**D E C I S I O N**  
**of Technical Board of Appeal 3.4.01**  
**of 5 May 2015**

**Appellant:** FUJITSU LIMITED  
(Applicant) 1-1, Kamikodanaka 4-chome,  
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Kanagawa 211-8588 (JP)

**Representative:** Stebbing, Timothy Charles  
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**Decision under appeal:** **Decision of the Examining Division of the  
European Patent Office posted on 11 June 2010  
refusing European patent application No.  
06253854.1 pursuant to Article 97(2) EPC.**

**Composition of the Board:**

**Chairman** G. Assi  
**Members:** H. Wolfrum  
M. Vogel

## **Summary of Facts and Submissions**

I. European patent application 06 253 854.1 (publication No. EP 1 840 802) was refused by a decision of the examining division dispatched on 11 June 2010 for reasons of added subject-matter (Article 123(2) EPC) and lack of novelty (Article 54(1) and (2) EPC 1973) for a main request then on file and for reasons of added subject-matter and lack of inventive step (Article 56 EPC 1973) for an auxiliary request then on file.

II. The applicant lodged an appeal against the decision on 22 July 2010. The prescribed appeal fee was paid on 4 August 2010. A statement setting out the grounds of appeal was filed on 21 October 2010.

The appellant requested that the decision be set aside and the application be remitted to the examining division for further examination on the basis of a new set of claims 1 to 6 according to a main request or on the basis of a new set of claims 1 to 3 according to an auxiliary request, both filed with the statement of grounds of appeal.

Furthermore, an auxiliary request for oral proceedings was made.

III. On 11 November 2014 the appellant was summoned to oral proceedings to take place on 5 May 2015.

In an annexed communication pursuant to Article 15(1) RPBA the Board commented on the issues to be addressed during the oral proceedings. In this context, the Board pointed inter alia to various problems concerning

added subject-matter and lack of clarity for the requests on file.

IV. The appellant did not comment on the Board's observations nor did it file any further amendments. Instead, the appellant's representative informed the Board by letter of 13 April 2015 that he had been instructed not to attend the oral proceedings.

V. Oral proceedings took place on 5 May 2015 in the absence of the appellant.

VI. Independent claims 1 and 5 of the appellant's main request read as follows :

*"1. An RFID tag (50) having a loop antenna and comprising:  
a flat plate shaped dielectric member (51), and characterised by  
first and second band shaped loop antenna sections (52, 53) having a U shaped cross section and that have the same dimensions and are formed over a first and second surface of said dielectric member (51) so that they face each other and are separated from each other by specified spaces, respectively on both said first and second surface and a dielectric surface slit (59) is exposed on the second surface, and so that each band shaped loop antenna section (52, 53) is wrapped around said dielectric member (51) in a direction away from each other and away from an IC chip (54) so as to be continuous from the first surface to the second surface of the dielectric member (51); and  
said IC chip (54) electrically connects said first and second band shaped loop antenna sections (52, 53) on one of said surfaces."*

"5. A method for manufacturing a RFID tag (50) having a loop antenna comprising:  
a step of forming first and second band-shaped loop antenna sections (52, 53) having a U-shaped cross section and that have the same dimensions and comprise IC chip mounting sections (55, 56) on an insulating film (71) so that the IC chip-mounting sections (55, 56) face each other and are separated from each other by specified spaces, respectively;  
a step of mounting an IC chip (54) on said IC chip-mounting sections (55, 56) of said first and second band shaped loop antenna sections (52, 53) having a U-shaped cross section, and electrically connecting said IC chip (54) to said first and second band shaped loop antenna sections (52, 53); and  
a step of wrapping and fastening said insulating film (71) on which said IC chip (54) is mounted around a flat plate shaped dielectric member (51) so that said IC chip (54) is located on a first surface of said dielectric member (51), and said first and second band shaped loop antenna sections (52, 53) having a U-shaped cross section are located on a second surface of said dielectric member (51) so that they are separated from each other by said specified spaces, respectively and a dielectric surface slit (59) is exposed on the second surface, and so that each band shaped loop antenna section (52, 53) is wrapped around said dielectric member (51) in a direction away from each other and away from said IC chip (54) so as be continuous from the first surface to the second surface of the dielectric member (51)."

Claims 2 to 4 and 6 are dependent claims.

Claim 1 of the auxiliary request differs from claim 1 of the main request in that the following feature is added at the end of the claim :

*"wherein the RFID tag (50) further comprises either an insulating layer (81) layered on the surface opposite from said IC chip-mounting surface or an insulating layer (81) and conductive layer (82) that are layered on the surface opposite from said IC chip-mounting surface."*

Claim 3 of the auxiliary request differs from claim 5 of the main request in that the following feature is added at the end of the claim:

*"and a step of layering either an insulating layer (81), or an insulating layer (81) and conductive layer (82), on the surface opposite from said IC chip mounting surface."*

Claim 2 is a dependent claim.

### **Reasons for the Decision**

1. The appeal complies with the requirements of Articles 106 to 108 and Rule 99 EPC and is, therefore, admissible.
2. Main request
  - 2.1 As observed in the annex of 11 November 2014 to the summons to oral proceedings, a number of definitions comprised in present claim 1 are ambiguous (Article 84 EPC 1973) and/or have no proper basis of disclosure (Article 123(2) EPC) in the claimed ambiguity.

For example, *"loop antenna sections (52, 53) having a U-shaped cross section"* are disclosed solely by

Figure 1 and the corresponding description in paragraph [0012] of the application as originally filed, from where it is apparent that the arrangement in the shape of a 'U' results from the fact that each of the antenna sections is wrapped around the "*flat plate shaped dielectric member*". However, claims 1 and 5 on file do not unambiguously specify that the respective U-shaped cross section arises from this wrapping.

There are other ambiguous definitions for which the basis of disclosure in present claim 1 is obscure, such as for instance the reference to "*a dielectric surface slit (59)*" as an item separate from any of the "*specified spaces*", or to "*IC chip mounting sections (55, 56)*" on just any surface of the "*flat plate shaped dielectric member (51)*".

- 2.2 Although having been informed about the above deficiencies by the Board's communication annexed to the summons to oral proceedings of 11 November 2014, the appellant did not present any comments nor propose any amendments.

The Board sees thus no reason to deviate from its preliminary opinion given in the said communication.

3. Auxiliary request

In its communication of 11 November 2014 the Board also noted that the further amendment made to claim 1 of the auxiliary request did not overcome the aforementioned deficiencies identified for claim 1 of the main request.

4. Consequently, none of the appellant's requests on file is allowable.

**Order**

**For these reasons it is decided that:**

The appeal is dismissed.

The Registrar:

The Chairman:



R. Schumacher

G. Assi

Decision electronically authenticated