

Internal distribution code:

- (A) [-] Publication in OJ
(B) [-] To Chairmen and Members
(C) [-] To Chairmen
(D) [X] No distribution

**Datasheet for the decision
of 5 October 2018**

Case Number: T 2559/12 - 3.4.01

Application Number: 10158746.7

Publication Number: 2204882

IPC: H01Q1/50, G06K19/07,
G06K19/077, H01Q1/38, H01Q1/46,
H01Q9/16, H04B5/02

Language of the proceedings: EN

Title of invention:
Wireless IC device and component for wireless IC device

Applicant:
MURATA MANUFACTURING CO., LTD.

Headword:
Wireless IC device / MURATA MANUFACTURING

Relevant legal provisions:
EPC Art. 123(2), 76
EPC R. 43(2)(c)

Keyword:
Amendments - added subject-matter (yes) - intermediate
generalisation



Beschwerdekammern
Boards of Appeal
Chambres de recours

Boards of Appeal of the
European Patent Office
Richard-Reitzner-Allee 8
85540 Haar
GERMANY
Tel. +49 (0)89 2399-0
Fax +49 (0)89 2399-4465

Case Number: T 2559/12 - 3.4.01

D E C I S I O N
of Technical Board of Appeal 3.4.01
of 5 October 2018

Appellant: MURATA MANUFACTURING CO., LTD.
(Applicant) 10-1, Higashikotari 1-chome
Nagaokakyo-shi, Kyoto 617-8555 (JP)

Representative: Stöckeler, Ferdinand
Schoppe, Zimmermann, Stöckeler
Zinkler, Schenk & Partner mbB
Patentanwälte
Radlkoferstrasse 2
81373 München (DE)

Decision under appeal: **Decision of the Examining Division of the
European Patent Office posted on 3 July 2012
refusing European patent application No.
10158746.7 pursuant to Article 97(2) EPC.**

Composition of the Board:

Chairman P. Scriven
Members: P. Fontenay
J. Geschwind

Summary of Facts and Submissions

- I. The Examining Division refused European patent application No. 10 158 746 which had been filed as a divisional application of the earlier patent application No. 07 706 650.
- II. The decision to refuse the application refers to a previous communication of the Examining Division dated 15 June 2012 reflecting the content of a phone consultation between the examiner and the applicant's representative. In the Examining Division's view, claim 1 of the sole request then on file constituted a non-allowable intermediate generalisation of the specific embodiments corresponding to Figures 29, 32, 35 and 44 of the application.

The Examining Division's communication also stated that *combinations of the features of claim 1 on file on one hand and the features of claims 2-5 on file on the other hand, respectively, appeared to define patentable subject-matter in conformity with Article 123(2) EPC.*

- III. The appellant/applicant filed an appeal and requested that the impugned decision be set aside and that a patent be granted on the basis of the "pending documents", i.e. those underlying the appealed decision.

In the appellant's view, the wording of claim 1 did not involve added subject-matter. Particular emphasis was put on the fact that the last feature of claim 1, regarding a first inductance element of a first resonance circuit being magnetically coupled to a second inductor element of a second resonance circuit,

was common to the four embodiments corresponding to figures 29, 32, 35 and 44, respectively. Consequently, the skilled person would have recognised that variations within the framework of claim 1 had been envisaged, and were not limited to the specific arrangements disclosed. This further supported the generalisation resulting from the mention in the claim of the magnetic coupling between the first and second inductance elements without the other components of the power feeding circuit: its specific construction was not essential for the system to perform satisfactorily.

- IV. In accordance with the appellant's request, oral proceedings were arranged.

- V. In a communication under Article 15(1) RPBA, the appellant was informed of the Board's preliminary view with regard to the issue of added subject-matter.

Taking account of the fact that the communication of the Examining Division referred to in the impugned decision did not specify the legal basis on which the objection of added subject-matter was based, the Board stressed that it intended to consider both branches of the objection, that is the question of support for claim 1 with regard to the original current application (Article 123(2) EPC) and with regard to the original earlier application (Article 76 EPC).

As the original current and earlier applications differed only in the claims, the question to be answered came down to determining whether the original applications provided a sufficient basis for the feature, common to the embodiments of Figures 29, 32, 35 and 44, of a first inductance element of a first resonance circuit being magnetically coupled to a

second inductor element of a second resonance circuit, without the other circuit components of those embodiments (see, for example, page 3, lines 2-12 and page 5, lines 21-23 of both original applications).

- VI. In a subsequent phone call, initiated by the appellant's representative, the Rapporteur explained that it was, at that stage, not possible to go further than the Board had done in its communication. Common general knowledge in the field in question had to be assessed. It was likely to play a major role in the question to be answered. There was no doubt, in this regard, that the skilled person would have known about the principles applying to resonance circuits.
- VII. Under cover of a letter dated 29 August 2018, a corrected version of the main request was filed as well as an auxiliary request. In the course of the oral proceedings, a second auxiliary request was filed
- VIII. During the oral proceedings, the appellant reiterated the view that claim 1 of the main request incorporated the feature common to the embodiments of Figures 29, 32, 35 and 44. This constituted a sufficient basis for the generalisation resulting from the claim's wording since it established that a variety of arrangements had been envisaged by the applicant. The skilled person would have recognised, from common general knowledge in the field of resonating circuits, that further variations were possible and that the feature served, on its own, to enlarge the bandwidth of the claimed IC wireless device.

With regard to the multiplicity of independent claims in the first auxiliary request, the appellant emphasised that the presence of one single claim per

category was not an absolute requirement according to Rule 43(2) EPC. Under the circumstances, it appeared justified to have four independent claims corresponding to the four embodiments for which protection was sought.

IX. Claims 1 - 6 of the main request read:

1. A wireless IC device comprising:

a wireless IC chip (5);

a power feeding circuit board (10) connected to the wireless IC chip (5), the power feeding circuit board (10) comprising a power feeding circuit (16) including a resonance circuit having a predetermined resonance frequency; and

a radiating plate (20) having the power feeding circuit board bonded thereon or having the power feeding circuit board disposed in the vicinity thereof, the radiating plate (20) radiating a transmission signal supplied from the power feeding circuit (16) and/or receiving and propagating a reception signal to the power feeding circuit (16),

wherein the resonance circuit is a lumped constant resonance circuit including a plurality of LC series resonance circuits or a plurality of LC parallel resonance circuits,

wherein a first inductance element (L1; L2) of a first resonance circuit of the plurality of resonance circuits is magnetically coupled to a second inductance element (L2; L3) of a second resonance circuit of the plurality of resonance circuits.

2. The wireless IC device according to claim 1, wherein the first resonance circuit comprises a first series connection of a first capacitance element (C1a),

the first inductance element (L1) and a second capacitance element (C1b),

the first series connection is connected between two terminals of the IC chip (5),

the second resonance circuit comprises a second series connection of a third capacitance element (C2a), the second inductance element (L2) and a fourth capacitance element (C2b),

the second series connection is connected in parallel to the first inductance element (L1), and

the two inductance elements (L1, L2) are magnetically coupled with the radiation plate (20).

3. The wireless IC device according to claim 1, wherein:

the first resonance circuit comprises a first series connection of a first capacitance element (C1) and the first inductance element (L1),

the first series connection is connected between two terminals (131a, 131b) of the IC chip (5),

the second resonance circuit comprises a second series connection of a second capacitance element (C2) and the second inductance element (L2),

the second series connection is connected in parallel to the first inductance element (L1), and

the two inductance elements (L1, L2) are magnetically coupled with the radiation plate (20).

4. The wireless IC device according to claim 1, wherein

the first resonance circuit comprises a first parallel connection of a first capacitance element (C1) and the first inductance element (L1),

the second resonance circuit comprises a second parallel connection of a second capacitance element (C2) and the second inductance element (L2),

a third capacitance element (C3) is connecting the first parallel connection and the second parallel connection,

the first capacitance element (C1) is capacitively coupled with the radiation plate (20), and

the first inductance element (L1) is magnetically coupled with an inductance element (L5) provided in the wireless IC chip (5).

5. The wireless IC device according to claim 1, wherein the resonance circuit comprises a third inductance element (L1) magnetically coupled with an inductance element (L5) provided in the wireless IC chip (5),

the first resonance circuit comprises a first series connection of a first capacitance element (C1a), the first inductance element (L2) and a second capacitance element (C1b),

the first series connection is connected in parallel to the third inductance element (L1),

the second resonance circuit comprises a second series connection of a third capacitance element (C2a), the second inductance element (L2) and a fourth [sic] capacitance element (C2b),

the second series connection is connected in parallel to the first inductance element (L2),

wherein the first, second and third inductance elements (L1, L2, L3) are magnetically coupled with each other and with the radiation plate (20).

6. The wireless IC device according to claim 1, wherein

the radiation plate (20) has an electrical length that is an integer multiple of a half wavelength of the resonant frequency of the resonant circuit.

- X. Independent claims 1 to 4 of the first auxiliary request correspond, respectively, to claims 3, 2, 4 and 5 of the main request. Claim 5 corresponds to claim 6 of the main request.

Claim 1 of the second auxiliary request corresponds to claim 1 of the first auxiliary request. Dependent claim 2 corresponds to claim 5 of the first auxiliary request.

Reasons for the Decision

1. *Main request - Added subject-matter (Articles 76(1) and 123(2) EPC)*
- 1.1 Claim 1 of the main request is based on claim 1 of the original earlier application (Article 76(1) EPC) which defines a wireless IC device with a wireless IC chip, a power feeding circuit board with a resonance circuit, and a radiating plate.
- 1.2 Although the claims originally filed with the divisional application all concern a feed circuit, the passage on page 3, lines 2-12, of the description as filed provides a basis for a wireless IC device incorporating a wireless IC chip, a power feeding circuit board with a resonance circuit and a radiating

plate. In combination with this, page 5, lines 21-23 further describe the resonance circuit being a lumped constant resonance circuit including a plurality of LC series resonance circuits or a plurality of LC parallel resonance circuits. Similar statements are found on page 5, lines 21-23 and claims 6-8 of the original earlier application.

- 1.3 Claim 1 of the main request further defines the magnetic coupling of two inductors from two of the resonant circuits.
- 1.4 This feature is disclosed in the circuit arrangements of the seventeenth, eighteenth, nineteenth and twenty-second embodiments, corresponding to figures 29, 32, 35 and 44, respectively. In each of these embodiments, however, it appears in combination with other circuit elements defining the plurality of resonance circuits according to specific arrangements.
- 1.5 Since the description and drawings corresponding to the earlier and current applications are essentially identical, the question of whether claim 1 defines added subject-matter under Article 123(2) EPC is essentially the same as the one raised under Article 76 EPC. This is particularly true considering that the claims of the current and earlier applications do not contain any information regarding the feature in question. Concretely, the issue hinges on whether the embodiments of Figures 29, 32, 35 and 44 provide a sufficient basis for incorporating the additional feature of the first and second inductance elements being magnetically coupled, without the other components of the disclosed circuits.

- 1.6 In the appellant's view, the existence of four different embodiments disclosing the selected feature in various structural configurations indicates that it is not inextricably associated with a specific arrangement of circuit elements. It was further stressed that the selected feature contributed, on its own, to enlarge the bandwidth of the claimed IC wireless device.
- 1.7 This alone is however not sufficient to dissociate the coupled inductance elements from the other circuit elements in Figures 32, 35 and 44.
- 1.8 These Figures show resonance circuits which themselves consist of a plurality of resonance circuits, two of them being coupled by one of their inductance elements. This implies that the coupling of the first and second inductance elements is indeed intimately associated with the other circuit elements and their arrangements in the device so that the circuit, as a whole, operates at the intended resonating frequency.
- 1.9 A further reason why the claimed subject-matter is considered to define added subject-matter is that nothing in the original disclosures suggests that the claimed combination of features could be an invention on its own. There is no indication in the original applications that the seventeenth, eighteenth, nineteenth and twenty-second embodiments are more than an arbitrary selection from the original 31 embodiments.
- 1.10 In conclusion, the subject-matter of claim 1 defines added subject-matter contrary to Articles 123(2) EPC and 76 EPC.

2. *First auxiliary request - Admissibility*

2.1 The first auxiliary request was filed in response to the Board's communication. Its admission is a matter for the Board's discretion (Article 13(1) RPBA).

2.2 In this respect, the presence of four independent claims in the same category prima facie infringes Rule 43(2) EPC, according to which, the number of independent claims in the same category is normally limited to one.

2.3 The appellant put forward that the claims of the first auxiliary request correspond to the claims which the Examining Division regarded as being allowable in the communication it issued on 15 June 2012.

2.4 Independently of the fact that such a statement by the Examining Division would have no bearing on the question of admissibility of said late request in the appeal proceedings, the Board observes that no such request was ever filed in the course of examination proceedings. The communication dated 15 June 2012, referred to, reflects the content of a phone call which took place between the first examiner and the applicant's representative. It attests solely the view of the Examining Division that dependent claims 2 to 5 of the request then pending, which constitute the independent claims of the current first auxiliary request, defined patentable subject-matter in conformity with Article 123(2) EPC.

2.5 Contrary to the appellant's suggestion, this communication cannot be construed as a statement by the Examining Division that a request containing four

independent claims would have been considered allowable.

2.6 Rule 43(2) EPC reads:

Without prejudice to Article 82, a European patent application may contain more than one independent claim in the same category (product, process, apparatus or use) only if the subject-matter of the application involves one of the following:

(a) [...]

(b) {...]

(c) alternative solutions to a particular problem, where it is inappropriate to cover these alternatives by a single claim.

With regard to the criterion that one independent claim would not be appropriate in the present situation, the following is noted:

Firstly, the appellant did not elaborate on this aspect, merely commenting that the requirement of one single claim per category was not absolute and that circumstances allowed a plurality of independent claims in the same category.

Secondly, it appears that it would have been entirely appropriate under the present circumstances, assuming that the embodiments in question define true alternatives, to adopt wording incorporating all essential features in a single independent claim with dependent claims as necessary, as evidenced by the very existence of the main request with its single independent claim and claims 2 to 5 depending thereon more specifically defining the embodiments corresponding to Figures 29, 32, 35 and 44.

The fact that such a claim is not allowable under Article 123(2) and 76 EPC does not affect this.

2.7 In conclusion, the first auxiliary request is not admitted.

3. *Second auxiliary request*

The second auxiliary request was filed during the oral proceedings before the Board. It was filed late, in the sense of Article 13(1) RPBA. The Board however decided to admit said request in the appeal proceedings.

When exercising its discretion under Article 13(1) RPBA, the board noted that the claim constituted a detailed definition of the embodiment of Figure 44 and that the objections of added subject-matter under Article 123(2) and 76 EPC, which applied to the main request, were overcome. The second auxiliary request is unobjectionable under Rule 43(2) EPC, since it includes only one independent claim. Moreover, the admissibility of the second auxiliary request does not require lengthy examination since independent claim 1 corresponds to a combination of claims 1 and 2 of the main request with dependent claim 2 corresponding to former dependent claim 6.

4. Since the Board is not able to derive from the rather ambiguous indication in the communication of the Examining Division dated 15 June 2012 that the claims resulting from the combination of claim 1 with the features of claims 2-5 then pending would "*appear to present patentable subject-matter in conformity with Article 123(2) EPC*" whether this implied that the

requirements as to novelty and inventive step had been fully considered, the case is remitted to the Examining Division in order for them to decide on the appropriate course of action.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the Examining Division for further prosecution on the basis of the second auxiliary request filed during the oral proceedings.

The Registrar:

The Chairman:



R. Schumacher

P. Scriven

Decision electronically authenticated