

**PATENT COOPERATION TREATY**

**TRANSLATION**

From the  
INTERNATIONAL SEARCHING AUTHORITY

**PCT**

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year)	<b>19.07.2011</b>
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Applicant's or agent's file reference <b>10F060PCT</b>	<b>FOR FURTHER ACTION</b> See paragraph 2 below
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International application No. <b>PCT/JP2011/059308</b>	International filing date (day/month/year) <b>14.04.2011</b>	Priority date (day/month/year) <b>19.04.2010</b>
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International Patent Classification (IPC) or both national classification and IPC  
**H01G4/40 (2006.01) i, H01F27/00 (2006.01) i**

Applicant  
**NATIONAL INSTITUTE FOR MATERIALS SCIENCE**

1. This opinion contains indications relating to the following items:

<input checked="" type="checkbox"/>	Box No. I	Basis of the opinion
<input type="checkbox"/>	Box No. II	Priority
<input type="checkbox"/>	Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
<input type="checkbox"/>	Box No. IV	Lack of unity of invention
<input checked="" type="checkbox"/>	Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
<input type="checkbox"/>	Box No. VI	Certain documents cited
<input type="checkbox"/>	Box No. VII	Certain defects in the international application
<input type="checkbox"/>	Box No. VIII	Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Date of completion of this opinion	Authorized officer
Facsimile No.		Telephone No.

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International application No.

PCT/JP2011/059308

Box No. I Basis of this opinion

1. With regard to the **language**, this opinion has been established on the basis of:
  - the international application in the language in which it was filed
  - a translation of the international application into \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b)).
2.  This opinion has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43*bis*.1(a))
3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, this opinion has been established on the basis of a sequence listing filed or furnished:
  - a. (means)
    - on paper
    - in electronic form
  - b. (time)
    - in the international application as filed
    - together with the international application in electronic form
    - subsequently to this Authority for the purposes of search
4.  In addition, in the case that more than one version or copy of a sequence listing has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
5. Additional comments:

**WRITTEN OPINION OF THE  
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International application No. PCT/JP2011/059308
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Box No. V	<b>Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</b>																								
1. Statement	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 20%; vertical-align: top; padding: 2px;">Novelty (N)</td> <td style="padding: 2px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-7</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table> </td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">Inventive step (IS)</td> <td style="padding: 2px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-7</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table> </td> </tr> <tr> <td style="vertical-align: top; padding: 2px;">Industrial applicability (IA)</td> <td style="padding: 2px;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-7</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table> </td> </tr> </table>	Novelty (N)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-7</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table>	Claims	1-7	YES	Claims		NO	Inventive step (IS)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-7</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table>	Claims	1-7	YES	Claims		NO	Industrial applicability (IA)	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 10%; padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;">1-7</td> <td style="width: 10%; text-align: right; padding: 2px;">YES</td> </tr> <tr> <td style="padding: 2px;">Claims</td> <td style="border-bottom: 1px solid black; padding: 2px;"></td> <td style="text-align: right; padding: 2px;">NO</td> </tr> </table>	Claims	1-7	YES	Claims		NO
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2. Citations and explanations:	<p style="margin: 0;">Document 1: JP 2005-294109 A (TOYOTA MOTOR CORP.), 20 October 2005, entire text, all drawings (Family: none)</p> <p style="margin: 0;">Document 2: JP 11-176238 A (JAPAN SCIENCE AND TECHNOLOGY CORP.), 02 July 1999, entire text, all drawings (Family: none)</p> <p style="margin: 0;">Document 3: WO 2009/028728 A1 (CANON INC.), 05 March 2009, entire text, all drawings &amp; JP 2009-74062 A &amp; US 2009/0159856 A1 &amp; US 2010/0286335 A &amp; EP 2189482 A1</p> <p style="margin: 0;">Document 4: US 2002/0118077 A1 (US SEC OF AIR FORCE), 29 August 2002, entire text, all drawings (Family: none)</p> <p style="margin: 0;">Document 5: JP 2006-013153 A (FUJI XEROX CO., LTD.), 12 January 2006, entire text, all drawings (Family: none)</p> <p style="margin: 10px 0 0 40px;">The invention as in claims 1-7 is not disclosed in any of the documents cited in the ISR, and thus is novel and involves an inventive step.</p> <p style="margin: 0 0 0 40px;">In particular, none of documents 1-5, which are considered to be the most relevant prior art documents,</p>																								

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Box No. V

Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement

discloses a helical capacitor-inductor device provided with an array of individual capacitors configured in a loop shape along the longitudinal direction, wherein..., the charge that accumulates inside the individual capacitor increases or decreases according to an increase or decrease in the bias applied to the device, and the increase or decrease in the charge increases or decreases the current to the loop, thereby changing magnetic flux generated inside the device.