

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2019/049131

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. G01K7/00 (2006.01) i, G01K7/01 (2006.01) i
 FI: G01K7/01 G, G01K7/00 321Z

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int. Cl. G01K7/00, G01K7/01

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Published examined utility model applications of Japan 1922-1996
 Published unexamined utility model applications of Japan 1971-2020
 Registered utility model specifications of Japan 1996-2020
 Published registered utility model applications of Japan 1994-2020

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 63-041013 B2 (ANALOG DEVICES INC.) 15 August 1988, column 1, line 22 to column 14, line 27, fig. 1-3	1-6
Y	JP 2017-058146 A (MITSUBISHI ELECTRIC CORP.) 23 March 2017, paragraphs [0001], [0013]-[0017], fig. 1	1-6
Y	JP 2009-145195 A (DENSO CORP.) 02 July 2009, paragraphs [0017], [0029], fig. 1	1-6
Y	JP 51-120160 A (ANALOG DEVICES INC) 21 October 1976, page 14, lower left column, lines 8-15, fig. 2	1-6

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents:

- “A” document defining the general state of the art which is not considered to be of particular relevance
- “E” earlier application or patent but published on or after the international filing date
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- “O” document referring to an oral disclosure, use, exhibition or other means
- “P” document published prior to the international filing date but later than the priority date claimed

- “T” later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- “X” document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- “Y” document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- “&” document member of the same patent family

Date of the actual completion of the international search
07.02.2020

Date of mailing of the international search report
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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2005-017139 A (SHARP CORP.) 20 January 2005, paragraphs [0064]-[0068], fig. 3	2-6
Y	US 2007/0152649 A1 (MICRON TECHNOLOGY, INC.) 05 July 2007, paragraph [0016], fig. 2	2-6
A	US 6867470 B1 (NATIONAL SEMICONDUCTOR CORPORATION) 15 March 2005, entire text, all drawings	1-10

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
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Patent Documents referred to in the Report	Publication Date	Patent Family	Publication Date
JP 63-041013 B2	15.08.1988	JP 53-8583 A US 4123698 A column 1, line 6 to column 9, line 21 GB 1590136 A DE 2730314 A1 FR 2357875 A1 NL 7707522 A	
JP 2017-058146 A	23.03.2017	US 2017/0074921 A1 paragraphs [0002], [0022]-[0026], fig. 1 DE 102016214223 A1 CN 106531704 A	
JP 2009-145195 A	02.07.2009	(Family: none)	
JP 51-120160 A	21.10.1976	US 3940760 A column 4, lines 56-64, fig. 2 GB 1537542 A DE 2611858 A1 FR 2305067 A1 SE 412150 B NL 7602941 A	
JP 2005-017139 A	20.01.2005	(Family: none)	
US 2007/0152649 A1	05.07.2007	US 2008/0279254 A1 US 2014/0023114 A1	
US 6867470 B1	15.03.2005	(Family: none)	