

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2018/006484

## A. CLASSIFICATION OF SUBJECT MATTER

*H01L 33/40(2010.01)i, H01L 33/62(2010.01)i, H01L 33/14(2010.01)i, H01L 33/22(2010.01)i*

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)

H01L 33/40; H01L 21/205; H01L 33/36; H01L 33/00; H01L 33/14; H01L 33/04; H01L 33/44; H01L 33/22; H01L 33/62

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
Korean Utility models and applications for Utility models: IPC as above  
Japanese Utility models and applications for Utility models: IPC as above

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

eKOMPASS (KIPO internal) &amp; Keywords: semiconductor element, unevenness part, flat part, pad electrode, current breaking part

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	JP 2014-120695 A (ROHM CO., LTD.) 30 June 2014 See paragraphs [14]-[26], [30]-[35], and figures 1-2.	1-10
Y	KR 10-2016-0076785 A (LG INNOTEK CO., LTD.) 01 July 2016 See paragraphs [57], [80], and figures 1, 13.	1-10
Y	KR 10-2014-0099619 A (LG INNOTEK CO., LTD.) 13 August 2014 See paragraphs [51]-[53], and figures 1-2.	7-9
Y	KR 10-2014-0097898 A (LG INNOTEK CO., LTD.) 07 August 2014 See paragraph [88], and figure 4.	10
A	JP 2003-174191 A (TOSHIBA CORP.) 20 June 2003 See paragraphs [17]-[31], and figures 1-4.	1-10



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

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"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

"&amp;" document member of the same patent family


Date of the actual completion of the international search

11 SEPTEMBER 2018 (11.09.2018)

Date of mailing of the international search report

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Name and mailing address of the ISA/KR


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**INTERNATIONAL SEARCH REPORT**  
Information on patent family members

International application No.

**PCT/KR2018/006484**

Patent document cited in search report	Publication date	Patent family member	Publication date
JP 2014-120695 A	30/06/2014	US 2014-0166975 A1	19/06/2014
		US 2015-0318440 A1	05/11/2015
		US 9099628 B2	04/08/2015
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		EP 2763193 A2	06/08/2014
		EP 2763193 A3	13/04/2016
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		EP 1271665 A3	15/10/2003
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