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INTERNATIONAL SEARCH REPORT

International application No.

PCT/KR2020/016504

A. CLASSIFICATION OF SUBJECT MATTER

H04M 1/02(2006.01)i; H04B 1/40(2006.01)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)

H04M 1/02(2006.01); G06F 1/18(2006.01); G06F 3/044(2006.01); H01Q 1/24(2006.01); H01Q 13/10(2006.01); H01Q 5/307(2014.01); H01Q 5/335(2014.01); H04B 1/44(2006.01); H05K 1/02(2006.01); H05K 1/14(2006.01)

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  
Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & keywords: first/second printed circuit board, bracket, metal region, non-metal region, ground unit, electrical path

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category* | Citation of document, with indication, where appropriate, of the relevant passages                                               | Relevant to claim No. |
|-----------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Y         | US 2019-0261515 A1 (SAMSUNG ELECTRONICS CO., LTD.) 22 August 2019 (2019-08-22)<br>See paragraphs [0030]-[0093] and figure 1A.    | 1-15                  |
| Y         | US 2018-0090821 A1 (SAMSUNG ELECTRONICS CO., LTD.) 29 March 2018 (2018-03-29)<br>See paragraphs [0032]-[0076] and figure 4.      | 1-15                  |
| A         | US 2017-0273173 A1 (ROHM CO., LTD.) 21 September 2017 (2017-09-21)<br>See paragraphs [0038]-[0042] and figures 1A-1C.            | 1-15                  |
| A         | US 2018-0017999 A1 (SAMSUNG ELECTRONICS CO., LTD.) 18 January 2018 (2018-01-18)<br>See paragraphs [0030]-[0042] and figure 1.    | 1-15                  |
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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  
“D” document cited by the applicant in the international application  
“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

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“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

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INTERNATIONAL SEARCH REPORT  
Information on patent family members

International application No.  
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| Patent document<br>cited in search report |                 |    | Publication date<br>(day/month/year) | Patent family member(s) |                 |    | Publication date<br>(day/month/year) |
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