

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/CN2018/118541

**A. CLASSIFICATION OF SUBJECT MATTER**

H04R 1/10(2006.01)i; H04R 11/04(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)

H04R

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

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

CNPAT, WPI, EPODOC, CNKI, IEEE: 受话器, 听筒, 扬声器, 喇叭, 耳机, 薄, 厚, 尺寸, 体积, 电枢, 磁, 壳, 线圈, 密封, 膜, loudspeaker, speaker, earphone, thin, thick, size, volume, armature, magnetic, magnetism, shell, housing, casing, case, coil, seal +, membrane, film

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	CN 103067806 A (HEARONIC ELECTRONIC (SUZHOU) CO., LTD.) 24 April 2013 (2013-04-24) description, paragraphs [0022]-[0033], [0035], and [0036], and figures 1-6	1-12
X	CN 107404679 A (SUZHOU YICHUAN ACOUSTICS TECHNOLOGY CO., LTD.) 28 November 2017 (2017-11-28) description, paragraphs [0057]-[0066], and figures 1 and 2	1-12
A	CN 106792301 A (SUZHOU SHINWU OPTRONICS TECHNOLOGY CO., LTD.) 31 May 2017 (2017-05-31) entire document	1-12
A	CN 207968953 U (SHENZHEN BELLSING ACOUSTIC TECHNOLOGY CO., LTD.) 12 October 2018 (2018-10-12) entire document	1-12
A	CN 108391215 A (SHENZHEN BELLSING ACOUSTIC TECHNOLOGY CO., LTD.) 10 August 2018 (2018-08-10) entire document	1-12

 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

24 April 2019

Date of mailing of the international search report

31 May 2019

Name and mailing address of the ISA/CN

National Intellectual Property Administration, PRC (ISA/  
CN)  
No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing  
100088  
China

Facsimile No. (86-10)62019451

Authorized officer

Telephone No.

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C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 108322877 A (SHENZHEN BELLSING ACOUSTIC TECHNOLOGY CO., LTD.) 24 July 2018 (2018-07-24) entire document	1-12
A	CN 203206429 U (ZHANG, Xiumei et al.) 18 September 2013 (2013-09-18) entire document	1-12
A	CN 104581579 A (HEARONIC ELECTRONIC (SUZHOU) CO., LTD.) 29 April 2015 (2015-04-29) entire document	1-12
A	US 2015010199 A1 (SAMSUNG ELECTRONICS CO., LTD.) 08 January 2015 (2015-01-08) entire document	1-12

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

International application No.

**PCT/CN2018/118541**

Patent document cited in search report			Publication date (day/month/year)	Patent family member(s)			Publication date (day/month/year)
CN	103067806	A	24 April 2013	CN	103067806	B	15 April 2015
				WO	2014166287	A1	16 October 2014
CN	107404679	A	28 November 2017	None			
CN	106792301	A	31 May 2017	None			
CN	207968953	U	12 October 2018	None			
CN	108391215	A	10 August 2018	None			
CN	108322877	A	24 July 2018	None			
CN	203206429	U	18 September 2013	None			
CN	104581579	A	29 April 2015	None			
US	2015010199	A1	08 January 2015	US	9420379	B2	16 August 2016
				KR	20150004079	A	12 January 2015