

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/CN2017/111890

## A. CLASSIFICATION OF SUBJECT MATTER

H02J 7/00 (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)

H02J

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: 车辆, 汽车, 点烟器, 车载, 车充, 充电, 逆变, 适配, 散热, 镂空, 开放, 敞开, 孔, car, automotive, vehicle, cigar, lighter, inverter, adapter, charger, heat, dissipate, radiate, ventilate, cool, hollow, open, hole

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CN 201294298 Y (HUANG, Guanxing) 19 August 2009 (19.08.2009), description, page 2, line 15 to page 3, line 3, and figures 1 and 2	1-10
A	CN 101563825 A (APPLE INC.) 21 October 2009 (21.10.2009), entire document	1-10
A	CN 2927393 Y (WU, Qingwei) 25 July 2007 (25.07.2007), entire document	1-10
A	US 8547056 B2 (CHING-CHIH CHANG) 01 October 2013 (01.10.2013), entire document	1-10
A	CN 206389140 U (JIANGMEN JIEMA TECHNOLOGY CO., LTD.) 08 August 2017 (08.08.2017), entire document	1-10

Further documents are listed in the continuation of Box C.       See patent family annex.

<p>* Special categories of cited documents:</p> <p>“A” document defining the general state of the art which is not considered to be of particular relevance</p> <p>“E” earlier application or patent but published on or after the international filing date</p> <p>“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)</p> <p>“O” document referring to an oral disclosure, use, exhibition or other means</p> <p>“P” document published prior to the international filing date but later than the priority date claimed</p>	<p>“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</p> <p>“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</p> <p>“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</p> <p>“&amp;” document member of the same patent family</p>
---	---

Date of the actual completion of the international search 28 April 2018	Date of mailing of the international search report 18 May 2018
Name and mailing address of the ISA State Intellectual Property Office of the P. R. China No. 6, Xitucheng Road, Jimenqiao Haidian District, Beijing 100088, China Facsimile No. (86-10) 62019451	Authorized officer  ZHA, Jieli  Telephone No. (86-10) 53961488

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

International application No.  
PCT/CN2017/111890

Patent Documents referred in the Report	Publication Date	Patent Family	Publication Date
CN 201294298 Y	19 August 2009	None	
CN 101563825 A	21 October 2009	HK 1138117 A1	12 July 2013
		JP 2013212047 A	10 October 2013
		EP 2087573 A2	12 August 2009
		AU 2007323863 A1	29 May 2008
		US 2008119241 A1	22 May 2008
		JP 2010510763 A	02 April 2010
		WO 2008064045 A2	29 May 2008
		CN 102868190 A	09 January 2013
		EP 3276779 A1	31 January 2018
CN 2927393 Y	25 July 2007	None	
US 8547056 B2	01 October 2013	None	
CN 206389140 U	08 August 2017	None	