

Title (en)

MICROPHONE AND SPEAKER COMBINED MODULE, EARPHONES, AND TERMINAL DEVICE

Title (de)

MODUL MIT KOMBINIERTEM MIKROFON UND LAUTSPRECHER, UND ENDGERÄT

Title (fr)

MODULE COMBINÉ DE MICROPHONE ET HAUT-PARLEUR, ÉCOUTEURS, ET DISPOSITIF TERMINAL

Publication

**EP 4040799 A4 20221221 (EN)**

Application

**EP 20890501 A 20201111**

Priority

- CN 201911157650 A 20191122
- CN 2020128011 W 20201111

Abstract (en)

[origin: EP4040799A1] Embodiments of this application provide a microphone-loudspeaker combined module, a headset, and a terminal device. The microphone-loudspeaker combined module includes a microphone, a loudspeaker, and a PCB. The microphone has a microphone front cavity, the loudspeaker has a loudspeaker front cavity, and the microphone front cavity communicates with the loudspeaker front cavity. The microphone and the loudspeaker are disposed on the PCB, a signal processing unit is disposed on the PCB, and the microphone and the loudspeaker are electrically connected to a signal processing chip separately. In this application, the microphone and the loudspeaker are disposed on the PCB and the microphone front cavity communicates with the loudspeaker front cavity, so that the microphone and the loudspeaker can share the front cavity, thereby improving space utilization of the microphone and the loudspeaker, and resolving a problem that the loudspeaker and the microphone occupy large space.

IPC 8 full level

**H04R 1/10** (2006.01)

CPC (source: CN EP)

**H04R 1/04** (2013.01 - EP); **H04R 1/08** (2013.01 - CN); **H04R 1/10** (2013.01 - CN); **H04R 1/1075** (2013.01 - EP); **H04R 1/1083** (2013.01 - EP); **H04R 1/1091** (2013.01 - CN); **H04R 5/033** (2013.01 - CN); **H04R 2201/003** (2013.01 - EP)

Citation (search report)

- [X] EP 1396983 A1 20040310 - CIT ALCATEL [FR]
- [X] WO 2011061483 A2 20110526 - INCUS LAB LTD [GB], et al
- [A] US 9521499 B2 20161213 - THEUSS HORST [DE]
- [A] EP 3429957 A1 20190123 - AUSTRIA TECH & SYSTEM TECH [AT]
- See references of WO 2021098562A1

Designated contracting state (EPC)

AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

Designated extension state (EPC)

BA ME

Designated validation state (EPC)

KH MA MD TN

DOCDB simple family (publication)

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DOCDB simple family (application)

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