

Title (en)  
MOBILE TERMINAL

Title (de)  
MOBILES ENDGERÄT

Title (fr)  
TERMINAL MOBILE

Publication  
**EP 3688971 A4 20210609 (EN)**

Application  
**EP 18863472 A 20180727**

Priority  

- US 201762565116 P 20170929
- US 201762587442 P 20171116
- KR 20180050813 A 20180502
- KR 2018008552 W 20180727

Abstract (en)  
[origin: KR20190038264A] The present disclosure discloses a mobile terminal, including a case forming a portion of an appearance; a circuit board disposed inside the case; a flexible printed circuit board electrically connected to the circuit board; a first connector mounted on the circuit board; a second connector mounted on the flexible printed circuit board and fastened to the first connector; and a first antenna having array elements mounted on the flexible printed circuit board, wherein the first antenna is disposed to face a side surface of the case to radiate beam-formed wireless signals through the side surface adjacent to one side of the circuit board.

IPC 8 full level  
**H01Q 1/24** (2006.01); **H01Q 1/22** (2006.01); **H01Q 1/38** (2006.01); **H01Q 1/40** (2006.01); **H01Q 21/06** (2006.01); **H01R 12/77** (2011.01); **H04B 1/38** (2015.01); **H04M 1/02** (2006.01)

CPC (source: EP KR)  
**H01Q 1/2283** (2013.01 - EP); **H01Q 1/243** (2013.01 - EP KR); **H01Q 1/38** (2013.01 - EP); **H01Q 9/285** (2013.01 - KR); **H01Q 21/00** (2013.01 - KR); **H01Q 21/065** (2013.01 - EP); **H01R 12/771** (2013.01 - KR); **H04B 1/38** (2013.01 - KR); **H04M 1/0249** (2013.01 - KR); **H04M 1/0277** (2013.01 - EP KR); **H01Q 1/40** (2013.01 - EP); **H04M 1/0274** (2013.01 - EP)

Citation (search report)  

- [XAYI] US 2010240327 A1 20100923 - LAMBRECHT FRANK [US], et al
- [X] DE 202017002063 U1 20170801 - APPLE INC [US]
- [X] WO 2016168432 A1 20161020 - APPLE INC [US]
- [X] US 2017201011 A1 20170713 - KHRIPKOV ALEXANDER NIKOLAEVICH [RU], et al
- [Y] US 2012075147 A1 20120329 - TSUTSUMI YUKAKO [JP], et al
- See references of WO 2019066235A1

Cited by  
EP3747182A4; WO2019198958A1

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

DOCDB simple family (publication)  
EP 3688971 A1 20200805; EP 3688971 A4 20210609; KR 102439813 B1 20220902; KR 20190038264 A 20190408

DOCDB simple family (application)  
EP 18863472 A 20180727; KR 20180050813 A 20180502