

Title (en)  
TEN-FREQUENCY BAND ANTENNA

Title (de)  
BANDANTENNE MIT ZEHN FREQUENZEN

Title (fr)  
ANTENNE À BANDE À DIX FRÉQUENCES

Publication  
**EP 3444896 A1 20190220 (EN)**

Application  
**EP 18185525 A 20160621**

Priority  
• EP 16175514 A 20160621  
• TW 104132758 A 20151006

Abstract (en)  
A ten-frequency band antenna includes a carrier (1), a high-frequency segment (2), a low-frequency segment (3), a printed circuit board (PCB) (4) and an inductor (5). The high-frequency segment (2) is arranged on left side of the carrier (1) and the low-frequency segment (3) is arranged on right side of the carrier (1). The radiator (22, 24) on the bottom face (14) of the carrier (1) electrically connects with the micro strip (44) of the PCB (4) and the ground line (46) of the first ground metal face (43) when the carrier (1) is fixed to the PCB (4). The low-frequency segment (3) is located at an opened area and corresponding to a smaller area (432) of the first ground metal face (43) with such that the low-frequency segment (3) is at a free space to enhance the frequency response of the low-frequency segment (3) and the bandwidth of the high-frequency segment (2). The area and the volume of blind hole (15) on the carrier (1) can adjust the effective dielectric constant to adjust the resonant frequency and bandwidth of the antenna.

IPC 8 full level  
**H01Q 1/38** (2006.01); **H01Q 1/48** (2006.01); **H01Q 5/378** (2015.01)

CPC (source: EP)  
**H01Q 1/38** (2013.01); **H01Q 1/48** (2013.01); **H01Q 5/378** (2015.01)

Citation (search report)  
• [XAI] WO 2014058926 A1 20140417 - ZUNIGA ELEAZAR [US]  
• [A] US 8779988 B2 20140715 - YANG TSAI-YI [TW], et al

Cited by  
US10601135B2; USRE49000E; US11342674B2; US11641060B2; US12034231B2

Designated contracting state (EPC)  
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**EP 16175514 A 20160621**; EP 18185525 A 20160621; TW 104132758 A 20151006