

Title (en)  
PORTABLE WIRELESS MACHINE

Title (de)  
TRAGBARE DRAHTLOSE MASCHINE

Title (fr)  
APPAREIL PORTABLE SANS FIL

Publication  
**EP 1538694 A4 20060222 (EN)**

Application  
**EP 03741127 A 20030626**

Priority  

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Abstract (en)  
[origin: EP1538694A1] An upper case (1) is connected to a lower case (2) in a hinge portion (3) so as to freely rotate. A plate shaped conductor (4) and a plate shaped conductor (5) are disposed along the surface of the case in the upper case (1). A ground plate (6) is formed in a ground pattern of a circuit board disposed in the lower case (2). The plate shaped conductor (4) and the plate shaped conductor (5) are selected by a high frequency switch (14) and connected to one end of a feeding portion (15). The other end of the feeding portion (15) is connected to the ground plate (6) to form a dipole antenna. <IMAGE>

IPC 1-7  
**H01Q 1/24**

IPC 8 full level  
**H01Q 1/24** (2006.01); **H01Q 3/24** (2006.01); **H01Q 9/16** (2006.01); **H01Q 9/30** (2006.01); **H01Q 9/42** (2006.01); **H01Q 21/29** (2006.01); **H01Q 23/00** (2006.01)

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**H01Q 1/243** (2013.01); **H01Q 3/24** (2013.01); **H01Q 9/16** (2013.01); **H01Q 9/42** (2013.01); **H01Q 21/29** (2013.01); **H01Q 23/00** (2013.01)

Citation (search report)  

- [XY] US 4471493 A 19840911 - SCHOBBER EDWARD A [US]
- [XY] US 5561437 A 19961001 - PHILLIPS JAMES P [US], et al
- [Y] WO 0203665 A1 20020110 - MATSUSHITA ELECTRIC IND CO LTD [JP], et al
- [Y] US 6327485 B1 20011204 - WALDRON RUPERT JAMES [GB]
- [X] US 5649306 A 19970715 - VANNATTA LOUIS JAY [US], et al
- [XP] EP 1258943 A1 20021120 - MITSUBISHI ELECTRIC CORP [JP]
- [Y] WO 0129927 A1 20010426 - SIEMENS AG [DE], et al
- [Y] PATENT ABSTRACTS OF JAPAN vol. 1997, no. 08 29 August 1997 (1997-08-29)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 12 31 October 1998 (1998-10-31)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 2000, no. 13 5 February 2001 (2001-02-05)
- [Y] PATENT ABSTRACTS OF JAPAN vol. 1998, no. 13 30 November 1998 (1998-11-30)
- See references of WO 2004010530A1

Cited by  
EP2448061A1; EP2302816A4; EP2262055A1; EP1901395A4; EP1919028A4; EP2023437A4; EP3661171A4; EP2068395A1; GB2428332A; GB2428332B; US8816913B2; US7289072B2; US7456794B2; WO2008051725A1; WO2012137040A1; US7616161B2; US7830313B2; US8315677B2; US8994604B2; US9118120B2; US10135138B2; US10468770B2; US10734723B2

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