

Title (en)
MICROWAVE ANTENNA STRUCTURE

Publication
EP 0312989 A3 19900704 (EN)

Application
EP 88117340 A 19881018

Priority
• JP 19951388 A 19880810
• JP 26315787 A 19871019
• JP 27075787 A 19871027
• JP 29941687 A 19871127
• JP 30191787 A 19871130

Abstract (en)
[origin: EP0312989A2] A suspended line feed type planar antenna has a substrate (3) sandwiched between a top plate (2) and a bottom plate (1), in which a number of protrusions (31, 30) are formed on the top plate (2) and the bottom plate (1) at a plurality of corresponding positions by deforming the top plate (2) and the bottom plate (1) by means of a press-process or press-treatment, so that the substrate (3) is supported by the protrusions (31, 30).

IPC 1-7
H01Q 21/06

IPC 8 full level
H01Q 1/12 (2006.01); **H01Q 21/00** (2006.01); **H01Q 21/06** (2006.01)

CPC (source: EP KR)
H01Q 1/00 (2013.01 - KR); **H01Q 1/125** (2013.01 - EP); **H01Q 21/0081** (2013.01 - EP); **H01Q 21/065** (2013.01 - EP)

Citation (search report)
• [AP] EP 0252779 A1 19880113 - RAMMOS EMMANUEL
• [A] FR 2552273 A1 19850322 - LABO ELECTRONIQUE PHYSIQUE [FR]
• [A] EP 0228742 A1 19870715 - RADIOTECHNIQUE COMPELEC [FR], et al
• [X] US 4626864 A 19861202 - MICKLETHWAITE IAN W [CA]
• [X] EP 0112205 A1 19840627 - THOMSON BRANDT [FR]
• [AE] EP 0301580 A2 19890201 - SONY CORP [JP]
• [A] PATENT ABSTRACTS OF JAPAN, vol. 9, no. 240 (E-345)[1963], 26th September 1985; & JP-A-60 090 403 (MASPRO DENKO)

Cited by
AU681525B2; EP0543519A1; GB2299213A; EP0807324A4; EP0521377A3; EP0383597A3; DE4139245A1; EP0447018A1; EP0445453A1; GB2535216A; GB2535216B; WO9532528A1; WO9837595A1; US6225960B1; US10431904B2

Designated contracting state (EPC)
DE FR GB IT NL SE

DOCDB simple family (publication)
EP 0312989 A2 19890426; EP 0312989 A3 19900704; EP 0312989 B1 19940413; AU 2361988 A 19890420; AU 624342 B2 19920611; CN 1018875 B 19921028; CN 1034096 A 19890719; DE 3889061 D1 19940519; DE 3889061 T2 19940721; KR 890007450 A 19890619; KR 970002728 B1 19970308

DOCDB simple family (application)
EP 88117340 A 19881018; AU 2361988 A 19881011; CN 88108417 A 19881018; DE 3889061 T 19881018; KR 880013609 A 19881019