

## Title (en)

Radiating multi-layer structure with variable directivity.

## Title (de)

Strahlende Mehrschichtenstruktur mit variabelem Strahlungsdiagramm.

## Title (fr)

Structure rayonnante multicouches à directivité variable.

## Publication

**EP 0627783 A1 19941207 (FR)**

## Application

**EP 94401183 A 19940530**

## Priority

FR 9306660 A 19930603

## Abstract (en)

The antenna of the invention comprises radiating sources having a multi-layer dielectric/conductor structure and a multiplicity of coupled elements distributed over the interfaces between the successive dielectric layers, fed by a single radiating block situated on the lower level of the antenna. The geometric parameters of the conducting patches and of their distributions on successive layers confer great flexibility in the antenna design, especially as far as the simultaneous optimisation of antenna parameters are concerned, such as: directivity, pass band, efficiency (by minimising distribution losses), the purity of the polarisation, and the symmetry of the radiating diagram. These advantages of the invention stem principally from the possibility for increasing the radiating aperture of a source without increasing the complexity of the passive distributors for distributing the radiated signals. This is achieved by the coupling of the elements between levels, and by the production of a geometry which makes it possible to increase the equivalent radiating surface at each successive level. <IMAGE>

## IPC 1-7

**H01Q 9/04**; **H01Q 19/00**

## IPC 8 full level

**H01Q 9/04** (2006.01); **H01Q 19/00** (2006.01)

## CPC (source: EP US)

**H01Q 9/0414** (2013.01 - EP US); **H01Q 19/005** (2013.01 - EP US)

## Citation (search report)

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- [A] EP 0403910 A1 19901227 - ALCATEL ESPACE [FR]
- [A] WO 9101577 A1 19910207 - MOTOROLA INC [US]
- [A] LEE ET AL.: "MICROSTRIP SUBARRAY WITH COPLANAR AND STACKED PARASITIC ELEMENTS", ELECTRONICS LETTERS., vol. 26, no. 10, 10 May 1990 (1990-05-10), STEVENAGE GB, pages 668 - 669, XP000124204
- [A] REVANKAR ET KUMAR: "BROADBAND STACKED THREE-LAYER CIRCULAR MICROSTRIP ANTENNA ARRAYS", ELECTRONICS LETTERS., vol. 28, no. 21, 8 October 1992 (1992-10-08), STEVENAGE GB, pages 1995 - 1997, XP000319648

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## Designated contracting state (EPC)

DE ES FR GB IT SE

## DOCDB simple family (publication)

**EP 0627783 A1 19941207**; **EP 0627783 B1 19981014**; DE 69413882 D1 19981119; DE 69413882 T2 19990602; ES 2125420 T3 19990301; FR 2706085 A1 19941209; FR 2706085 B1 19950707; US 5497164 A 19960305

## DOCDB simple family (application)

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