

Title (en)

MODULAR MICROWAVE ANTENNA UNITS AND ANTENNA COMPOSED OF SUCH UNITS

Publication

EP 0205212 B1 19911127 (FR)

Application

EP 86200958 A 19860602

Priority

FR 8508398 A 19850604

Abstract (en)

[origin: US4743915A] A high-frequency antenna unit module for receiving or transmitting a rectilinearly polarized wave including radiating elements in the form of horns and a waveguide supply network. The module has four horns with square apertures which form a bidimensional network in a plane parallel to a reference plane P. The supply network is of the "planar" type having first pairs of opposing sidewalls extending in a direction parallel to P, and of the "tree-structured" type because all of the horns are fed in-phase by T-shaped power dividers. The waveguide sections have sidewall dimensions a and b, where $a > b$ and $a = \lambda/2$. The dimension b is the width of each of the opposing sidewalls extending parallel to P, and a is the height of opposing sidewalls extending perpendicularly to P and connecting each of the first pairs of sidewalls. The network is suitable for propagating the TE₀₁ mode along which the electric field vector E propagates in parallel with the plane P. Branches of the power dividers are rectilinear or curved so as to enable the propagation of the electric field vector E perpendicularly to the sidewalls which are perpendicular to the plane P.

IPC 1-7

H01Q 21/06

IPC 8 full level

H01P 3/12 (2006.01); **H01P 5/12** (2006.01); **H01Q 13/02** (2006.01); **H01Q 21/06** (2006.01)

CPC (source: EP US)

H01Q 21/064 (2013.01 - EP US)

Cited by

US5926147A; GB2260649A; GB2260649B; US5568160A; GB2238914A; FR2655204A1; GB2238914B; US2022200160A1; US11626668B2; US8558746B2; WO9708775A1; WO8801444A1; WO8909501A1; WO9120109A1

Designated contracting state (EPC)

DE FR GB SE

DOCDB simple family (publication)

EP 0205212 A1 19861217; **EP 0205212 B1 19911127**; DE 3682622 D1 19920109; FR 2582864 A1 19861205; FR 2582864 B1 19870731; JP S6236905 A 19870217; US 4743915 A 19880510

DOCDB simple family (application)

EP 86200958 A 19860602; DE 3682622 T 19860602; FR 8508398 A 19850604; JP 12825586 A 19860604; US 87027586 A 19860603