

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.

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CPC (source: EP US)
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Cited by
US5926147A; GB2260649A; GB2260649B; US5568160A; GB2238914A; FR2655204A1; GB2238914B; US2022200160A1; US11626668B2; US8558746B2; WO9708775A1; WO8801444A1; WO8909501A1; WO9120109A1

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