

Title (en)

HIGH FREQUENCY MULTIMODE FEED, AND ANTENNA COMPRISING SUCH A FEED

Publication

EP 0035929 B1 19840905 (FR)

Application

EP 81400312 A 19810227

Priority

FR 8005199 A 19800307

Abstract (en)

[origin: US4357612A] A multimode ultrahigh-frequency source with wide passband comprises a rectangular waveguide with a cavity terminating at an exit aperture in a horizontally flared horn, an input end of the cavity remote from the horn being joined at a transverse discontinuity plane to an upper and a lower pair of symmetrically disposed rectangular supply guides that are vertically separated from each other. An obstruction in the form of a block located between the levels of the supply guides extends from the discontinuity plane forward into the cavity and converges toward the horn in the vertical E-plane, e.g. with a trapezoidal cross-section. With the supply guides excited in the basic TE₁₀ mode, a suitable dimensioning of the block will maintain a cophasal relationship between this basic mode and a hybrid mode EM₁₂, originating at the discontinuity plane, in the exit aperture of the cavity over a wide frequency band.

IPC 1-7

H01Q 25/04; **H01Q 19/08**; **H01P 1/16**

IPC 8 full level

H01Q 13/02 (2006.01); **H01P 1/16** (2006.01); **H01Q 19/08** (2006.01); **H01Q 25/04** (2006.01)

CPC (source: EP US)

H01P 1/16 (2013.01 - EP US); **H01Q 19/08** (2013.01 - EP US); **H01Q 25/04** (2013.01 - EP US)

Citation (examination)

- DE 2626926 A1 19771229 - LICENTIA GMBH
- US 3701163 A 19721024 - GRABOWSKI JOSEPH P
- FR 2418551 A1 19790921 - THOMSON CSF [FR]
- GB 1275353 A 19720524 - LABOFINA SA [BE]
- FR 1550648 A 19681220
- US 3324423 A 19670606 - WEBB JAMES E
- FR 1290275 A 19620413 - THOMSON HOUSTON COMP FRANCAISE

Cited by

EP0057121A3; FR2498820A1; GB2438261A; GB2438261B

Designated contracting state (EPC)

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DOCDB simple family (publication)

EP 0035929 A1 19810916; **EP 0035929 B1 19840905**; CA 1174760 A 19840918; DE 3165806 D1 19841011; FR 2477785 A1 19810911; FR 2477785 B1 19840224; JP H0337323 B2 19910605; JP S56140703 A 19811104; US 4357612 A 19821102

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