

Title (en)

High frequency multimode feed, and antenna comprising such a feed.

Title (de)

Multimode-Mikrowellenerreger und Antenne mit einem solchen Erreger.

Title (fr)

Source hyperfréquence multimode et antenne comportant une telle source.

Publication

EP 0035929 A1 19810916 (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.

Abstract (fr)

Source hyperfréquence multimode, à large bande passante constituée par une cavité (12), formant modeur E, excitée dans le mode fondamental par un groupement de guides d'alimentation (9-10,90-100), comprenant un obstacle profilé (17) s'étendant entre le plan d'entrée (P) de la cavité et le plan d'excitation (PB) d'un mode hybride pour les fréquences basses de la bande. Application aux sources multimodes pour radars, antennes spatiales de télécommunications.

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 (search report)

- FR 2118848 A1 19720804 - THOMSON CSF
- Revue Technique CFTH, Numero 37, Novembre 1962 Paris FR S. DRABOWITCH: "Theorie et Applications des Antennes Multimodes" pages 117-168 * pages 127-136 *

Cited by

EP0057121A3; FR2498820A1; GB2438261A; GB2438261B

Designated contracting state (EPC)

CH DE GB IT LI NL SE

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

DOCDB simple family (application)

EP 81400312 A 19810227; CA 372423 A 19810305; DE 3165806 T 19810227; FR 8005199 A 19800307; JP 3305081 A 19810306; US 24089981 A 19810305