

Title (en)  
REFLECTOR ANTENNA WITH A SELF-SUPPORTED FEED

Publication  
**EP 0268635 B1 19911227 (EN)**

Application  
**EP 87903452 A 19870603**

Priority  
• NO 862192 A 19860603  
• NO 864563 A 19861117

Abstract (en)  
[origin: WO8707771A1] A reflector antenna with a dish-shaped main reflector (10), and a self-supporting feed (11) for the transmission or reception of polarized electromagnetic waves. The feed (11) consists of a tube (12) which is attached to the middle of the main reflector (10) and is terminated by a subreflector (13) so that an intermediate space (14) is formed between the subreflector and the end of the tube. The part of the tube that is nearest the intermediate space (14) contains a cylindrical waveguide (15), or is the waveguide itself, and has an approximately circular or quadratic cross-section. Externally, the intermediate space (14) is bounded by a circular, cylindrical surface (16) with the same diameter as the outer diameter of the tube (12) this being called the aperture surface. The surface of the subreflector (13) which is located just outside the surface of the aperture (16) has circular corrugations (17), or other means of creating a reactive, anisotropic surface impedance, to ensure that the electromagnetic waves are propagated along the surface disregardless of whether the electrical field is tangential to the surface or is normally on it. The part of the subreflector (13) that is located within the aperture surface (16) is shaped as a central conical element (18) with reflecting characteristics and which is inclined towards the tube (12).

IPC 1-7  
**H01Q 19/19**

IPC 8 full level  
**H01Q 19/13** (2006.01); **H01Q 19/18** (2006.01); **H01Q 19/19** (2006.01)

IPC 8 main group level  
**H01Q** (2006.01)

CPC (source: EP)  
**H01Q 19/134** (2013.01)

Cited by  
CN110140257A

Designated contracting state (EPC)  
AT BE CH DE FR GB IT LI LU NL SE

DOCDB simple family (publication)  
**WO 8707771 A1 19871217**; AT E70924 T1 19920115; DE 3775528 D1 19920206; EP 0268635 A1 19880601; EP 0268635 B1 19911227; JP H01500790 A 19890316; NO 163928 B 19900430; NO 163928 C 19900808; NO 864563 D0 19861117; NO 864563 L 19871204; NO 880464 D0 19880203; NO 880464 L 19880203

DOCDB simple family (application)  
**NO 8700044 W 19870603**; AT 87903452 T 19870603; DE 3775528 T 19870603; EP 87903452 A 19870603; JP 50332287 A 19870603; NO 864563 A 19861117; NO 880464 A 19880203