

Title (en)

COMPACT BROADBAND MICROSTRIP ANTENNA.

Title (de)

KOMPAKTE BREITBANDIGE MIKROSTREIFENLEITERANTENNE.

Title (fr)

ANTENNE MICRORUBAN COMPACTE A BANDE LARGE.

Publication

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Application

EP 92925063 A 19921104

Priority

- US 79870091 A 19911126
- US 9209439 W 19921104

Abstract (en)

[origin: WO9311582A1] Arrangements of compact broadband microstrip antennas are disclosed. Each arrangement comprises a dielectric material (32, 62) with the microstrip antennas mounted to one side and a ground surface (GP) on the opposite side. A first arrangement comprises a closed array of antenna elements (63-70) electrically driven out of phase from one another to excite one or more spiral modes. A second arrangement comprises one or more antenna elements arranged on a magnetic substrate (73) which has a relative permittivity approximately equal to its relative permeability. In a third arrangement, the microstrip antenna operates in a single mode and radiation from other modes is suppressed by varying the spacing above the ground plane (GP) in the radiation zones so that only radiation in the desired zones is fostered. In a fourth arrangement, a spiral mode antenna element (21) is spaced between 1/60 and 1/2 wavelengths from the ground surface (GP) throughout a multioctave operating frequency range. The substrate (32) has epsilon r APPROX 1.0 and the antenna is driven by a near-perfect impedance-matched feed network.

IPC 1-7

H01Q 11/02; **H01Q 11/08**; **H01Q 1/36**; **H01Q 1/38**; **H01Q 25/00**; **H01Q 1/00**; **H01Q 13/08**; **H01Q 21/00**; **H01Q 21/22**; **H01Q 25/04**

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- No further relevant documents disclosed
- See references of WO 9311582A1

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