

Title (en)
Frequency selective surface waveguide filter

Title (de)
Hohlleiterfilter mit frequenzselektiver Oberfläche

Title (fr)
Filtre en guide d'ondes à surface sélective en fréquence

Publication
EP 1184930 A1 20020306 (EN)

Application
EP 00118658 A 20000828

Priority
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Abstract (en)
A waveguide filter is hereby presented for separating electromagnetic waves of differing wavelengths by means of transmission through, or reflection from, a two-dimensional frequency selective surface. Electromagnetic energy consisting of any arbitrary wavelength enters a section of waveguide. A two-dimensional array of thin metallic film, either self-supporting or supported by a dielectric film, is transversely located at an arbitrary cross section within the waveguide. The film consists of one or more patterns so replicated and arranged as to permit the transmission of defined wavelengths of electromagnetic energy, and to reflect other wavelengths. By this means, selected wavelengths can be separated from a broad spectrum, and transmitted further along the waveguide. This invention is not limited to any defined cross-section of waveguide, and can be applied to any arbitrary shape. This invention is also not limited to any one pattern of metallic film. Also, a multiplicity of such two-dimensional films may be located longitudinally in the waveguide to increase the filtering effect. Further, such frequency selective surfaces can be combined with coupling means to effect transmission between microstrip and waveguide structures. <IMAGE>

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H01P 1/207; **H01P 5/107**

IPC 8 full level
H01P 1/207 (2006.01); **H01P 5/107** (2006.01)

CPC (source: EP)
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Citation (search report)
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