

Title (en)

PRINTED CIRCUIT TECHNOLOGY MULTILAYER PLANAR REFLECTOR AND METHOD FOR THE DESIGN THEREOF

Title (de)

MEHRSCICHTIGER PLANARER REFLEKTOR IN GEDRUCKTER SCHALTUNGSTECHNOLOGIE UND DAMIT VERBUNDENE DESIGNMETHODE

Title (fr)

REFLECTEURS PLATS EN TECHNOLOGIE DES CIRCUITS IMPRIMES MULTICOUCHES ET PROCEDES DE CONCEPTION ASSOCIES

Publication

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Application

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Abstract (en)

The invention relates to a printed circuit technology multilayer planar reflector reflecting the electromagnetic field from a feed (110) forming a collimated or conformal beam by performing adjustments in the reflection coefficient phases. The phase control is effected by adjusting the dimensions in each element (300) that is formed by several layers of conductive patches (400), (410), spacers (420), (430) and conductor plane (440). The inclusion of two or more layers reduces sensitivity to manufacturing tolerances and improves the bandwidth of the reflector. The invention also relates to a design method for obtaining photomasks involving the following steps: 1) Defining the phase shift in each element; 2) adjusting the dimensions of each element at the central frequency; c) performing fine adjustments to meet specifications. The reflector according to the invention can be used as antenna of terrestrial and satellite communications, collapsible antenna and conformal beam reflector. <IMAGE>

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IPC 8 full level

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CPC (source: EP)

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See references of WO 0076026A1

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