

## Title (en)

Packaging of active and passive microwave circuits using lid or bed of curved posts

## Title (de)

Verpackung von aktiven und passiven Mikrowellenschaltungen mittels Deckel oder Bett aus gebogenen Stützen

## Title (fr)

Conditionnement de circuits actifs et passifs de micro-ondes utilisant un couvercle ou un lit de poteaux recourbés

## Publication

**EP 2390953 A1 20111130 (EN)**

## Application

**EP 10163740 A 20100525**

## Priority

EP 10163740 A 20100525

## Abstract (en)

The present invention represents a new, way of packaging passive and active microwave circuits, and in particular circuits involving microstrip transmission lines and similar substrate bound transmission lines. The circuits are located between two conducting surfaces, one of these surface may be the ground plane of the microwave circuit, and at least one of these surfaces are provided with curved conducting posts. The two surfaces may form the bottom and lid of a cavity with conducting sidewalls. The posts may with advantage be arrange in a periodic grid, and create together with the ground plane of the microwave circuit board or the smooth metal plane below the microwave circuit board a stopband for waves propagating between the lid of posts and the ground plane. Thereby, cavity resonances are avoided or suppressed that otherwise create a big problem associated with the packaging in metal boxes with smooth metal walls.

## IPC 8 full level

**H01P 1/16** (2006.01)

## CPC (source: EP)

**H01P 1/16** (2013.01)

## Citation (applicant)

- WO 2010003808 A2 20100114 - KILDAL ANTENNA CONSULTING AB [SE], et al
- E. RAJO-IGLESIAS; A. U. ZAMAN; P-S. KILDAL: "Parallel Plate Cavity Mode Suppression in Microstrip Circuit Packages Using a Lid of Posts", IEEE MICROWAVE AND WIRELESS COMPONENTS LETTERS, vol. 20, no. 1, January 2010 (2010-01-01)

## Citation (search report)

- [A] EP 1763101 A1 20070314 - MURATA MANUFACTURING CO [JP]
- [A] GB 2373102 A 20020911 - MARCONI CASWELL LTD [GB], et al
- [X] KAMGAING T ET AL: "Design and Modeling of High-Impedance Electromagnetic Surfaces for Switching Noise Suppression in Power Planes", IEEE TRANSACTIONS ON ELECTROMAGNETIC COMPATIBILITY, IEEE SERVICE CENTER, NEW YORK, NY, US LNKD- DOI:10.1109/TEM.2005.850692, vol. 47, no. 3, 1 August 2005 (2005-08-01), pages 479 - 489, XP011140260, ISSN: 0018-9375

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WO2013185807A1; EP2609683A4; CN114865261A; EP2945222A1; SE2030209A1; SE543704C2; US9301426B2; WO2014090290A1

## Designated contracting state (EPC)

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## Designated extension state (EPC)

BA ME RS

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