Title (en)

Microwave device comprising at least one transition between a transmission line integrated on a substrate and a waveguide

Title (de)

Mikrowellenanordnung mit mindestens einem Übergang zwischen einer auf einem Substrat integrierten Übertragungsleitung und einem Hohlleiter

Title (fr)

Dispositif hyperfréquences comprenant au moins une transition entre une ligne de transmission intégrée sur un substrat et un guide d'onde

Publication

EP 0605046 B1 19980311 (FR)

Application

EP 93203621 A 19931222

Priority

FR 9215837 A 19921229

Abstract (en)

[origin: EP0605046A1] Microwave device including at least one transition between a transmission line (24) integrated on a substrate (23) made of a hard material, arranged in a said first microwave cavity (31), and a waveguide (100) formed by a said second microwave cavity (102a, 102b). This transition comprising an open end (25a, 25b) of the integrated line forming a probe introduced over a length l into the cavity of the guide, at a distance D from a short-circuit (42a, 42b) closing the end of the guide. This transition also has an impedance-matching system with, on the one hand, a restriction (33a, 33b) in the dimension of the said first microwave cavity (31) perpendicular to the direction of propagation, over a defined length L parallel to the direction of propagation in the integrated line (24), and, on the other hand, with a restriction in the dimensions of the cross-section of the waveguide in the region (22a, 32a; 22b, 32b) between the probe (25a, 25b) and the plane of the short-circuit (32a, 42b). Application: transitions between microwave ICs and waveguides. <IMAGE>

IPC 1-7

H01P 5/107

IPC 8 full level

H01P 1/00 (2006.01); **H01P 5/02** (2006.01); **H01P 5/107** (2006.01)

CPC (source: EP US)

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EP 0605046 A1 19940706; **EP 0605046 B1 19980311**; DE 69317390 D1 19980416; DE 69317390 T2 19980903; FR 2700066 A1 19940701; JP H06283914 A 19941007; US 5414394 A 19950509

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