

Title (en)  
Waveguide transition

Title (de)  
Wellenleiterübergang

Title (fr)  
Transition de guide d'onde

Publication  
**EP 2500978 A1 20120919 (EN)**

Application  
**EP 11158700 A 20110317**

Priority  
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Abstract (en)  
This invention relates to a transition between a microstrip and a waveguide, comprising a rectangular waveguide (102) having a floor (104), side walls (106), a ceiling (108), and a transition end; a microstrip (110); and a substrate integrated waveguide (112). At the transition end thereof, the rectangular waveguide is coupled to the substrate integrated waveguide at a first end of the substrate integrated waveguide. The microstrip is coupled to the substrate integrated waveguide at a second end thereof. The rectangular waveguide comprises a ridge (118) attached to the ceiling, extending along a portion of the rectangular waveguide, and having a first end portion which is engaged with a portion of a top surface of the substrate integrated waveguide at its first end.

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**H01P 5/08** (2006.01); **H01P 5/107** (2006.01)

CPC (source: EP)  
**H01P 5/082** (2013.01); **H01P 5/107** (2013.01)

Citation (applicant)  
WO 9811652 A1 19980319 - SIEMENS AG [DE], et al

Citation (search report)  
• [A] US 2011025550 A1 20110203 - SAGALA DJUNIADI A [JP], et al  
• [A] US 2004145426 A1 20040729 - WU KE-LI [HK], et al  
• [A] EP 0074613 A1 19830323 - NEC CORP [JP]  
• [A] EP 1494309 A1 20050105 - MA COM INC [US]  
• [A] LIN LI ET AL: "A transition from substrate integrated waveguide (SIW) to rectangular waveguide", MICROWAVE CONFERENCE, 2009. APMC 2009. ASIA PACIFIC, IEEE, PISCATAWAY, NJ, USA, 7 December 2009 (2009-12-07), pages 2605 - 2608, XP031614048, ISBN: 978-1-4244-2801-4  
• [A] LEE JA ET AL: "Step width tolerable for offset of the aperture in a millimeter-wave transducer between post-wall and hollow standard waveguides", IEICE TRANSACTIONS ON ELECTRONICS, INSTITUTE OF ELECTRONICS, TOKYO, JP, vol. E91C, no. 12, 1 December 2008 (2008-12-01), pages 1910 - 1916, XP001518931, ISSN: 0916-8524, DOI: 10.1093/IETELE-E91-C.12.1910  
• [A] DOMINIC DESLANDES ET AL: "Integrated Microstrip and Rectangular Waveguide in Planar Form", IEEE MICROWAVE AND WIRELESS COMPONENTS LETTERS, IEEE SERVICE CENTER, NEW YORK, NY, US, vol. 11, no. 2, 1 February 2001 (2001-02-01), XP011038691, ISSN: 1531-1309

Cited by  
CN104466325A; CN104078733A; CN108604722A; CN117374552A; WO2021123111A1; US10381317B2; US10468736B2; US10833385B2; WO2017137224A1; US9620841B2; US9887449B2; US11527808B2; US9917372B2; US11721905B2; US11757166B2; US11962085B2; US11749883B2; US11901601B2; US11973268B2; US10225925B2; US11681015B2; US11949145B2; US11616306B2; US11962087B2; US9444135B2; US11670829B2; US11668787B2; US10103447B2; US11444364B2; US11502420B2; US11626668B2; US11757165B2; US11362436B2; US11728576B2

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