

(19)



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(11) Publication number:

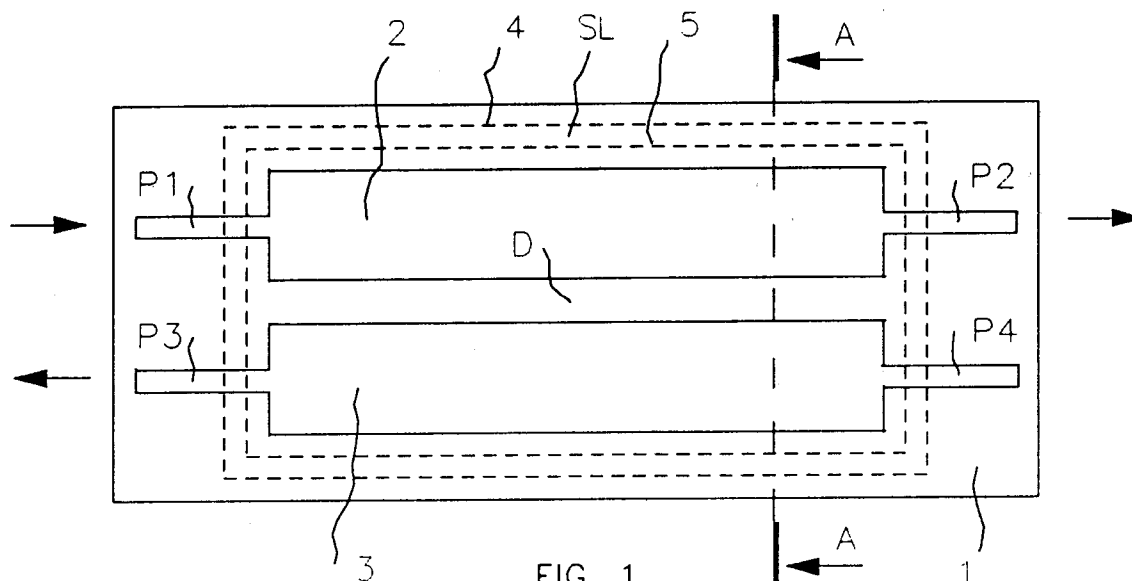
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(12)

EUROPEAN PATENT APPLICATION(21) Application number: **90201164.2**(51) Int. Cl.⁵: **H01P 5/18**(22) Date of filing: **08.05.90**(30) Priority: **15.05.89 IT 2050889**(43) Date of publication of application:
22.11.90 Bulletin 90/47(84) Designated Contracting States:
CH DE ES FR GB GR IT LI SE(86) Date of deferred publication of the search report:
08.01.92 Bulletin 92/02(71) Applicant: **SIEMENS TELECOMUNICAZIONI S.P.A.**
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c/o Marchi & Mittler s.r.l. Viale Lombardia, 20
I-20131 Milano(IT)(54) **One-octave 90 degrees 3dB directional coupler embodied in microstrip and slotline.**

(57) A 3dB 90 degrees directional coupler having a one-octave band extension for microwave circuits is described. It consists of two coupled lines (2,3)

embodied in microstrip form and a slotline loop (4,5) made in the ground plane (6) of the microstrip lines.

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EUROPEAN SEARCH REPORT

Application Number

EP 90 20 1164

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
X	MICROWAVE JOURNAL. vol. 29, no. 4, April 1986, DED-HAM US pages 197 - 201; B.PETROVIC: 'A new type of microstrip directional coupler' * page 197, left column, line 10 - middle column, line 6; figure 2 **	1-5	H 01 P 5/18
Y	— — —	6-10	
Y	ELECTRONICS LETTERS. vol. 19, no. 22, 27 October 1983, STEVENAGE GB pages 911 - 912; K.SHIBATA ET AL.: 'Three-line microstrip directional coupler with dielectric overlay' * page 911, left column, line 1 - line 9; figure 1 **	6-10	
X	— — —		
X	DE-A-2 907 837 (VEB KOMBINAT ROBOTRON) * page 7, line 4 - page 9, line 7; claim 2; figures 1,2 **	1-5	
A	— — —	6-10	
X	1986 IEEE-MTT-S INTERNATIONAL MICROWAVE SYMPOSIUM- DIGEST; June 2-4, 1986, Maryland, US IEEE, New York, US, 1986 L.DONGTIEN: "New types of 3-dB directional couplers of microstrip transmission lines" pages 265-266 * page 265, right-hand column, lines 4-14; figure 1b**	1-5	
A	— — —	6-10	TECHNICAL FIELDS SEARCHED (Int. Cl.5) H 01 P
A	TRANSACTIONS OF THE INSTITUTE OF ELECTRONICS AND COMMUNICATION vol. E60, no. 4, April 1977, TOKYO JP pages 206 - 207; M.AIKAWA: 'Microstrip line directional coupler with tight coupling and high directivity' * page 206, right column, line 1 - page 207, left column, line 13; figure 1 **	1-10	
	— — — — / —		
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of search 29 October 91	Examiner DEN OTTER A.M.
CATEGORY OF CITED DOCUMENTS X: particularly relevant if taken alone Y: particularly relevant if combined with another document of the same category A: technological background O: non-written disclosure P: intermediate document T: theory or principle underlying the invention E: earlier patent document, but published on, or after the filing date D: document cited in the application L: document cited for other reasons &: member of the same patent family, corresponding document			



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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
A	SIEMENS FORSCHUNGS- UND ENTWICKLUNGS-BERICHT. vol. 10, no. 5, May 1981, BERLIN DE pages 271 - 279; J.SIEGL ET AL.: 'Calculated and measured parameters of interdigitated microstrip couplers' * page 271, line 21 - page 272, line 20 * * * page 273, left column, line 3 - right column, line 14; figures 3A,6 * *	1-10	
A	SOVIET INVENTIONS ILLUSTRATED Section EI, Week 8627, 18 July 1986 Derwent Publications Ltd., London, GB; Class W, Page 13, AN 86-175479/27 & SU-A-1 195 403 (ZHURAVSKII) 30 November 1985 * abstract * *	1-10	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
The present search report has been drawn up for all claims			
Place of search		Date of completion of search	Examiner
The Hague		29 October 91	DEN OTTER A.M.
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			