

(19)



Europäisches Patentamt  
European Patent Office  
Office européen des brevets

(11) Publication number:

**0 265 001**  
**A3**

(12)

# EUROPEAN PATENT APPLICATION

(21) Application number: 87201928.6

(51) Int. Cl.4: **H01P 1/387**

(22) Date of filing: 08.10.87

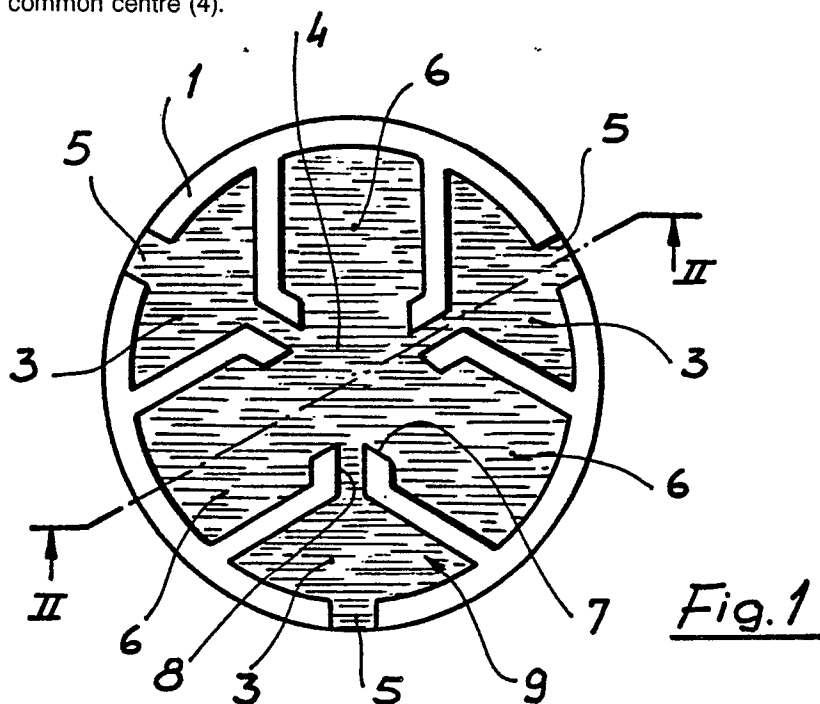
(30) Priority: 22.10.86 IT 2208886

(43) Date of publication of application:  
27.04.88 Bulletin 88/17(84) Designated Contracting States:  
**BE DE ES FR GB GR IT NL SE**(88) Date of deferred publication of the search report:  
19.07.89 Bulletin 89/29(71) Applicant: **SIEMENS TELECOMUNICAZIONI S.P.A.**

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**I-20131 Milano(IT)**(54) **Thin-film circulator with three matched gates.**

(57) The circulator has top metallization made with geometry such as to describe three transmission lines (3) 120° apart converging at a common centre (4) from respective input and output gates (5). Between said transmission lines (3) are placed the same number of matching line sections (6) also converging at said common centre (4).



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**EP 0 265 001 A3**



EP 87 20 1928

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. 4)
X	DE-A-2 401 188 (INSTITUT FÜR NACHRICHTENTECHNIK) * Page 1, lines 1-7; page 3, line 1 - page 4, line 7; figure *	1	H 01 P 1/387
Y	----	5	
A		2	
Y	FR-A-2 445 038 (NIPPON ELECTRIC CO., LTD) * Page 4, lines 7-29; figure 4 *	5	
X	----- PATENT ABSTRACTS OF JAPAN, vol. 4, no. 67 (E-11)[549], 20th May 1980, page 117 E 11; & JP-A-55 37 040 (TSUKASA NAGAO) 14-03-1980 * Abstract *	1,3	
A	----- IEEE TRANS. ON MICROWAVE THEORY & TECHN., vol. MTT-28, no. 6, June 1980, pages 616-621, IEEE, New York, US; J. HELSZAJN et al.: "Characteristics of circulators using planar triangular and disk resonators symmetrically loaded with magnetic ridges" * Page 616, left-hand column, lines 1-21; figures 1(a),(b) *	3,4	
			TECHNICAL FIELDS SEARCHED (Int. Cl.4)
			H 01 P
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 20-04-1989	Examiner DEN OTTER A.M.
<b>CATEGORY OF CITED DOCUMENTS</b>			
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	