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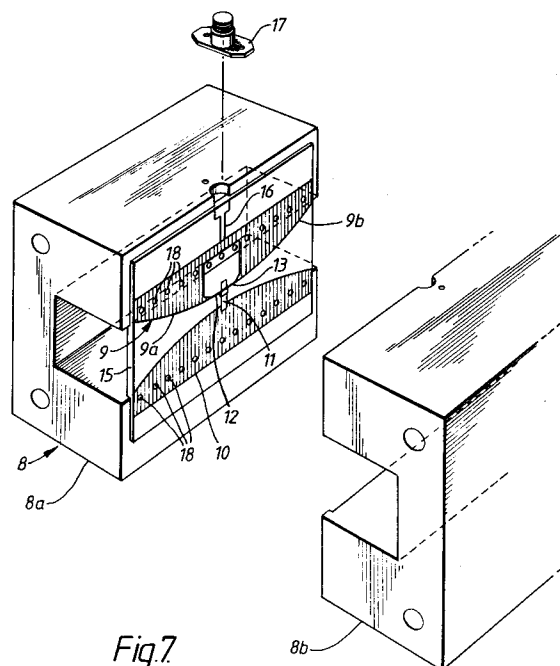
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**12.02.92 Bulletin 92/07**(71) Applicant: **GEC-MARCONI LIMITED**  
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**8HN(GB)**(54) **Waveguide switch.**

(57) A pair of conductive strips 9, 10 in a waveguide, for example, defining a fin-line transmission line insert have a switching element such as a PIN diode 11 connected to them to reflect or pass r.f. energy in the fin-line section. The switching element 11 forms part of a filter circuit, for example, in conjunction with inductances 12, 13, the characteristic impedance of which is matched to that of the gap. When the PIN diode is forward biased, the strips 9, 10 are in effect short circuited and the r.f. energy is reflected. When the diode is reverse biased, the r.f. energy passes without reflections. Due to the matching of the impedances this obtains over a broad bandwidth.

*Fig.7***EP 0 399 739 A3**



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## EUROPEAN SEARCH REPORT

Application Number

EP 90 30 5438

### 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)
Y	IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES. vol. 30, no. 3, March 1982, NEW YORK US pages 294 - 296; F.G.ANANASSO: 'Optimizing wide-band MIC switch performance' * page 294, left column, line 1 - line 9; figure 1 ** -- --	1-5	H 01 P 1/15
Y	IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES. vol. 37, no. 2, February 1989, NEW YORK US pages 307 - 316; H.CALLSEN ET AL.: 'P-I-N diode control devices in E-plane technique' * page 307, right column, line 33 - page 308, left column, line 16; figures 1,2 ** -- --	1-5	
A	GB-A-2 202 683 (NEW JAPAN RADIO CO LTD) * page 5, line 34 - page 6, line 38; figures 3A-D ** -- --	1-4,8,9	
A	ARCHIV DER ELEKTRISCHEN UBERTRAGUNG. vol. 36, no. 2, February 1982, STUTTGART DE pages 49 - 56; H.E.HENNAWY ET AL.: 'Computer-aided design of fin-line detectors,modulators,and switches' * page 53, right column, line 34 - page 55, left column, line 7; figures 11,12 ** -- --	1-3	
A	ELECTRONIC ENGINEERING. vol. 52, no. 634, February 1980, LONDON GB pages 82 - 93; R.YEO ET AL.: 'Current microwave broadband circuit design techniques' * page 91, right column, line 53 - page 93, left column, line 2 ** -- --	1-3	H 01 P H 03 C H 03 G
A	PATENT ABSTRACTS OF JAPAN vol. 8, no. 281 (E-286)(1718) 21 December 1984 & JP-A-59 148 403 ( NIPPON DENSHIN DENWA KOSHA ) 25 August 1984 * abstract ** -- -- --/-	6	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of search 13 December 91	Examiner DEN OTTER A.M.
<div><div><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</div><div>E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- &amp; : member of the same patent family, corresponding document</div></div>			



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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	<p>ELECTRONICS LETTERS. vol. 18, no. 19, September 1982, STEVENAGE GB pages 839 - 840; L.-P.SCHMIDT ET AL.: 'Broadband millimetre-wave PIN-diode attenuator with double-ridge waveguide flanges'</p> <p>* the whole document **</p> <p style="text-align: center;">- - - - -</p>	2,3,5,8,9	
			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		13 December 91	DEN OTTER A.M.
<p><b>CATEGORY OF CITED DOCUMENTS</b></p> <p>X : particularly relevant if taken alone</p> <p>Y : particularly relevant if combined with another document of the same category</p> <p>A : technological background</p> <p>O : non-written disclosure</p> <p>P : intermediate document</p> <p>T : theory or principle underlying the invention</p> <p>E : earlier patent document, but published on, or after the filing date</p> <p>D : document cited in the application</p> <p>L : document cited for other reasons</p> <p>.....</p> <p>&amp; : member of the same patent family, corresponding document</p>			