1 Publication number:

**0 272 907** 

12

## **EUROPEAN PATENT APPLICATION**

2) Application number: 87311265.0

(5) Int. Cl.4: H 01 P 1/195

2 Date of filing: 21.12.87

30 Priority: 24.12.86 GB 8630883

Date of publication of application: 29.06.88 Bulletin 88/26

Designated Contracting States: FR IT

Base Date of deferred publication of search report: 18.01.89 Bulletin 89/03

Applicant: RACAL-MESL LIMITED
Lochend Industrial Estate Newbridge
Midlothian EH28 8LP Scotland (GB)

72 Inventor: Arthur, John Willins 35 Echline Grove South Queensferry West Lothian, EH30 9RU (GB)

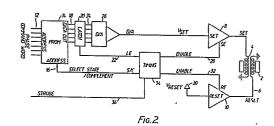
> Gilhooley, Bernard 22 Prestonhall Avenue Glenrothes Fife (GB)

Lennon, Christopher Eric 22 Haygate Avenue Polmont Falkirk, FK2 0TL (GB)

74 Representative: Corin, Christopher John et al Mathisen Macara & Co. The Coach House 6-8 Swakeleys Road Ickenham Uxbridge UB10 8BZ (GB)

## 54) Latching phase shifters.

A ferrite phase shifter is described in which the switching circuit is arranged to apply a complementary setting pulse to a latching wire (4) of a toroidal ferrite phase shifter (2) before a resetting current pulse is applied by means of a latching wire (6). A new phase state is then set by a normal setting pulse applied to the latching wire (4). The complementary setting pulse is of a voltage sufficient to bring the magnetisation state of the phase shifter to an unsaturated magnetic state. This may be achieved by applying a complementary setting pulse of a voltage which together with the voltage of the previous setting pulse adds up to a constant amount. Alternatively, the magnitude of the complementary setting voltage may be determined on an empirical basis in order to reduce the phase error in any subsequently set phase. This may result in the unsaturated magnetic state varying in dependence on the previously set state.



EP 0 272 907 A3



## EUROPEAN SEARCH REPORT

EP 87 31 1265

Category	Citation of document with indication	on, where appropriate,	Relevant	CLASSIFICATION OF THE
X	of relevant passages IEE TRANSACTIONS ON MICAND TECHNIQUES, vol. 24 1976, pages 522-525, Ne MUELLER et al.: "On the ferrite microwave device * Whole article *	ROWAVE THEORY , no. 8, August w York, US; R.S. latching of	to claim	H 01 P 1/195
D,A	EP-A-0 139 800 (ELECTR SCIENCES) * Whole article *	OMAGNETIC	4-9	
A	DE-A-1 940 987 (PHILIP PATENTVERWALTUNG)	\$1		
A	US-A-4 382 237 (H.F. I	NACKER)		TECHNICAL FIELDS SEARCHED (Int. Cl.4)
	·			H 01 P
	The present search report has been di			
Place of search THE HAGUE		Date of completion of the search 21–10–1988	LAI	Examiner UGEL R.M.L.
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		E : earlier paten after the fili D : document cit L : document cit	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	