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(54) Title: MACH-ZEHNDER OPTICAL MODULATOR USING A BALANCED COPLANAR STRIPLINE WITH LATERAL GROUND PLANES

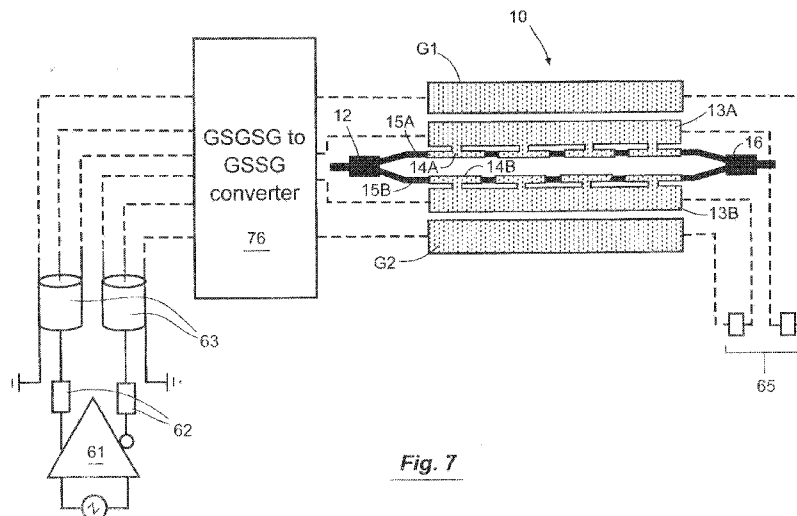


Fig. 7

(57) Abstract: A Mach-Zehnder optical modulator with a series push-pull traveling wave electrode uses a balanced coplanar stripline with lateral ground planes (G1,G2). Two signal electrodes (13A,13B) extend along the center of the optical modulator adjacent and parallel to the optical waveguides (15A,15B) in a series push-pull configuration. The ground planes (G1, G2) run parallel to the signal electrodes (13A,13B), but are spaced laterally outward from the signal electrodes (13A,13B).

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INTERNATIONAL SEARCH REPORT

International application No.

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A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G02F 1/01 (2013.01)

USPC - 385/2

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

USPC - 385/2

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

USPC - 385/2 ; 385/1; 385/131; 385/132; 385/14; 385/3; 385/39; 385/40

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

PatBase, Google Patent, Google Scholar; Search Terms Used: Mach-Zehnder Optical Modulator Balanced Coplanar Stripline Lateral Ground Planes Mach Zehnder Mach-zehnder optical interferometer optic modulat beamsplitter series push pull traveling wave electrode differential electrical modulation signal phase shift phase retard signal ground electrode.

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2011/0135242 A1 (Prosyk) 09 June 2011 (09.06.2011), Abstract, para. [0015], [0031], [0033], [0034], Figs. 4-5, Figs. 7-10	1-6
Y	US 2006/0023288 A1 (McBrien et al.) 02 February 2006 (02.02.2006), Para. [0090], [0116]	1-6
A	WO 2002/50606 A1 (Kimber et al.) 17 June 2002 (27.06.2002), entire document	1-6
A	US 2004/0052443 A1 (Heaton et al.) 18 March 2004 (18.03.2004), entire document	1-6
A	US 2008/0170821 A1 (Kissa et al.) 17 July 2008 (17.07.2008), entire document	1-6
A	US 5,278,923 A (Nazarathy et al.) 11 January 1994 (11.01.1994), entire document	1-6
A	US 2010/0111303 A1 (Finlayson et al.) 06 May 2010 (06.05.2010), entire document	1-6

 Further documents are listed in the continuation of Box C.

* Special categories of cited documents:

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