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(54) Method for driving active matrix type liquid crystal display

(57) In an active matrix type liquid crystal display, during a non-display period such as the horizontal blanking interval or the vertical blanking interval wherein no pixel TFT (10) is selected, the voltage of the opposing electrode is changed so that the power consumption is reduced with application of sufficient voltage to the liquid crystal and without increasing the amplitude of the display data. Also, a change alleviating voltage VM is applied during the change in the opposing electrode voltage to data lines (22) for supplying display data to each of pixel TFTs during the display period, in order to prevent changes in the potential of the data lines (22) caused by the change in the opposing electrode voltage and large reverse bias from being loaded to switches Hsw for outputting display data to the data lines (22).

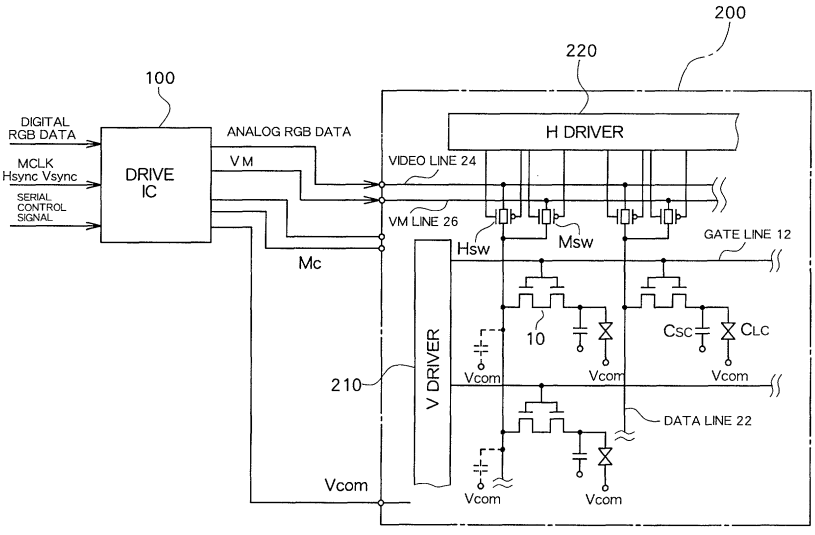

Fig. 1

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EUROPEAN SEARCH REPORT

Application Number
EP 02 25 2388

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	US 5 694 145 A (SUGAWA SHIGETOSHI ET AL) 2 December 1997 (1997-12-02) * abstract; claims 1,2; figure 8 * * the whole document *	1-5	G09G3/36
X	EP 0 678 848 A (SONY CORP) 25 October 1995 (1995-10-25) * abstract; figure 5 * * the whole document * * claims 1-7 *	1-5	
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P,A	EP 1 139 329 A (SANYO ELECTRIC CO) 4 October 2001 (2001-10-04) * abstract; figure 2 * * paragraph [0037] - paragraph [0039]; figure 2 *	1-5	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7) G09G G02F

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
MUNICH	27 November 2002	Wolff, 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

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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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 02 25 2388

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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	有源矩阵型液晶显示器的驱动方法		
公开(公告)号	EP1246160A3	公开(公告)日	2003-01-15
申请号	EP2002252388	申请日	2002-04-02
[标]申请(专利权)人(译)	三洋电机株式会社		
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当前申请(专利权)人(译)	SANYO ELECTRIC CO.，LTD.		
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IPC分类号	G02F1/133 G09G3/20 G09G3/36		
CPC分类号	G09G3/3648 G09G3/3614 G09G3/3655 G09G3/3688 G09G2310/0248 G09G2320/02		
优先权	2001101768 2001-03-30 JP		
其他公开文献	EP1246160A2		
外部链接	Espacenet		

摘要(译)

在有源矩阵型液晶显示器中，在诸如水平消隐间隔或垂直消隐间隔的非显示周期期间，其中没有选择像素TFT（10），改变相对电极的电压，使得功耗为通过向液晶施加足够的电压并且不增加显示数据的幅度来减小。另外，在对置电极电压变化期间，向显示周期期间向每个像素TFT提供显示数据的数据线（22）施加变化缓和电压VM，以防止数据线电位的变化（ 22）由相对电极电压的变化和大的反向偏压加载到开关Hsw，用于将显示数据输出到数据线（22）。

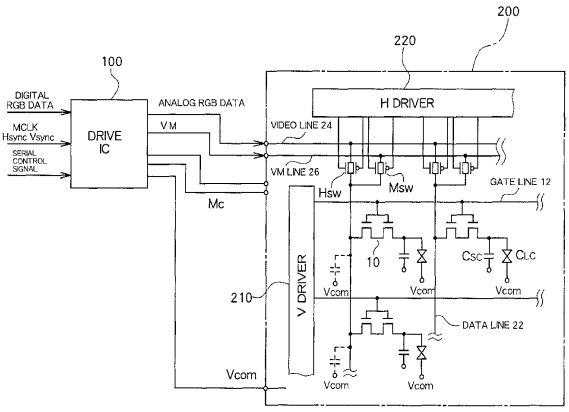

Fig. 1