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(71) Applicant: **Samsung Electronics Co., Ltd.**
Yeongtong-gu
Suwon-city, Gyeonggi-do 442-742 (KR)

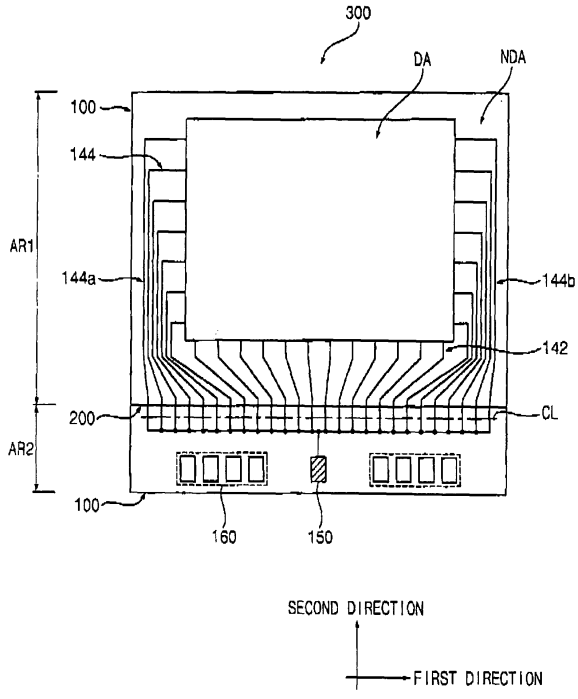
(72) Inventors:
- **Kwon, Sun-Ja**
  Gunpo-si,
  Gyeonggi-do (KR)
- **Jeon, Jin**
  Anyang-si,
  Gyeonggi-do (KR)
- **Park, Young-Gi**
  Shiheung-si,
  Gyeonggi-do (KR)

(74) Representative: **Dr. Weitzel & Partner**
Friedenstrasse 10
89522 Heidenheim (DE)

(54) **Display panel, method of inspecting the display panel and method of manufacturing the display panel**

(57) A display panel includes an array substrate, an opposite substrate facing the array substrate, and a liquid crystal layer interposed between the array and opposite substrates. The array substrate includes a gate wiring, a data wiring, a pixel section, a sensor wiring section, a sensor electrode section and a sensor pad section. The gate wiring is formed in a first direction. The data wiring is formed in a second direction crossing the first direction. The pixel section is electrically connected to the gate and data wirings. The sensor wiring section is spaced apart from the gate and data wirings. The sensor electrode section is electrically connected to the sensor wiring section. The sensor pad section applies a test voltage to the sensor wiring section in order to inspect a display panel defect. Therefore, a short defect, which is generated between the array substrate and the opposite substrate, may be easily inspected.

FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 08 00 0423

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
A	GB 2 419 950 A (SHARP KK [JP]) 10 May 2006 (2006-05-10) * abstract * * page 2, paragraphs 2,3 * * claim 19; figures 1,12 * -----	1,19	INV. G02F1/1362
A	US 2005/078057 A1 (CHANG JONG-WOONG [KR] ET AL) 14 April 2005 (2005-04-14) * paragraph [0013]; figure 3 * * paragraph [0008] * -----	1,19	
A	JP 2001 195034 A (TOKYO SHIBAURA ELECTRIC CO) 19 July 2001 (2001-07-19) * abstract * -----	1,19	
			TECHNICAL FIELDS SEARCHED (IPC) G02F G06F G09G

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	21 November 2008	Gill, Richard

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 08 00 0423

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
GB 2419950 A	10-05-2006	CN 1773442 A	17-05-2006
		JP 2006184273 A	13-07-2006
		KR 20060052547 A	19-05-2006
		US 2006114247 A1	01-06-2006
US 2005078057 A1	14-04-2005	CN 1584719 A	23-02-2005
		JP 2005062876 A	10-03-2005
		KR 20050019493 A	03-03-2005
JP 2001195034 A	19-07-2001	NONE	

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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)	显示面板，检查显示面板的方法和制造显示面板的方法		
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[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	SAMSUNG ELECTRONICS CO.，LTD.		
当前申请(专利权)人(译)	SAMSUNG ELECTRONICS CO.，LTD.		
[标]发明人	KWON SUN JA JEON JIN PARK YOUNG GI		
发明人	KWON, SUN-JA JEON, JIN PARK, YOUNG-GI		
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外部链接	Espacenet		

摘要(译)

一种显示面板，包括阵列基板，面对阵列基板的相对基板，以及介于阵列和相对基板之间的液晶层。阵列基板包括栅极布线，数据布线，像素部分，传感器布线部分，传感器电极部分和传感器焊盘部分。栅极布线沿第一方向形成。数据布线沿与第一方向交叉的第二方向形成。像素部分电连接到栅极和数据布线。传感器布线部分与栅极和数据布线间隔开。传感器电极部分电连接到传感器布线部分。传感器焊盘部分将测试电压施加到传感器布线部分，以检查显示面板缺陷。因此，可以容易地检查在阵列基板和相对基板之间产生的短缺陷。

FIG. 1