

Generally, the signal lines **10**, **10a** and **10b** are formed of Flexible Printed Cable (FPC).

[0013] **FIG. 4** is a cross-sectional view illustrating a general touch panel according to the related art. Opposing transparent electrodes are formed on the respective upper and lower substrate **7** and **6**. Spacers **8** are disposed on the viewing area V/A for maintaining the predetermined space between the upper and lower substrates. The upper and lower substrates are bonded to each other in the dead space region by the adhesive tape **11**.

[0014] An operation of the aforementioned resistive type touch panel with the LCD device will be described as follows. A power supply voltage Vcc and a ground voltage GND are applied to upper and lower sides of the transparent electrode printed on the upper substrate **7** via the two signal lines **10a** connected to the upper substrate and the metal electrodes **7a**. The power supply voltage Vcc and the ground voltage GND are also applied to the left and right sides of the transparent electrode printed on the lower substrate **6** via the two signal lines **10b** connected to the lower substrate and the metal electrodes **6a**. If the surface of the upper substrate **7** is touched at a point with a stylus or finger, the transparent electrodes (not shown) of the upper and lower substrates become electrically connected to each other at the touched point. Then, a voltage value of the touched point is read via the transparent electrode, the metal electrode **6a** and the signal line **10b** of the lower substrate **6**, so that Y-axis coordinate is detected. In addition, a voltage value is output for the touch point by the transparent electrode, the metal electrode **7a** and the signal line **10a** of the upper substrate **7**, so that X-axis coordinate is detected. Accordingly, the X and Y coordinates of the touch point are detected.

[0015] In the alternative, a capacitive type touch panel may be applied to the touch panel integrated with the LCD device instead of the resistive type touch panel. **FIG. 5** is a cross-sectional view illustrating the capacitive type touch panel integrated with the LCD device according to the related art. Referring to **FIG. 5**, the capacitive type touch panel integrated with the LCD device includes an LCD panel **1**, upper and lower polarizing plates **2** and **3**, a backlight **4**, a touch panel **15** and a case top **9**. Upper and lower substrates (not shown) are bonded to each other with a gap therebetween. A liquid crystal (not shown) is injected between the upper and lower substrates, thereby forming the LCD panel **1**. The LCD panel **1** displays a picture image according to an external driving signal and video signal. Also, the upper polarizing plate **2** is formed on the LCD panel **1**, and the lower polarizing plate **3** is formed under the LCD panel **1**, thereby polarizing light passing through them. The backlight **4** irradiates uniform light upon a rear surface of the LCD panel **1**. The capacitive type touch panel **5** detects a touched point by outputting a voltage value corresponding to the touched point on the LCD panel **1**. The case top **9** supports the backlight **4**, the LCD panel **1** and the capacitive type touch panel **5**.

[0016] An operation of the capacitive type touch panel integrated with the LCD device is will be described as follows. As mentioned above, a voltage is applied to generate a uniform electric field in the transparent electrode (not shown) of the touch panel **15**, and a point of a display surface is touched with an input device, such as finger or conductive stylus, thereby generating a voltage drop. The

voltage drop is detected with a current sensor, and then calculated to sense X-Y coordinates.

[0017] The touch panel integrated with the LCD device according to the related art has the following disadvantages. In damp weather, little static electricity can be generated on the human body. However, in a dry weather, a large amount of static charge can be stored on the human body depending upon the type of clothes worn. When a user have a large amount of static charge touches the display surface of the touch panel in dry weather, the static charge may discharge as static electricity into the touch panel and generate noise in the touch panel. As a result, the touch panel may perform an incorrect operation.

SUMMARY OF THE INVENTION

[0018] Accordingly, the present invention is directed to a touch panel for a display device that substantially obviates one or more of the problems due to limitations and disadvantages of the related art.

[0019] Another object is to provide a touch panel for a display device that prevents noise from being generated by static electricity.

[0020] Additional features and advantages of the invention will be set forth in the description which follows, and in part will be apparent from the description, or may be learned by practice of the invention. The objectives and other advantages of the invention will be realized and attained by the structure particularly pointed out in the written description and claims hereof as well as the appended drawings.

[0021] To achieve these objects and other advantages and in accordance with the purpose of the invention, as embodied and broadly described herein, a touch panel for a display device including a display device, a touch panel on the display device, a conductive pattern on an upper surface of the touch panel and a conductive member connected to the conductive pattern, and supporting the display device and the touch panel.

[0022] It is to be understood that both the foregoing general description and the following detailed description of the present invention are exemplary and explanatory, and are intended to provide further explanation of the invention as claimed.

BRIEF DESCRIPTION OF THE DRAWINGS

[0023] The accompanying drawings, which are included to provide a further understanding of the invention and are incorporated in and constitute a part of this application, illustrate embodiment(s) of the invention and together with the description serve to explain the principles of the invention.

[0024] **FIG. 1** is a cross-sectional view illustrating a resistive type touch panel integrated with an LCD device according to the related art.

[0025] **FIG. 2** is a plan view illustrating a resistive type touch panel integrated with an LCD device according to the related art.

[0026] **FIG. 3** is an exploded view illustrating upper and lower substrates of a touch panel according to the related art.