

a sheet member that faces the transparent substrate, with a space layer being interposed in between, and has a plurality of first protrusions formed on a substrate-facing surface of the sheet member, which surface faces the transparent substrate,

the substrate-facing surface of the sheet member being not brought into contact with the transparent substrate when an object does not touch the operation area, and the substrate-facing surface of the sheet member being brought into contact with the transparent substrate when the object touches the operation area.

2. The touch panel as claimed in claim 1, wherein the first protrusions are dot spacers.

3. The touch panel as claimed in claim 1, wherein the sheet member has second protrusions that are formed in inner peripheral regions on the substrate-facing surface that are not to touch the transmission/reception unit, the second protrusions being situated closer to the transparent substrate than the first protrusions to the transparent substrate.

4. The touch panel as claimed in claim 1, wherein the sheet member has a predetermined peripheral portions bonded to the transparent substrate with a bonding means.

5. The touch panel as claimed in claim 1, wherein:

the sheet member has third protrusions that are dike-like mounds formed in outer peripheral regions on the substrate-facing surface that are not to touch the transmission/reception unit; and

the third protrusions are bonded to the transparent substrate with a bonding means.

6. The touch panel as claimed in claim 3, wherein the first protrusions or the second protrusions are made of a material that does not absorb surface acoustic wave as much as the sheet member does.

7. The touch panel as claimed in claim 3, wherein the first protrusions or the second protrusions are formed through a printing process.

8. The touch panel as claimed in claim 3, wherein the first protrusions or the second protrusions are formed by integral molding.

9. The touch panel as claimed in claim 1, further comprising an antireflection film that is formed on one or either of the surfaces of the sheet member.

10. The touch panel as claimed in claim 1, wherein the sheet member is subjected to antiglare treatment.

11. The touch panel as claimed in claim 1, further comprising a transparent conductive film that is formed on one or either of the surfaces of the sheet member.

12. The touch panel as claimed in claim 1, further comprising a polarizing plate that is placed over the sheet member.

13. The touch panel as claimed in claim 1, wherein the sheet member is a polarizing plate.

14. A display device comprising:

a liquid crystal panel; and

a touch panel that is mounted on the outer surface of the liquid crystal panel,

the touch panel including:

a transparent substrate on which surface acoustic wave is propagated;

a transmission/reception unit that is formed in peripheral regions on the transparent substrate, each two of the peripheral regions facing each other, and transmit and receive the surface acoustic wave;

a detecting unit that detects the location of an object touching a predetermined operation area; and

a sheet member that faces the transparent substrate, with a space layer being interposed in between, and has a plurality of first protrusions formed on a substrate-facing surface of the sheet member, which surface faces the transparent substrate,

the substrate-facing surface of the sheet member being not brought into contact with the transparent substrate when an object does not touch the operation area, and the substrate-facing surface of the sheet member being brought into contact with the transparent substrate when the object touches the operation area, and

the sheet member being a polarizing plate.

15. A display device comprising:

an organic EL display panel; and

a touch panel that is mounted on the outer surface of the organic EL display panel,

the touch panel including:

a transparent substrate on which surface acoustic wave is propagated;

a transmission/reception unit that is formed in peripheral regions on the transparent substrate, each two of the peripheral regions facing each other, and transmit and receive the surface acoustic wave;

a detecting unit that detects the location of an object touching a predetermined operation area; and

a sheet member that faces the transparent substrate, with a space layer being interposed in between, and has a plurality of first protrusions formed on a substrate-facing surface of the sheet member, which surfaces faces the transparent substrate,

the substrate-facing surface of the sheet member being not brought into contact with the transparent substrate when an object does not touch the operation area, and the substrate-facing surface of the sheet member being brought into contact with the transparent substrate when the object touches the operation area.

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