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ELECTRONIC DEVICE INCLUDING CONDUCTIVE MEMBER

Abstract

An electronic device is provided. The electronic device includes a foldable display, a decoration member made of a resin material to surround at least a portion of the foldable display, a support member configured to support the foldable display and including a metal area connected to the decoration member, and a conductive member disposed on the decoration member and electrically connected to the metal area. The conductive member may include a first conductive member arranged to face the support member and a second conductive member arranged parallel to the first conductive member and electrically connected to the first conductive member.

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Background/Summary

CROSS-REFERENCE TO RELATED APPLICATION(S) [0001] This application is a continuation application of prior application Ser. No. 18/403,020, filed on Jan. 3, 2024, which has issued as U.S. Pat. No. 12,289,843 on Apr. 29, 2025, which is a continuation application of prior application Ser. No. 17/423,019, filed on Jul. 14, 2021, which has issued as U.S. Pat. No. 11,903,149 on Feb. 13, 2024, which is a U.S. National Stage application under 35 U.S.C. § 371 of an International application number PCT/KR2021/008648, filed on Jul. 7, 2021, which is based on and claimed priority of a Korean patent application number 10-2020-0095771, filed on Jul. 31, 2020, in the Korean Intellectual Property Office, and of a Korean patent application number 10-2021-0035415, filed on Mar. 18, 2021, in the Korean Intellectual Property Office, the disclosure of each of which is incorporated by reference herein in its entirety.

TECHNICAL FIELD
[0002] The disclosure relates to an electronic device including a conductive member. More particularly, the disclosure relates to an electronic device (e.g., a portable terminal) including a conductive member disposed on a decoration member and electrically connected to a metal area, where the conductive member includes a first conductive member arranged to face a support member and a second conductive member arranged parallel to the first conductive member and electrically connected to the first conductive member.
BACKGROUND ART
[0003] Due to the development of information communication technology and semiconductor technology, the distribution and use of various electronic devices are rapidly increasing. In particular, recent electronic devices are being developed such that users are capable of communicating with each other while carrying the electronic devices. Electronic devices may output information stored therein as sound or an image. As the degree of integration of electronic devices has increased and super-high-speed and large-capacity wireless communication has become popular, multiple functions have recently come to be provided in a single electronic device, such as a mobile communication terminal. For example, various functions, such as an entertainment function (e.g., a game function), a multimedia function (e.g., a music/video reproduction function), a communication and security function for mobile banking or the like, a schedule management function, and an e-wallet function, are integrated in a single electronic device, in addition to a communication function. Such an electronic device has been miniaturized so that the user can conveniently carry the electronic device.
[0004] As the mobile communication service is extended to the multimedia service area, it is necessary to increase the sizes of the displays of electronic devices so as to allow the users to fully utilize the multimedia service as well as a voice call or short message service. However, the size of the display of an electronic device is in a trade-off relationship with the miniaturization of the electronic device.
[0005] The above information is presented as background information only to assist with an

understanding of the disclosure. No determination has been made, and no assertion is made, as to whether any of the above might be applicable as prior art with regard to the disclosure.

DISCLOSURE

Technical Problem

[0006] Aspects of the disclosure are to address at least the above-mentioned problems and/or disadvantages and to provide at least the advantages described below. Accordingly, an aspect of the disclosure is to provide an electronic device (e.g., a portable terminal) including a display having a flat surface or a flat surface and a curved surface. An electronic device including an existing type of display may require another terminal when implementing a screen larger than the size of the electronic device due to the structure of a fixed display. Accordingly, electronic devices including a foldable or rollable display have been and are being researched.

[0007] In a foldable electronic device, in order to implement the folding of a display, a physical separation space between display components is required. However, electrical surge may be introduced into a display panel from the outside of the electronic device through the separation space. It may be possible to reduce the electrical surge introduced into the display panel using a decoration member surrounding the display panel. However, when the area of the decoration member increases, the volume of the electronic device may increase, or the size of the actual display area of the display may decrease.

Technical Solution

[0008] According to various embodiments of the disclosure, it is possible to provide a display that is capable of being unfoldable or folded through a user's manipulation.

[0009] According to various embodiments of the disclosure, an electronic device including a discharge path capable of transmitting electrical surge introduced from the outside to a ground may be provided.

[0010] However, issues to be addressed in this disclosure are not limited to those described above, and may be variously expanded without departing from the spirit and scope of this disclosure.

[0011] Additional aspects will be set forth in part in the description which follows and, in part, will be apparent from the description, or may be learned by practice of the presented embodiments.

[0012] In accordance with an aspect of the disclosure, an electronic device is provided. The electronic device includes a foldable display, a decoration member made of a resin material to surround at least a portion of the foldable display, a support member configured to support the foldable display and including a metal area connected to the decoration member, and a conductive member disposed on the decoration member and electrically connected to the metal area. The conductive member may include a first conductive member arranged to face the support member and a second conductive member arranged parallel to the first conductive member and electrically connected to the first conductive member.

[0013] In accordance with another aspect of the disclosure, an electronic device is provided. The electronic device includes a foldable display, a decoration member made of a resin material and surrounding at least a portion of the foldable display, a support member configured to support the foldable display and including a metal area connected to the decoration member and a resin area disposed in a segment portion of the metal area, and a conductive member electrically connected to the metal area. The decoration member may include a first decoration member area facing the support member, and a second decoration member area extending from the first decoration member area and facing a direction different from a direction the first decoration member area faces, the conductive member may be disposed in the first decoration member area and the second decoration member area, and the conductive member may include a third conductive member and a fourth conductive member spaced apart from each other with reference to the segment portion.

Advantageous Effects

[0014] According to various embodiments of the disclosure, an electronic device is capable of including a discharge path capable of discharging electrical surge introduced into the electronic

device using a support member electrically connected to a conductive member.
[0015] According to various embodiments of the disclosure, an electronic device includes a decoration member having a reduced area overlapping the display. Therefore, it is possible to increase a substantial screen display area, and to improve aesthetics.
[0016] Other aspects, advantages, and salient features of the disclosure will become apparent to those skilled in the art from the following detailed description, which, taken in conjunction with the annexed drawings, discloses various embodiments of the disclosure.

Description

DESCRIPTION OF THE DRAWINGS
[0017] The above and other aspects, features, and advantages of certain embodiments of the disclosure will be more apparent from the following description taken in conjunction with the accompanying drawings, in which:
[0018] FIG. **1** is a view illustrating a state in which an electronic device is unfolded according to an embodiment of the disclosure;
[0019] FIG. **2** is a view illustrating a state in which an electronic device is folded according to an embodiment of the disclosure;
[0020] FIG. **3** is an exploded perspective view illustrating an electronic device according to an embodiment of the disclosure;
[0021] FIG. **4** is a cross-sectional view taken along line B-B′ in FIG. **3** according to an embodiment of the disclosure;
[0022] FIG. **5** is a cross-sectional view taken along line A-A′ in FIG. **1** according to an embodiment of the disclosure;
[0023] FIG. **6** is a cross-sectional view taken along line A-A′ in FIG. **1** according to an embodiment of the disclosure;
[0024] FIG. **7**A is a view illustrating a conductive member coupled to a decoration member according to an embodiment of the disclosure;
[0025] FIG. **7**B is a view illustrating a conductive member coupled to a decoration member according to an embodiment of the disclosure;
[0026] FIG. **7**C is a view illustrating a conductive member coupled to a decoration member according to an embodiment of the disclosure;
[0027] FIG. **8** is a front view of a support member according to an embodiment of the disclosure;
[0028] FIG. **9**A is a view illustrating a conductive member arranged to correspond to a support member according to an embodiment of the disclosure;
[0029] FIG. **9**B is a view illustrating a conductive member arranged to correspond to a support member according to an embodiment of the disclosure; FIG. **9**C is a view illustrating a conductive member arranged to correspond to a support member according to an embodiment of the disclosure;
[0030] FIG. **10** is a schematic view of a support member according to an embodiment of the disclosure;
[0031] FIG. **11** is a cross-sectional view of a conductive member according to an embodiment of the disclosure; and
[0032] FIG. **12** is a schematic view of a conductive member disposed on a decoration member according to an embodiment of the disclosure.
[0033] Throughout the drawings, like reference numerals will be understood to refer to like parts, components, and structures.
MODE FOR DISCLOSURE
[0034] The following description with reference to the accompanying drawings is provided to

assist in a comprehensive understanding of various embodiments of the disclosure as defined by the claims and their equivalents. It includes various specific details to assist in that understanding but these are to be regarded as merely exemplary. Accordingly, those of ordinary skill in the art will recognize that various changes and modifications of the various embodiments described herein can be made without departing from the scope and spirit of the disclosure. In addition, descriptions of well-known functions and constructions may be omitted for clarity and conciseness.

[0035] The terms and words used in the following description and claims are not limited to the bibliographical meanings, but, are merely used by the inventor to enable a clear and consistent understanding of the disclosure. Accordingly, it should be apparent to those skilled in the art that the following description of various embodiments of the disclosure is provided for illustration purpose only and not for the purpose of limiting the disclosure as defined by the appended claims and their equivalents.

[0036] It is to be understood that the singular forms “a,” “an,” and “the” include plural referents unless the context clearly dictates otherwise. Thus, for example, reference to “a component surface” includes reference to one or more of such surfaces.

[0037] The electronic device according to various embodiments may be one of various types of electronic devices. The electronic devices may include, for example, a portable communication device (e.g., a smartphone), a computer device, a portable multimedia device, a portable medical device, a camera, a wearable device, or a home appliance. According to an embodiment of the disclosure, the electronic devices are not limited to those described above.

[0038] It should be appreciated that various embodiments of the disclosure and the terms used therein are not intended to limit the technological features set forth herein to particular embodiments and include various changes, equivalents, or replacements for a corresponding embodiment. With regard to the description of the drawings, similar reference numerals may be used to refer to similar or related elements. As used herein, each of such phrases as “A or B,” “at least one of A and B,” “at least one of A or B,” “A, B, or C,” “at least one of A, B, and C,” and “at least one of A, B, or C,” may include any one of, or all possible combinations of the items enumerated together in a corresponding one of the phrases. As used herein, such terms as “1st” and “2nd,” or “first” and “second” may be used to simply distinguish a corresponding component from another, and does not limit the components in other aspect (e.g., importance or order). It is to be understood that if an element (e.g., a first element) is referred to, with or without the term “operatively” or “communicatively”, as “coupled with,” “coupled to,” “connected with,” or “connected to” another element (e.g., a second element), it means that the element may be coupled with the other element directly (e.g., wiredly), wirelessly, or via a third element.

[0039] As used in connection with various embodiments of the disclosure, the term “module” may include a unit implemented in hardware, software, or firmware, and may interchangeably be used with other terms, for example, “logic,” “logic block,” “part,” or “circuitry”. A module may be a single integral component, or a minimum unit or part thereof, adapted to perform one or more functions. For example, according to an embodiment of the disclosure, the module may be implemented in a form of an application-specific integrated circuit (ASIC).

[0040] According to various embodiments of the disclosure, each component (e.g., a module or a program) of the above-described components may include a single entity or multiple entities, and some of the multiple entities may be separately disposed in different components. According to various embodiments of the disclosure, one or more of the above-described components may be omitted, or one or more other components may be added. Alternatively or additionally, a plurality of components (e.g., modules or programs) may be integrated into a single component. In such a case, according to various embodiments of the disclosure, the integrated component may still perform one or more functions of each of the plurality of components in the same or similar manner as they are performed by a corresponding one of the plurality of components before the integration. According to various embodiments of the disclosure, operations performed by the

module, the program, or another component may be carried out sequentially, in parallel, repeatedly, or heuristically, or one or more of the operations may be executed in a different order or omitted, or one or more other operations may be added.

[0041] FIG. **1** is a view illustrating a state in which an electronic device is unfolded according to an embodiment of the disclosure. FIG. **2** is a view illustrating a state in which an electronic device is folded according to an embodiment of the disclosure.

[0042] Referring to FIGS. **1** and **2**, in an embodiment of the disclosure, an electronic device **101** may include a foldable housing **300**, a hinge cover **330** configured to cover the foldable portion of the foldable housing **300**, and a flexible or foldable display **200** (hereinafter, simply referred to as a "display" **200**) disposed in a space defined by the foldable housing **300**. According to an embodiment of the disclosure, the surface on which the display **200** is disposed is defined as the front surface (e.g., a first surface **310***a* and a third surface **320***a*) of the electronic device **101**. In addition, a surface opposite to the front surface is defined as a rear surface (e.g., a second surface **310***b* and a fourth surface **320***b*) of the electronic device **101**. In addition, a surface surrounding the space between the front and rear surfaces is defined as a side surface (e.g., the first side surface **311***a* and the second side surface **321***a*) of the electronic device **101**.

[0043] According to various embodiments of the disclosure, the foldable housing **300** may include a first housing **310**, a second housing **320** including a sensor area **324**, a first rear cover **380**, a second rear cover **390**, and a hinge structure (e.g., the hinge structure **302** in FIG. **3**). The foldable housing **300** of the electronic device **101** is not limited to the shape and assembly illustrated in FIGS. **1** and **2**, but may be implemented by a combination and/or an assembly of different shapes or components. For example, in another embodiment of the disclosure, the first housing **310** and the first rear cover **380** may be integrally configured, and the second housing **320** and the second rear cover **390** may be integrally configured. According to various embodiments of the disclosure, the first housing **310** may be connected to the hinge structure **302**, and may include the first surface **310***a* facing a first direction and the second surface **310***b* facing a second direction opposite to the first direction. The second housing **320** may be connected to the hinge structure **302**, and may include the third surface **320***a* facing a third direction and the fourth surface **320***b* facing a fourth direction opposite to the third direction. The second housing **320** is rotatable about the hinge structure **302** relative to the first housing **310**. Accordingly, the electronic device **101** may be deformable into the folded state or the unfolded state. In the folded state of the electronic device **101**, the first surface **310***a* may face the third surface **320***a,* and in the unfolded state, the third direction may be the same as the first direction. According to an embodiment of the disclosure, in the state in which the electronic device **101** is unfolded, the first and third directions may be the +Z direction, and the second and fourth directions may be the −Z direction. According to an embodiment of the disclosure, in the state in which the electronic device **101** is folded, the first and second directions may be the +Z direction, and the second and third directions may be the −Z direction. In the following, unless otherwise stated, a direction will be described based on the unfolded state of the electronic device **101**.

[0044] According to various embodiments of the disclosure, the first housing **310** and the second housing **320** may be disposed on opposite sides about the folding axis A, and may have generally symmetrical shapes with respect to the folding axis A. As will be described later, the angle or distance between the first housing **310** and the second housing **320** may vary depending on whether the electronic device **101** is in the unfolded state, in the folded state, or in the intermediate state. According to an embodiment of the disclosure, unlike the first housing **310**, the second housing **320** may further include the sensor area **324** in which various sensors are disposed. However, the first housing **310** and the second housing **320** may have mutually symmetrical shapes in other areas. According to an embodiment of the disclosure, the folding axis A may be a plurality of (e.g., two) parallel folding axes.

[0045] According to an embodiment of the disclosure, the electronic device **101** may include a

structure into which a digital pen is insertable. For example, a hole **323** into which the digital pen is insertable may be provided in the side surface of the first housing **310** or the side surface of the second housing **320** of the electronic device **101**.

[0046] According to various embodiments of the disclosure, the first housing **310** and the second housing **320** may define a recess that accommodates the display **200** together. According to an embodiment of the disclosure, due to the sensor area **324**, the recess may have two or more different widths in a direction perpendicular to the folding axis A.

[0047] According to various embodiments of the disclosure, at least a portion of the first housing **310** and at least a portion of the second housing **320** may be made of a metal material or a non-metal material having the rigidity of a level selected to support the display **200**. The at least a portion made of the metal material may provide a ground plane of the electronic device **101**, and may be electrically connected to a ground line defined on a printed circuit board (e.g., the printed circuit board **360** in FIG. **3**).

[0048] According to various embodiments of the disclosure, the sensor area **324** may be defined to have a predetermined area adjacent to one corner of the second housing **320**. However, the arrangement, shape, and size of the sensor area **324** are not limited to those in the illustrated example. For example, in another embodiment of the disclosure, the sensor area **324** may be provided in any area between another corner or an upper end corner or a lower end corner of the second housing **320** or in the first housing **310**. In an embodiment of the disclosure, components embedded in the electronic device **101** to perform various functions may be exposed to the front surface of the electronic device **101** through the sensor area **324** or one or more openings provided in the sensor area **324**. In various embodiments of the disclosure, the components may include various types of sensors. The sensors may include at least one of, for example, a front camera, a receiver, or a proximity sensor.

[0049] According to various embodiments of the disclosure, the first rear cover **380** may be disposed at one side of the folding axis A on the rear surface of the electronic device **101**, and may have, for example, a substantially rectangular periphery, which may be surrounded by the first housing **310**. Similarly, the second rear cover **390** may be disposed at the other side of the folding axis A on the rear surface of the electronic device **101**, and the periphery of the second rear cover **390** may be surrounded by the second housing **320**.

[0050] According to various embodiments of the disclosure, the first rear cover **380** and the second rear cover **390** may have substantially symmetrical shapes about the folding axis (the axis A). However, the first rear cover **380** and the second rear cover **390** do not necessarily have mutually symmetrical shapes, and in another embodiment of the disclosure, the electronic device **101** may include the first rear cover **380** and the second rear cover **390**, which have various shapes.

[0051] According to various embodiments of the disclosure, the first rear cover **380**, the second rear cover **390**, the first housing **310**, and the second housing **320** may define a space in which various components (e.g., a printed circuit board or a battery) of the electronic device **101** can be arranged. According to an embodiment of the disclosure, one or more components may be disposed or visually exposed on the rear surface of the electronic device **101**. For example, at least a portion of a sub-display (not illustrated) may be visually exposed through a first rear area **382** of the first rear cover **380**. In another embodiment of the disclosure, one or more components or sensors may be visually exposed through a second rear area **392** of the second rear cover **390**. In various embodiments of the disclosure, the sensors may include a proximity sensor and/or a rear camera.

[0052] According to various embodiments of the disclosure, a front camera, which is exposed to the front surface of the electronic device **101** through the one or more openings provided in the sensor area **324** or a rear camera exposed through the second rear area **392** of the second rear cover **390**, may include one or more lenses, an image sensor, and/or an image signal processor. The flash **313** may include, for example, a light-emitting diode or a xenon lamp. In some embodiments of the disclosure, two or more lenses (e.g., an infrared camera, a wide-angle lens, and a telephoto lens),

and image sensors may be disposed on one surface of the electronic device **101**.
[0053] Referring to FIG. **2**, the hinge cover **330** may be disposed between the first housing **310** and the second housing **320** so as to cover internal components (e.g., the hinge structure **302** in FIG. **3**). According to an embodiment of the disclosure, the hinge cover **330** may be covered by a portion of the first housing **310** and a portion of the second housing **320**, or may be exposed to the outside depending on the state of the electronic device **101** (the unfolded state (flat state) or the folded state).
[0054] According to an embodiment of the disclosure, as illustrated in FIG. **1**, when the electronic device **101** is in the unfolded state, the hinge cover **330** may not be exposed by being covered by the first housing **310** and the second housing **320**. As another example, as illustrated in FIG. **2**, when the electronic device **101** is in the folded state (e.g., the fully folded state), the hinge cover **330** may be exposed to the outside between the first housing **310** and the second housing **320**. As still another example, when the first housing **310** and the second housing **320** are in the intermediate state in which the first housing **310** and the second housing **320** are folded to form a predetermined angle therebetween, a portion of the hinge cover **330** may be exposed to the outside between the first housing **310** and the second housing **320**. In this case, however, the exposed area may be smaller than that in the fully folded state. In an embodiment of the disclosure, the hinge cover **330** may include a curved surface.
[0055] According to various embodiments of the disclosure, the display **200** may be disposed in a space defined by the foldable housing **300**. For example, the display **200** may be seated in the recess defined by the foldable housing **300**, and may constitute most of the front surface of the electronic device **101**. Accordingly, the front surface of the electronic device **101** may include the display **200**, and partial areas of the first housing **310** and the second housing **320**, which are adjacent to the display **200**. In addition, the rear surface of the electronic device **101** may include the first rear cover **380**, a partial area of the first housing **310** adjacent to the first rear cover **380**, the second rear cover **390**, and a partial area of the second housing **320** adjacent to the second rear cover **390**.
[0056] According to various embodiments of the disclosure, the display **200** may refer to a display in which at least a portion is deformable into a planar surface or a curved surface. According to an embodiment of the disclosure, the display **200** may include a folding area **203**, a first area **201** disposed at one side of the folding area **203** (e.g., the left side of the folding area **203** illustrated in FIG. **2**), and a second area **202** disposed at the other side of the folding area **203** (e.g., the right side of the folding area **203** illustrated in FIG. **2**).
[0057] However, the area division of the display **200** is illustrative, and the display **200** may be divided into multiple areas (e.g., four or more areas or two areas) depending on the structure or functions thereof. For example, in the embodiment illustrated in FIG. **2**, the area of the display **200** may be divided by the folding area **203** or the folding axis (the axis A) extending parallel to the y axis. However, in another embodiment of the disclosure, the area of the display **200** may be divided based on another folding area (e.g., a folding area parallel to the x axis) or another folding axis (e.g., a folding axis parallel to the x axis). According to an embodiment of the disclosure, the display **200** may be coupled to or disposed adjacent to a touch-sensitive circuit, a pressure sensor that is capable of measuring touch intensity (pressure), and/or a digitizer configured to detect a magnetic field-type stylus pen.
[0058] According to various embodiments of the disclosure, the first area **201** and the second area **202** may have generally symmetrical shapes about the folding area **203**. However, unlike the first area **201**, the second area **202** may include a notch cut due to the presence of the sensor area **324**, but may be symmetric to the first area **201** in the area other than the sensor area **524**. In other words, the first area **201** and the second area **202** may include portions having mutually symmetrical shapes and portions having mutually asymmetrical shapes.
[0059] Hereinafter, the operations of the first housing **310** and the second housing **320** according to

the states of the electronic device **101** (e.g., a flat or unfolded state and a folded state) and respective areas of the display **200** will be described.

[0060] According to various embodiments of the disclosure, when the electronic device **101** is in the unfolded state (the flat state) (e.g., FIG. **2**), the first housing **310** and the second housing **320** may be disposed to form an angle of 180 degrees therebetween and to face the same direction. The surface of the first area **201** and the surface of the second area **202** of the display **200** form 180 degrees relative to each other, and may face the same direction (e.g., the front direction of the electronic device). The folding area **203** may form the same plane as the first area **201** and the second area **202**.

[0061] According to various embodiments of the disclosure, when the electronic device **101** is in the folded state (e.g., FIG. **3**), the first housing **310** and the second housing **320** may be disposed to face each other. The surface of the first area **201** and the surface of the second area **202** of the display **200** may face each other while forming a narrow angle (e.g., an angle between 0 and 10 degrees) relative to each other. At least a portion of the folding area **203** may be configured as a curved surface having a predetermined curvature.

[0062] According to various embodiments of the disclosure, when the electronic device **101** is in the intermediate state (e.g., FIG. **3**), the first housing **310** and the second housing **320** may be disposed to form a predetermined angle relative to each other. The surface of the first area **201** and the surface of the second area **202** of the display **200** may form an angle larger than that in the folded state and smaller than that in the unfolded state. At least a portion of the folding area **203** may be configured as a curved surface having a predetermined curvature, and the curvature in this case may be smaller than that in the folded state.

[0063] FIG. **3** is an exploded perspective view illustrating an electronic device according to an embodiment of the disclosure.

[0064] Referring to FIG. **3**, the electronic device **101** may include a foldable housing **300**, a display **200**, a hinge structure **302**, a bracket assembly **350**, and a substrate unit **360**. The foldable housing **300** may include a first housing **310**, a second housing **320**, a bracket assembly **350**, a first rear cover **380**, and a second rear cover **390**. The configuration of the foldable housing **300** and the display **200** of FIG. **3** may be partially or wholly the same as the configuration of the foldable housing **300** and the display **200** of FIG. **1**.

[0065] According to various embodiments of the disclosure, the bracket assembly **350** may include a first mid plate **352** and a second mid plate **354**. A hinge structure **302** may be disposed between the first mid plate **352** and the second mid plate **354**. When the hinge structure **302** is viewed from the outside, the hinge structure **302** may be covered by a hinge cover (e.g., the hinge cover **330** in FIG. **3**). According to an embodiment of the disclosure, a printed circuit board (e.g., a flexible printed circuit board (FPCB)) may be disposed on the bracket assembly **350** across the first mid plate **352** and the second mid plate **354**.

[0066] According to various embodiments of the disclosure, the board unit **360** may include a first circuit board **362** disposed on the first mid plate **352** and a second circuit board **364** disposed on the second mid plate **354**. The first circuit board **362** and the second circuit board **364** may be disposed in a space defined by the bracket assembly **350**, the first housing **310**, the second housing **320**, the first rear cover **380**, and the second rear cover **390**. Components for implementing various functions of the electronic device **101** may be mounted on the first circuit board **362** and the second circuit board **364**.

[0067] According to various embodiments of the disclosure, the first housing **310** and the second housing **320** may be assembled so as to be coupled to the opposite sides of the bracket assembly **350** in the state in which the display **200** is coupled to the bracket assembly **350**. According to an embodiment of the disclosure, the first housing **310** may include a first side member **311** surrounding at least a portion of the side surface of the first mid plate **352**, and the second housing **320** may include a second side member **321** surrounding at least a portion of the side surface of the

second mid plate **354**. The first housing **310** may include a first rotational support surface **312**, and the second housing **320** may include a second rotational support surface **322**, which corresponds to the first rotational support surface **312**. The first rotational support surface **312** and the second rotational support surface **322** may include curved surfaces corresponding to curved surfaces included in the hinge cover **330**. According to an embodiment of the disclosure, the first side member **311** surrounds at least a portion between the first surface **310***a* and the second surface **310***b,* and may include a first side surface (e.g., the first side surface **311***a* in FIG. **1**) perpendicular to the first direction or the second direction. According to an embodiment of the disclosure, the second side member **321** may surround at least a portion between the third surface **320***a* and the fourth surface **320***b,* and may include a second side surface (e.g., the second side surface **321***a* in FIG. **1**) perpendicular to the third direction or the fourth direction.

[0068] According to an embodiment of the disclosure, when the electronic device **101** is in the unfolded state (e.g., the electronic device in FIG. **1**), the first rotation support surface **312** and the second rotation support surface **322** may cover the hinge cover **330**, and the hinge cover **330** may not be exposed to the rear surface of the electronic device **101** or may be exposed to a minimum. As still another embodiment of the disclosure, when the electronic device **101** is in the folded state (e.g., the electronic device in FIG. **2**), the first rotational support surface **312** and the second rotational support surface **322** may rotate along the curved surface included in the hinger cover **330** so that the hinge cover **330** may be exposed to the rear surface of the electronic device **101** to a maximum.

[0069] FIG. **4** is a cross-sectional view taken along line B-B′ in FIG. **3** according to an embodiment of the disclosure.

[0070] Referring to FIG. **4**, the display **200** may include components for visually providing information to the outside (e.g., a user) of the electronic device **101**. The configuration of the display **200** of FIG. **4** may be wholly or partially the same as the configuration of the display **200** of FIG. **1** or **3**.

[0071] According to various embodiments of the disclosure, The display **200** may include at least one of a protection film **210** configured to protect the outer surface of the display **200**, a window member **220** disposed below the protection film **210** (e.g., the-Z direction), a polarizing layer **230** disposed on the window member **220** via an adhesive **222**, a display panel **240** disposed under the polarizing layer **230** and configured to display visual information, a bending protection layer (BPL) **250** configured to protect the display panel **240**, a first protection film **262** disposed under the display panel **240**, a cushion layer **270** disposed under the first protection film **262**, a display support plate **280** disposed under the cushion layer **270**, a column spacer **290** separating a substrate (e.g., a color filter substrate **292** and a TFT substrate **294**), or a second protection film **264**.

[0072] According to various embodiments of the disclosure, at least a portion of the window member **220** may be made of a material that is substantially transparent and flexible. For example, the window member **220** may be made of ultra thin glass (UTG) or polyimide film. The display panel **240** may be exposed to the outside of the electronic device **101** through the window member **220**. According to an embodiment of the disclosure, the protective film **210** and/or the window member **220** may be interpreted as a transparent cover.

[0073] According to various embodiments of the disclosure, a portion of the display panel **240** may be curved, and the curved portion of the display panel **240** may be defined as a bent portion **242**. According to an embodiment of the disclosure, the bent portion **242** may be electrically connected to an electronic component (e.g., a display driving circuit). According to an embodiment of the disclosure, the display panel **240** may extend through the bent portion **242**, and may surround at least a portion of other components of the display **200** (e.g., the cushion layer **270** or the display support plate **280**). According to an embodiment of the disclosure, display panel **240** may be connected to the display driving circuit in a chip on plastic (COP) manner. According to an embodiment of the disclosure, at least of the display panel and/or the bending protection layer may

be covered by a decoration member (e.g., decoration member of FIG. **5**).
[0074] According to various embodiments of the disclosure, the bending protection layer **250** may reduce tensile stress applied to the display panel **240**. According to an embodiment of the disclosure, the bending protection layer **250** may extend along the bent portion **242** of the display panel **240**. The bending protection layer **250** may support the bent portion **242** so that the bent portion **242** is curved along a neutral plane.
[0075] According to various embodiments of the disclosure, the display **200** may include a first separation space g**1**. At least a portion of the first separation space g**1** may be surrounded by the display panel **240**, the bending protection layer **250**, and the polarizing layer **230**. For example, the bending protection layer **250** and the polarizing layer **230** may be disposed on the display panel **240** to be spaced apart from each other in the width direction of the electronic device **101** (e.g., the X-axis direction). Since the first separation space g**1** is physically exposed to the outside of the electronic device (e.g., the electronic device **101** in FIG. **1**), when there is no discharge structure, electrical surge (an electrical surge **800** in FIG. **5**) (e. g., static electrical charge) may be introduced into the display panel **240** through the first separation space g**1**. A structure for reducing the electrical surge **800** introduced into the display panel **240** through the first separation space g**1** will be described with reference to FIGS. **5** and **6** below.
[0076] FIG. **5** is a cross-sectional view taken along line A-A′ in FIG. **1** according to an embodiment of the disclosure. FIG. **6** is a cross-sectional view taken along line A-A′ in FIG. **1** according to an embodiment of the disclosure.
[0077] Referring to FIGS. **5** and **6**, the electronic device **101** may include a support member **400** (e.g., conductive member), a decoration member **500** (e.g., protection member), and a conductive member **600** (e.g., conductive layer). The configuration of the support member **400** of FIGS. **5** and **6** may be wholly or partially the same as the configuration of the foldable housing **300** of FIG. **3**.
[0078] According to various embodiments of the disclosure, the support member **400** may support components of the electronic device **101**. For example, the support member **400** may support the display **200**. According to an embodiment of the disclosure, the support member **400** may accommodate the electronic components of the electronic device **101**. For example, an electronic component (e.g., a battery (not illustrated)) of the electronic device **101** may be disposed on the support member **400**. According to an embodiment of the disclosure, the support member **400** may be connected to the decoration member **500**.
[0079] According to various embodiments of the disclosure, the support member **400** may form a portion of the outer surface of the electronic device **101**. For example, the support member **400** may form a portion of a side surface (e.g., the first side surface **311***a* or the second side surface **321***a* in FIG. **1**) of the electronic device **101**.
[0080] According to various embodiments of the disclosure, the support member **400** may be made of a mixture of a conductive material and a insulative material. For example, the support member **400** may include a metal area **410** (e.g., conductive member) made of a metal (e.g., stainless steel or aluminum) and a resin area **440** made of a resin (e.g., plastic). According to an embodiment of the disclosure, the resin area **440** may be molded through injection molding.
[0081] According to various embodiments of the disclosure, the metal area **410** of the support member **400** may provide a part of a discharge path. For example, the metal area **410** may provide a ground plane, and may be electrically connected to a ground line provided on a printed circuit board (e.g., the printed circuit board **360** in FIG. **3**).
[0082] According to various embodiments of the disclosure, interference of radio waves by the resin area **440** of the support member **400** may be less than that of radio waves by the metal area **410**. For example, the resin area **440** may be located on the support member **400** to correspond to an antenna structure (not illustrated) of the electronic device **101** so as to provide a path for a signal radiated from the antenna structure. According to an embodiment of the disclosure, the density of the resin area **440** may be less than that of the metal area **410**, and the support member **400**

including the resin area **440** may be lighter than a support member made only of a metal.
[0083] According to various embodiments of the disclosure, the metal area **410** and the resin area **440** of the support member **400** may be positioned in various structures. According to an embodiment of the disclosure, the metal area **410** may include a first metal area **420** forming the rim of the support member **400**. The first metal area **420** may include a third support member surface **400***c* that is a side surface of the support member **400**. According to an embodiment of the disclosure, the metal area **410** may include a second metal area **430** configured to support the display **200**. The second metal area **430** may accommodate an electronic component (e.g., a battery (not illustrated) or a printed circuit board (not illustrated)) of the electronic device **101**. According to an embodiment of the disclosure, the resin area **440** may be located between the first metal area **420** and the second metal area **430**.
[0084] According to various embodiments of the disclosure, the support member **400** may include at least one protrusion (e.g., a first protrusion **422** or a second protrusion **432**) electrically connected to the conductive member **600** to be described below. According to an embodiment (e.g., FIG. **5**) of the disclosure, the first metal area **420** may include a first protrusion **422** electrically connected to the conductive member **600**. For example, the first metal area **420** may extend in the width direction of the electronic device **101** (e.g., the X-axis direction) to accommodate a part of the decoration member **500** disposed on the support member **400** (e.g., the third decoration member area **530**). The first protrusion **422** may extend from the first metal area **420** and protrude toward the conductive member **600**. The first protrusion **422** may be integrated with the first metal area **420**. According to an embodiment (e.g., FIG. **6**) of the disclosure, the second metal area **430** may include a second protrusion **432** electrically connected to the conductive member **600**. For example, the second metal area **430** may extend in the width direction of the electronic device **101** (e.g., the X-axis direction) for electrical connection with the conductive member **600**. The bottom surface of the decoration member **500** (e.g., the third decoration member area **530**) may be coupled with the resin area **540** located between the first metal area **420** and the second metal area **430**. The second protrusion **432** may extend from the second metal area **430** and protrude toward the conductive member **600**. The second protrusion **432** may be integrated with the second metal area **430**.
[0085] According to an embodiment of the disclosure, the first protrusion **422** and the second protrusion **432** may be arranged along the longitudinal direction of the electronic device **101** (e.g., the Y-axis direction). According to another embodiment of the disclosure, a plurality of first protrusions **422** and second protrusions **432** may be provided. For example, a plurality of first protrusions **422** or second protrusions **432** may be provided to be spaced apart from each other with reference to a hole (e.g., a through hole **460** in FIG. **8**) or a segment portion (e.g., a segment portion **450** in FIG. **8**) in the support member **400**, respectively.
[0086] According to various embodiments of the disclosure, the support member **400** may include at least one of the first protrusion **422** and the second protrusion **432**. According to an embodiment of the disclosure, a portion of the support member **400** may include the first protrusion **422**, and another portion of the support member **400**, which is spaced apart from the first protrusion **422** on the support member **400** in the longitudinal direction of the electronic device **101** (e.g., the Y-axis direction in FIG. **1**), may include a second protrusion **432**. According to another embodiment of the disclosure, the support member **400** may include only the first protrusion **422** or only the second protrusion **432**.
[0087] According to various embodiments of the disclosure, the decoration member **500** may surround at least a portion of the display **200**. According to an embodiment of the disclosure, the decoration member **500** may surround at least a portion of a space between the support member **400** and the display **200**. For example, the decoration member **500** may be disposed on the first support member surface **400***a* and the second support member surface **400***b* of the support member **400**, and may cover a portion of the display **200** (e.g., the rim of the display **200**). According to an

embodiment of the disclosure, the decoration member **500** may be spaced apart from the display **200** in order to prevent a collision with the display **200** when the electronic device **101** is folded. For example, the decoration member **500** may be spaced apart from the display **200** in the thickness direction (e.g., the Z-axis direction) and the width direction (e.g., the X-axis direction).

[0088] According to various embodiments of the disclosure, the decoration member **500** may include an inner surface **500***a* of the decoration member facing the inside of the electronic device **101** and an outer surface **500***b* of the decoration member facing the outside of the electronic device **101**. The inner surface **500***a* of the decoration member may include a first decoration member area **510** (e.g., conductive side wall portion) facing the support member **400** (e.g., an interior upper surface of the decoration member **500**), and a second decoration member area **520** (e.g., conductive support portion) (e.g., an interior side surface of the decoration member **500**) extending from the first decoration member area **510** and facing a direction the first decoration member area **510** faces. For example, the second decoration member area **520** may face a side surface of the display **200** (e.g., the bent portion **242** or the bending protection layer **250** in FIG. **4**).

[0089] According to various embodiments of the disclosure, the decoration member **500** may be made of an insulative material. For example, the decoration member **500** may be made of a resin material (e.g., plastic). According to an embodiment of the disclosure, the electrical conductivity of the decoration member **500** may be lower than that of the metal area **410** or the conductive member **600** of the support member **400**.

[0090] According to various embodiments of the disclosure, the conductive member **600** may form a discharge path of the electronic device **101**. For example, the conductive member **600** may transmit power (e.g., the electrical surge **800**) provided to the electronic device **101** from the outside of the electronic device **101** to the ground. For example, the conductive member **600** may be electrically connected to the metal area **410** of the support member **400**. The description "electrically connected" herein may be used to define structures that are directly connected to (e.g., in contact with) each other, or structures that are sufficiently close to each other to be capable of causing movement of electrons according to current.

[0091] According to various embodiments of the disclosure, the conductive member **600** may be disposed on the decoration member **500**. For example, the conductive member **600** may be disposed on the inner surface **500***a* of the decoration member. The inner surface **500***a* of the decoration member may face a portion (e.g., the first decoration member area **510**) of the decoration member **500** that faces the bending protection layer (e.g., the bending protection layer **250** in FIG. **4**) or the bent portion (e.g., the bent portion **242** in FIG. **4**) of the display **200**). According to an embodiment of the disclosure, the conductive member **600** may face the bending protection layer **250** or the bent portion **242**. It is possible to reduce the electrical surge **800** introduced into the first separation space (e.g., the first separation space g**1** in FIG. **4**) by the conductive member **600** facing the bending protection layer **250** or the bent portion **242**.

[0092] According to various embodiments of the disclosure, the conductive member **600** may extend parallel to the folding axis (e.g., the folding axis A in FIG. **1**) of the electronic device **101**. For example, the conductive member **600** may extend along the longitudinal direction (e.g., the Y-axis direction) of the electronic device **101**.

[0093] According to various embodiments of the disclosure, the conductive member **600** may include at least one of a conductive sheet, a conductive fabric, a conductive film, a conductive paint, or a plating layer. According to an embodiment of the disclosure, the conductive sheet may be a sheet including a conductive metal (e.g., at least one of copper, nickel, gold, silver, or aluminum). According to an embodiment of the disclosure, the conductive fabric may be made of a woven fabric or a non woven fabric. The conductive fabric may include threads and fibers of a metal (e.g., at least one of copper, nickel, gold, silver, or aluminum). According to an embodiment of the disclosure, the conductive film may be a film including a conductive material (e.g., at least one of copper, nickel, gold, silver, or aluminum). According to an embodiment of the disclosure,

the conductive film may be a paint including particles of a metal (e.g., at least one of copper, nickel, gold, silver, or aluminum). According to an embodiment of the disclosure, the conductive member **600** may be interpreted as a printing layer including a conductive paint. For example, the conductive member **600** may be a conductive ink remaining after being applied using a dispenser together with a resin material, and then evaporating the resin material using a laser. According to an embodiment of the disclosure, the conductive member **600** may be a plating layer. For example, the conductive member **600** may be a plating layer disposed on a pattern formed using a laser.

[0094] According to various embodiments of the disclosure, the conductive member **600** may be a conductive material formed on the decoration member **500** through vapor deposition. According to an embodiment of the disclosure, the conductive member **600** may be a film or coating obtained through vapor deposition of a conductive material (e.g., at least one of copper, nickel, gold, silver, or aluminum) on the decoration member **500**. For example, the conductive member **600** may be integrated with the decoration member **500** by being vapor-deposited on the inner surface **500***a* of the first decoration member area **510**.

[0095] According to various embodiments of the disclosure, the electronic device **101** may include an insulative member **700** for blocking foreign matter flowing into the second separation space g**2** between the decoration member **500** and the display **200**. According to an embodiment of the disclosure, the insulative member **700** may be an elastic porous material (e.g., sponge) or a buffer material (e.g., mohair or brush).

[0096] According to various embodiments of the disclosure, the insulative member **700** may be disposed on the conductive member **600**. For example, the conductive member **600** may be disposed between the decoration member **500** and the insulative member **700** made of a resin material. According to an embodiment of the disclosure, the insulative member **700** may face the first decoration member area **510** of the decoration member **500**. For example, the insulative member **700** may be disposed on a portion of the conductive member **600** (e.g., a first conductive member **610** of FIG. **7**A). According to an embodiment of the disclosure, the decoration member **500** and the insulative member **700** may guide the flow of power (e.g., the electrical surge **800**) transmitted to the conductive member **600**. For example, the decoration member **500** and the insulative member **700** may cover the first surface **600***c* of the conductive member **600** facing the decoration member **500** and the second surface **600***d* of the conductive member **600** facing the display **200**, thereby reducing the power emitted through the first surface **600***c* or the second surface **600***d*. According to an embodiment of the disclosure, the conductive member **600** may include a first end **600***a* exposed to the outside of the electronic device **101** and a second end **600***b* located opposite to the first end **600***a* and facing the metal area **410**. The power transmitted to the first end **600***a* of the conductive member **600** may be transmitted to the second end **600***b* located opposite to the first end **600***a*.

[0097] FIGS. **5** and **6** illustrate the structure in which the support member **400**, the decoration member **500**, the conductive member **600**, and the insulative member **700** of the electronic device **101** are located at the left side of the electronic device **101** of FIG. **1** (e.g., the cross section of the first housing **310** (e.g., line A-A′), but this is merely an example for description, and the structure of the disclosure is not limited thereto. According to an embodiment of the disclosure, the support member **400**, the decoration member **500**, the conductive member **600**, and the insulative member **700** may be disposed in a housing in which the bending protection layer **250** or the bent portion **242** is located (e.g., the first housing **310** or the second housing **320** in FIG. **1**). For example, when the bending protection layer **250** or the bending part **242** of the display **200** is located at the right side of the electronic device **101**, the support member **400**, the decoration member **500**, the conductive member **600**, and the insulative member **700** of the electronic device **101** may be located at the right side of the electronic device **101** (e.g., the second housing **320**, the +X direction) of FIG. **1**.

[0098] FIG. **7**A is a view illustrating a conductive member coupled to a decoration member

according to an embodiment of the disclosure, FIG. **7**B is a view illustrating a conductive member coupled to a decoration member according to an embodiment of the disclosure, and FIG. **7**C is a view illustrating a conductive member coupled to a decoration member according to an embodiment of the disclosure.

[0099] Referring to FIGS. **7**A to **7**C, the conductive member **600** may be disposed on the decoration member **500** in various structures. The configuration of the decoration member **500**, the conductive member **600**, and the insulative member **700** of FIGS. **7**A, **7**B and **7**C may be wholly or partially the same as the configuration of the decoration members **500**, the conductive member **600**, and the insulative member **700** of FIGS. **5** and **6**.

[0100] According to various embodiments of the disclosure, the conductive member **600** may include a plurality of conductive members (e.g., the first conductive member **610** and the second conductive member **620**) arranged parallel to each other. For example, the first conductive member **610** may be disposed on the first decoration member area **510**, and the second conductive member **620** may be disposed on the second decoration member area **520**. According to an embodiment of the disclosure, the first conductive member **610** and the second conductive member **620** may be electrically connected to each other. For example, the power transmitted to the first conductive member **610** may be transmitted to the second conductive member **620**.

[0101] According to various embodiments of the disclosure, the first conductive member **610** and the second conductive member **620** may be spaced apart from each other by a first distance d**1**. The first distance d**1** may be a distance at which the power applied to the first conductive member **610** can be transmitted to the second conductive member **620** due to external electrical stimulation (e.g., static electricity). According to an embodiment (e.g., FIG. **7**A) of the disclosure, the first conductive member **610** may extend from the first decoration member area **510** to the second decoration member area **520**, and the second conductive member **620** may be disposed on the second decoration member area **520**. According to another embodiment (e.g., FIG. **7**B) of the disclosure, the second conductive member **620** may extend from the second decoration member area **520** to the first decoration member area **510**, and the first conductive member **610** may be disposed on the first decoration member area **510**. According to another embodiment (not illustrated) of the disclosure, the first conductive member **610** and the second conductive member **620** may be in contact with each other.

[0102] According to various embodiments of the disclosure, the conductive member **600** may be integrated with each other. Referring to FIG. **7**C, the conductive member **600** may be manufactured in a curved shape to correspond to the curved decoration member **500**. The conductive member **600** may extend from the first decoration member area **510** to the second decoration member area **520**.

[0103] According to various embodiments of the disclosure, the first conductive member **610** may be spaced apart from an end **500***c* of the decoration member **500** by a second distance d**2**. According to an embodiment of the disclosure, the second distance d**2** may be 500 μm or less. For example, the second distance d**2** may be 150 μm or less. For example, the decoration member **500** may extend or protrude more than the conductive member **600** in the width direction of the electronic device **101** (e.g., the X-axis direction) by a second distance d**2**. Since the electrical surge transmitted to the first conductive member **610** (e.g., the electrical surge **800** of FIG. **5**) is transmitted to the support member (e.g., the support member **400** in FIG. **5**) via the second conductive member **620**, the second distance d**2** may be decreased, and the width of the decoration member **500** may be decreased.

[0104] According to various embodiments of the disclosure, the insulative member **700** may be disposed on at least a portion of the conductive member **600**. For example, the insulative member **700** may be disposed on the first conductive member **610** or the second conductive member **620**. In another example (e.g., FIG. **7**C), the insulative member **700** may be disposed on a portion of the integrated conductive member **600**. As another example, the insulative member **700** may cover of the entire conductive member **600**. According to an embodiment of the disclosure, the insulative

member **700** may be disposed under the conductive member **600**. For example, the conductive member **600** may protrude more than the insulative member **700** in the width direction of the electronic device **101** (e.g., the X-axis direction), or may be located substantially on the same line as the insulative member **700**. The insulative member **700** may be disposed such that the insulative member **700** does not protrude more than the conductive member **600** in the width direction of the electronic device **101** (e.g., the X-axis direction).

[0105] Each of FIGS. **7**A, **7**B, and **7**C illustrates a structure in which the first decoration member area **510** of the decoration member **500** is perpendicular to the second decoration member area **520**, but the angle between the first decoration member area **510** and the second decoration member area **520** is not limited to 90 degrees. For example, the first decoration member area **510** and the second decoration member area **520** may be areas facing different directions on the inner surface of the decoration member **500** (e.g., the inner surface **500***a* of the decoration member in FIG. **5**).

[0106] According to an embodiment of the disclosure, the material of the first conductive member **610** and the second conductive material may be different from each other. For example, the first conductive member **610** may be made of a conductive fabric, and the second conductive member **620** may be made of a conductive sheet. As another example, the first conductive member **610** may be made of a conductive sheet, and the second conductive member **620** may be made of a conductive member. According to another embodiment of the disclosure, the material of the first conductive member **610** and the material of the second conductive member **620** may be the same. For example, the first conductive member **610** and the second conductive member **620** may be made of a conductive sheet containing copper.

[0107] FIG. **8** is a front view of a portion of a support member according to an embodiment of the disclosure. FIG. **9**A is a view illustrating a conductive member arranged to correspond to a support member according to an embodiment of the disclosure, FIG. **9**B is a view illustrating a conductive member arranged to correspond to a support member according to an embodiment of the disclosure, and FIG. **9**C is a view illustrating a conductive member arranged to correspond to a support member according to an embodiment of the disclosure.

[0108] Referring to FIGS. **8**, **9**A, **9**B, and **9**C, the conductive member **600** may be arranged to correspond to the support member **400**. For example, the support member **400** may include a insulative configuration (e.g., the segment portion **450** or the injection-molded area (i.e., the second metal area **430**) in FIG. **5**) and a conductive configuration (e.g., the metal area **410** in FIG. **5**), the conductive member **600** may face the conductive configuration, and the decoration member **500**, which is exposed because the conductive member **600** is not disposed, may face the insulative configuration. The configuration of the support member **400** of FIGS. **8** and **10** may be wholly or partially the same as the configuration of the support member **400** of FIGS. **5** and **6**, and the configuration of the conductive member **600** of FIGS. **9**A to **9**C, and **10** may be wholly or partially the same as the configuration of the conductive member **600** of FIGS. **5** and **6**.

[0109] According to various embodiments of the disclosure, the support member **400** may include the segment portion **450**. According to an embodiment of the disclosure, the support member **400** may include a plurality of rims spaced apart from each other (i.e., a first rim **402**, a second rim **404**, and a third rim **406**). A partial area of the support member **400** at which the plurality of edges **402**, **404**, and **406** are spaced apart from each other (e.g., a first area A**1** or a second area A**2**) may be defined as the segment portion **450**. According to an embodiment of the disclosure, a portion of the first metal area of the support member **400** (e.g., the first metal area **420** in FIG. **5**) is spaced apart, and a position at which the first metal area **420** is spaced apart may be defined as the segment portion **450**. According to an embodiment of the disclosure, the resin area of the support member **400** (e.g., the resin area **440** in FIG. **5**) may be located in the segment portion **450**, and may form a portion of the rim of the support member **400**.

[0110] According to various embodiments of the disclosure, the metal area of the support member **400** (e.g., the metal area **410** in FIG. **5**) may include the through hole **460** for providing a path of a

radio frequency (RF) signal. According to an embodiment of the disclosure, the resin area of the support member **400** (e.g., the resin area **440** in FIG. **5**) may be located in the through hole **460**. According to an embodiment of the disclosure, the resin area **440** disposed in the through hole **460** may directly face the conductive member **600**. According to an embodiment of the disclosure, the support member **400** may include a plurality of through holes (e.g., the through hole **460**) spaced apart from each other with reference to a bridge **470**.

[0111] According to various embodiments of the disclosure, the support member **400** may have different thicknesses. For example, the thickness of at least one of areas defining at least a portion of corner portion **401** of the support member **400** (e.g., the first area A**1** or the third area A**3**) may be smaller than the thickness of another area of the support member (e.g., the second area A**2**). According to an embodiment of the disclosure, at least a portion of the resin area of the corner portion (e.g., the resin area **440** in FIG. **5**) may be excluded.

[0112] According to various embodiments of the disclosure, the conductive member **600** may include a first conductive member **610** and the second conductive member **620**, which face different directions with reference to the bending axis Ax**1** of the decoration member **500**. The first conductive member **610** may be disposed on the first decoration member area **510**, and the second conductive member **620** may be disposed on the second decoration member area **520**. For example, the second conductive member **620** may be arranged along a rim of the support member **400** (e.g., the first rim **402**), and the first conductive member **610** may be arranged parallel to the second conductive member **620**. As another example, the first conductive member **610** and the second conductive member **620** may be disposed to be in contact with each other. FIGS. **9**A, **9**B, and **9**C illustrate the first decoration member area **510** and the second decoration member area **520** as flat surfaces for convenience of description. However, the second decoration member area **520** may be curved relative to the first decoration member area **510** with reference to a bending axis Ax**1** (e.g., FIG. **5**). According to an embodiment of the disclosure, the bending axis Ax**1** may be an axis extending parallel to the folding axis (e.g., the folding axis A in FIG. **1**) of the electronic device (e.g., the electronic device **101** of FIG. **1**).

[0113] According to various embodiments of the disclosure, the decoration member **500** may directly face a portion of the support member **400** (e.g., the first area A**1** or the second area A**2**) in which the segment portion **450** is located. According to an embodiment of the disclosure, the decoration member **500** may include a first portion S**1** facing the first area A**1** of the support member **400** in which a first segment portion **452** is located and a second portion S**2** facing the second area A**2** of the support member **400** in which a second segment portion **454** is located. For example, the first portion S**1** may cover at least a portion of the first area A**1** (e.g., the first segment portion **452**), and the second portion S**2** may cover at least a portion of the second area A**2** (e.g., the second segment portion **454**). The second portion S**2** may be an area of the decoration member **500** exposed to a space between a (1-1)th conductive member **612** and a (1-2)th conductive member **614** or a space between a (2-1)th conductive member **622** and a (2-2)th conductive member **624**.

[0114] According to various embodiments of the disclosure, the decoration member **500** may directly face a portion of the support member **400** (e.g., the first area A**1** or the third area A**3**) defining the portion of the corner portion **401**. According to an embodiment of the disclosure, the decoration member **500** may include a first portion S**1** facing the first area A**1** and a third portion S**3** facing the third area A**3**. The first portion S**1** and the third portion S**3** may be exposed to the outside of the decoration member **500**. For example, the conductive member **600** may not be disposed on the first portion S**1** and the third portion S**3**.

[0115] According to various embodiments of the disclosure, the decoration member **500** may directly face the through hole **460** in the support member **400**. For example, the decoration member **500** may include a fourth portion S**4** facing the through hole **460**. The fourth part S**4** may be exposed to the outside of the decoration member **500**. For example, the conductive member **600** may not be disposed on the fourth portion S**4**.

[0116] According to various embodiments of the disclosure, the conductive member **600** may be disposed to correspond to the segment portion **450** of the support member **400**. For example, the conductive member **600** may include a plurality of conductive members spaced apart from each other with reference to the segment portion **450**. According to an embodiment of the disclosure, the first conductive member **610** may include a (1-1)th conductive member **612** and a (1-2)th conductive member **614** spaced apart from each other with reference to the segment portion **450**, and the second conductive member **620** may include a (2-1)th conductive member **622** and a (2-2)th conductive member **624** spaced apart from each other with reference to the segment portion **450**. For example, the (1-1)th conductive member **612** and the (1-2)th conductive member **614** may be spaced apart from each other with reference to the second portion S**2**, and the (2-1)th conductive member **622** and the (2-2)th conductive member **624** may be spaced apart each other with reference to the second portion S**2**. According to another embodiment of the disclosure, at least one of the first conductive member **610** or the second conductive member **620** may disposed to correspond to a plurality of segment portions (e.g., the first segment portion **452** and the second segment portion **454**). For example, the second conductive member **620** may include at least one of a (2-1)th conductive member **622**, a (2-2)th conductive member **624**, a (2-3)th conductive member **626**, or a (2-4)th conductive member (**628**). The (2-1)th conductive member **622** and the (2-2)th conductive member **624** may be spaced apart from each other with reference to the second portion S**2** overlapping the second segment portion **454**, and The (2-3)th conductive member **626** and the (2-4)th conductive member **628** may be spaced apart from each other with reference to the first portion S**1** overlapping the first segment portion **452**.

[0117] According to various embodiments of the disclosure, a plurality of conductive members spaced apart from each other to correspond to the segment portion **450** may be electrically connected to each other. For example, the (1-1)th conductive member **612** and the (1-2)th conductive member **614** may be electrically connected to each other, and the (2-1)th conductive member **622** and the (2-2)th conductive member **624** may be electrically connected to each other. As another example, the (1-3)th conductive member **616** and the (1-1)th conductive member **612** may be electrically connected to each other, and the (2-3)th conductive member **626** and the (2-1)th conductive member **622** may be electrically connected to each other.

[0118] According to various embodiments of the disclosure, the conductive member **600** may be electrically connected via another conductive member **600** that is parallel thereto. According to an embodiment (e.g., FIG. **9**B) of the disclosure, the (2-1)th conductive member **622** may be electrically connected to the (2-3)th conductive member **626** via the (1-1)th conductive member **612** and the (1-3)th conductive member **616**. For example, the (2-1)th conductive member **622** may be electrically connected to the (1-1)th conductive member **612**, the (2-3)th conductive member **626** may be electrically connected to the (1-3)th conductive member **616**, and the (1-1)th conductive member **612** may be electrically connected to the (1-3)th conductive member **616**. According to another embodiment (not illustrated) of the disclosure, the (1-1)th conductive member **612** and the (1-3)th conductive member **616** may be integrated as a first conductive member **610**, and the (2-1)th conductive member may be electrically connected to the (2-3)th conductive member **626** via the first conductive member **610**.

[0119] According to various embodiments of the disclosure, the conductive member **600** may include a third conductive member **630** and a fourth conductive member **640** spaced apart from each other with reference to the segment portion **450** or the second portion S**2** facing the segment portion **450**. The third conductive member **630** may be disposed on the first decoration member area **510** and the second decoration member area **520** of the decoration member **500**, and the fourth conductive member **640** may be disposed on the first decoration member area **510** and the second decoration member area **520** of the decoration member **500**. For example, the third conductive member **630** may include a (3-1)th conductive member **632** disposed in the first decoration member area **510**, and a (3-2)th conductive member **634** disposed in the second decoration member area

520, and the fourth conductive member **640** may include a (4-1)th conductive member **642** disposed in the first decoration member area **510**, and a (4-2)th conductive member **644** disposed in the second decoration member area **520**. According to an embodiment of the disclosure, the (3-1)th conductive member **632** and the (3-2)th conductive member **634** are integrated with each other, and the (4-1)th conductive member **642** and the (4-2)th conductive member **644** may be integrated with each other. According to an embodiment of the disclosure, the third conductive member **630** and the fourth conductive member **640** may be electrically connected to each other.

[0120] According to various embodiments of the disclosure, the conductive member **600** may be disposed to correspond to the portion of the corner portion **401** of the support member **400**. For example, the first conductive member **610** and the second conductive member **620** may not be disposed on the first portion S**1** and the third portion S**3**, which face at least a portion of the corner portion **401**. According to an embodiment of the disclosure, the area of the third portion S**3** in the second decoration member area **520** may be larger than the area of the third portion S**3** in the first decoration member area **510**. For example, the area of the (1-2)th conductive member **614** facing electrical surge (e.g., the electrical surge **800** in FIG. **5**) applied from the outside of the electronic device (e.g., the electronic device **101** in FIG. **1**) may be larger than the area of the (2-2)th conductive member **624** facing the support member (e.g., the support member **400** in FIG. **5**).

[0121] According to various embodiments of the disclosure, the conductive member **600** may be disposed to correspond to the through hole **460** in the support member **400**. For example, the second conductive member **620** may include a (2-1)th conductive member **622** and a 2-3rd conductive member **626** spaced apart from each other with reference to the fourth portion S**4**. According to an embodiment of the disclosure, at least a portion of external electrical surge (e.g., the electrical surge **800** in FIG. **5**) transmitted to a partial area of the first conductive member **610** (e.g., the (1-1)th conductive member **612**) adjacent to the fourth portion S**4** may be transmitted to the (2-3)th conductive member **626** via the (2-1)th conductive member **622** and the (1-3)th conductive member **616**.

[0122] FIG. **10** is a schematic view of a support member according to an embodiment of the disclosure.

[0123] Referring to FIG. **10**, the support member **400** may include a plurality of through holes (e.g., the through hole **460**). For example, the metal area of the support member **400** (e.g., the metal area **410** in FIG. **5**) may include an upper metal area **480** and a lower metal area **490**, and the support member **400** may include an upper metal area **480**, a lower metal area **490**, and a resin area located between the upper metal area **480** and the lower metal area **490** (e.g., the resin area in FIG. **5**). The configuration of the support member **400** of FIG. **10** may be wholly or partially the same as the configuration of the support member **400** of FIGS. **5** and **8**.

[0124] According to various embodiments of the disclosure, the through hole **460** in the support member **400** may include at least one first through hole **462** configured in the upper metal area **480** facing the front surface (e.g., the first surface **310***a* and the third surface **320***a* in FIG. **1**) of the electronic device (e.g., the electronic device **101** in FIG. **1**), and second through holes **464** configured in the lower metal area **490** facing the rear surface (e.g., the second surface **310***b* and the fourth surface **320***b* in FIG. **1**) of the electronic device **101**. According to an embodiment of the disclosure, the support member **400** may include the through hole **460** in order to reduce or prevent interference with a radio frequency signal generated from an electronic component (e.g., an antenna (not illustrated)) of the electronic device (e.g., the electronic device **101** in FIG. **1**).

[0125] According to various embodiments of the disclosure, the ratio of the metal area (e.g., the metal area **410** in FIG. **5**) to the resin area (e.g., the resin area **440** in FIG. **5**) of the upper metal area **480** may be greater than the ratio of the metal area **410** to the resin area **440** of the lower metal area **490**. For example, the total area of the second through holes **464** configured in the lower metal area **490** may be greater than the area of the first through hole **462** formed in the upper metal area **480**. As another example, the number of second through holes **464** may be greater than the number

of first through holes **462**. According to an embodiment of the disclosure, as the ratio of the metal area (e.g., the metal area **410** in FIG. **5**) to the resin area (e.g., the resin area **440** in FIG. **5**) of the upper metal area **480** increases compared to the ratio of the metal area **410** to the resin area **440** of the lower metal area **490**, the area of the support member **400** electrically connected to the conductive member (e.g., the conductive member **600** in FIG. **5**) may increase.

[0126] FIG. **11** is a cross-sectional view of a conductive member according to an embodiment of the disclosure.

[0127] Referring to FIG. **11**, the conductive member **600** may include a shield layer **602**, a metal layer **604**, a conductive adhesive layer **606** and/or a release tape **608**. The configuration of the conductive member **600** of FIG. **11** may be wholly or partially the same as the configuration of the conductive member **600** of FIGS. **5** and **6**.

[0128] According to various embodiments of the disclosure, the shield layer **602** may reduce or prevent visibility of a portion of the conductive member **600** (e.g., the metal layer **604**) to the outside of the electronic device (e.g., the electronic device **101** in FIG. **1**). According to an embodiment of the disclosure, the shield layer **602** may face a decoration member (e.g., the decoration member **500** in FIG. **5**). According to an embodiment of the disclosure, the shield layer **602** may be an insulative black tape.

[0129] According to various embodiments of the disclosure, the metal layer **604** may include a conductive metal. According to an embodiment of the disclosure, the metal layer **604** may include a first metal layer **604***a*, a second metal layer **604***b*, and a third metal layer **604***c* disposed between the first metal layer **604***a* and the second metal layer **604***b* disposed below the shield layer **602**. The first metal layer **604***a* and the second metal layer **604***b* may include nickel (Ni). The third metal layer **604***c* may include copper (Cu). For example, the metal layer **604** may be interpreted as a plating layer of nickel, copper, and nickel. According to an embodiment of the disclosure, the first metal layer **604***a* and/or the second metal layer **604***b* may reduce or prevent the visibility of the third metal layer **604***c* made of copper to the outside of the electronic device (e.g., the electronic device **101** in FIG. **1**).

[0130] According to various embodiments of the disclosure, the conductive member **600** may be attached to the insulative member (e.g., the insulative member **700** in FIGS. **5** and **6**) using a conductive adhesive layer **606**. According to an embodiment of the disclosure, the release tape **608** disposed under the conductive adhesive layer **606** may be removed from the conductive adhesive layer **606**. The release tape **608** may be removed from the conductive adhesive layer **606**, and the conductive member **600** may be bonded to the insulative member **700** using the conductive adhesive layer **606**. According to an embodiment of the disclosure, the conductive adhesive layer **606** may include a conductive metal. For example, the conductive adhesive layer **606** may include a nickel filler.

[0131] FIG. **12** is a schematic view of a conductive member disposed on a decoration member according to an embodiment of the disclosure.

[0132] Referring to FIG. **12**, the electronic device **101** may include a decoration member **500** and a conductive member **600**. The configuration of the decoration member **500** and the conductive member **600** of FIG. **12** may be wholly or partially the same as the configuration of the decoration member **500** and the conductive member **600** of FIGS. **5** and **6**.

[0133] According to various embodiments of the disclosure, the conductive member **600** may include at least one pattern structure **601**. According to an embodiment of the disclosure, the pattern structure **601** may be interpreted as a plating layer or a metal layer formed using a laser. According to an embodiment of the disclosure, the pattern structure **601** may include a first conductive line **601***a* adjacent to the end **500***c* of the decoration member **500**, a second conductive line **601***b* spaced apart from the first conductive line **601***a*, and a third conductive line **601***c* connected to the first conductive line **601***a* and the second conductive line **601***b*. According to an embodiment of the disclosure, the first conductive line **601***a* and the second conductive line **601***b*

may be substantially parallel to each other. According to an embodiment of the disclosure, the pattern structure **601** may define at least one closed curve. For example, the first conductive line **601***a*, the second conductive line **601***b*, and the third conductive line **601***c* may surround an inner space **601***d*. According to an embodiment of the disclosure, at least a part of electrical surge **800** transmitted to the first conductive line **601***a* of the conductive member **600** may be transmitted to the second conductive line **601***b* via the third conductive line **601***c*. According to an embodiment of the disclosure, the first conductive line **601***a* may form at least a portion of the first end of the conductive member **600** (e.g., the first end **600***a* in FIG. **5**), and the second conductive line **601***b* may form at least a portion of the second end of the conductive member **600** (e.g., the second end **600***b* in FIG. **5**). According to an embodiment of the disclosure, the conductive member **600** may include a segment portion **603** disposed between a plurality of pattern structures **601**. Since the plurality of pattern structures **601** may be spaced apart from each other by the segment portion **603**, radiation performance is capable of increasing.

[0134] According to various embodiments of the disclosure, an electronic device (e.g., the electronic device **101** in FIG. **1**) may include a foldable display (e.g., the display **200** in FIG. **4**), a decoration member (e.g., the decoration member **500** in FIG. **5**) made of a resin material to surround at least a portion of the foldable display, a support member (e.g., the support member **400** in FIG. **5**) configured to support the foldable display and including a metal area (e.g., the metal area **410** in FIG. **5**) connected to the decoration member, and a conductive member (e.g., the conductive member **600** in FIG. **5**) disposed on the decoration member and electrically connected to the metal area. The conductive member may include a first conductive member (e.g., the first conductive member **610** in FIG. **7**A) arranged to face the support member and a second conductive member (e.g., the second conductive member **620** in FIG. **7**A) arranged parallel to the first conductive member and electrically connected to the first conductive member.

[0135] According to various embodiments of the disclosure, the electronic device may further include an insulative member (e.g., the insulative member **700** in FIG. **5**) disposed under the conductive member, and the insulative member may be spaced apart from the foldable display.

[0136] According to various embodiments of the disclosure, the support member may include a segment portion (e.g., the segment portion **450** in FIG. **8**), and a resin area located in the segment portion (e.g., the resin area **440** in FIG. **5**), the first conductive member may include a (1-1)th conductive member (e.g., the (1-1)th conductive member **612** in FIG. **9**A) and a (1-2)th conductive member (e.g., the (1-2)th conductive member **614** in FIG. **9**A), which are spaced apart from each other with reference to the segment portion, and the second conductive member may include a (2-1)th conductive member (e.g., the (2-1)th conductive member **622** in FIG. **9**A) and a (2-2)th conductive member (e.g., the (2-2)th conductive member **624** in FIG. **9**A), which are spaced apart from each other with reference to the segment portion.

[0137] According to various embodiments of the disclosure, the metal area may include a first metal area (e.g., the first metal area **420** in FIG. **5**) defining a rim of the support member (e.g., the first rim **402**, the second rim **404**, or the third rim **406** in FIG. **8**), and a second metal area configured to support the foldable display (e.g., the second metal area **430** in FIG. **5**), and the support member may include a resin area (e.g., the resin area **440** in FIG. **5**) located between the first metal area and the second metal area.

[0138] According to various embodiments of the disclosure, the support member may include a first protrusion (e.g., the first protrusion **422** in FIG. **5**) extending from the first metal area and protruding toward the conductive member.

[0139] According to various embodiments of the disclosure, the support member may include a second protrusion (e.g., the second protrusion **432** in FIG. **6**) extending from the second metal area and protruding toward the conductive member.

[0140] According to various embodiments of the disclosure, the electronic device may be configured to transmit electrical surge (e.g., the electrical surge **800** in FIG. **5**) provided to the

second conductive member from the outside of the electronic device to the metal area via the first conductive member.

[0141] According to various embodiments of the disclosure, the decoration member may include a first decoration member area (e.g., the first decoration member area **510** in FIG. **5**) facing the support member, and a second decoration member area (e.g., the second decoration member area **520** in FIG. **5**) facing a direction different from a direction the first decoration member area faces. The first conductive member may be disposed in the second decoration member area, and the second conductive member may be disposed in the first decoration member area.

[0142] According to various embodiments of the disclosure, the conductive member may include at least one of a conductive sheet, a conductive fabric, a conductive film, or a conductive paint.

[0143] According to various embodiments of the disclosure, the material of the first conductive member and the material of the second conductive member may be different from each other.

[0144] According to various embodiments of the disclosure, the decoration member may include a first decoration member area facing the support member, and a second decoration member area facing a direction different from a direction the first decoration member area faces, and the first conductive member and the second conductive member may be integral conductive members extending from the first decoration member area to the second decoration member area.

[0145] According to various embodiments of the disclosure, the support member may face the foldable display and may include an upper metal area (e.g., the upper metal area **480** in FIG. **10**) including a through hole (e.g., the through hole **460** in FIG. **8**) and a lower metal area (e.g., the lower metal area **490** in FIG. **10**) located opposite to the upper metal area, and the second conductive member may include a (2-1)th conductive member (e.g., the (2-1)th conductive member **622** in FIG. **9**B) and a (2-3)th conductive member (e.g., the (2-3)th conductive member **626** in FIG. **9**B), which are spaced apart from each other with reference to the through hole.

[0146] According to various embodiments of the disclosure, the decoration member may include a fourth portion (e.g., the fourth portion S**4** in FIG. **9**B) facing the through hole, and the first conductive member may include a (1-1)th conductive member (e.g., the (1-1)th conductive member **612** in FIG. **9**B) and a (1-3)th conductive member (e.g., the (1-3)th conductive member **616** in FIG. **9**B), which are arranged along the (2-1)th conductive member, the fourth portion, and the (2-3)th conductive portion. The (1-1)th conductive member may be electrically connected to the (2-1)th conductive member, and the (1-3)th conductive member may be electrically connected to the (2-3)th conductive member.

[0147] According to various embodiments of the disclosure, the foldable display may include a display panel (e.g., the display panel **240** in FIG. **4**) including a bent portion (e.g., the bent portion **242** in FIG. **4**) and a bending protection layer (e.g., the bending protection layer **250** in FIG. **4**) surrounding the bent portion, and the conductive member may face at least a portion of the bent portion.

[0148] According to various embodiments of the disclosure, the conductive member may be in contact with the metal area.

[0149] According to various embodiments of the disclosure, an electronic device (e.g., the electronic device **101** in FIG. **1**) may include a foldable display (e.g., the display **200** in FIG. **4**), a decoration member (e.g., the decoration member **500** in FIG. **5**) made of a resin material to surround at least a portion of the foldable display, a support member (e.g., the support member **400** in FIG. **5**) configured to support the foldable display and including a metal area (e.g., the metal area **410** in FIG. **5**) connected to the decoration member, and a resin area (e.g., the resin area **450** in FIG. **5**) disposed in the segment portion of the metal area, and a conductive member (e.g., the conductive member **600** in FIG. **5**) electrically connected to the metal area. The decoration member may include a first decoration member area (e.g., the first decoration member area **510** in FIG. **5**) facing the support member, and a second decoration member area (e.g., the second decoration member area **520** in FIG. **5**) extending from the first decoration member area and facing a direction

different from a direction the first decoration member area faces, the conductive member may be disposed in the first decoration member area and the second decoration member area, and the conductive member may include a third conductive member (e.g., the third conductive member **630** in FIG. **9**C) and a fourth conductive member (e.g., the fourth conductive member **640** in FIG. **9**C), which are spaced apart from each other with reference to the segment portion.

[0150] While the disclosure has been shown and described with reference to various embodiments thereof, it will be understood by those skilled in the art that various changes in form and details may be made therein without departing from the spirit and scope of the disclosure as defined by the appended claims and their equivalents.

Claims

1. A portable communication device comprising: a foldable housing including a conductive housing portion; a foldable display accommodated in the foldable housing, the foldable display including a foldable display panel including a planar panel portion and a bended panel portion, the bended panel portion accommodated in the first housing portion as extended from the planar panel portion and connected with a display driving circuit; a protective member composed of an insulative material and disposed on the foldable housing such that the protective member substantially surrounds a periphery of the foldable display; and a conductive layer disposed on an inner surface of the protective member facing at least part of the bended panel portion such that the conductive layer is extended from an upper portion of the inner surface to a side portion of the inner surface substantially angled with respect to the upper portion, the conductive layer electrically connected to the conductive housing portion and configured to allow an electrical stimulation applied from an outside of the portable communication device to be transmitted to the conductive housing portion.

2. The portable communication device of claim 1, wherein the protective member is configured to guide a flow of the electrical stimulation into the conductive housing portion to prevent the electrical stimulation from entering the bended panel portion of the foldable display.

3. The portable communication device of claim 1, wherein the conductive layer includes a first conductive layer portion and a second conductive layer portion disposed on the upper portion and the side portion, respectively, of the inner surface of the protective member such that the electrical stimulation is transmitted to the conductive housing portion via the first conductive layer portion and the second conductive layer portion.

4. The portable communication device of claim 3, wherein the second conductive layer portion is extended from the first conductive layer portion.

5. The portable communication device of claim 3, wherein the first conductive layer portion is not disposed on an ending portion of the upper portion of the inner surface of the protective member such that the protective member is protruded toward the foldable display more than the first conductive layer portion is.

6. The portable communication device of claim 1, wherein the conductive layer includes a first conductive layer portion having a first length and a second conductive layer portion having a second length shorter than the first length.

7. The portable communication device of claim 6, wherein at least part of the first conductive layer portion is disposed on the upper portion of the inner surface of the protective member, and wherein at least part of the second conductive layer portion is disposed on the side portion of the inner surface of the protective member.

8. The portable communication device of claim 1, wherein the foldable display further includes a foldable window member disposed over the foldable display panel, and a protection layer disposed over the foldable window member, and wherein the conductive layer is spaced apart from the protection layer via an air gap.

9. The portable communication device of claim 8, wherein the protection layer is protruded toward

the protective member more than the foldable window member is.
10. The portable communication device of claim 8, wherein the foldable window member is composed of a glass.
11. The portable communication device of claim 8, wherein the planar panel portion is disposed under the foldable window member, and the bended panel portion is disposed in proximity of the conductive layer, and wherein at least part of the bended panel portion is not covered by at least one of the protection layer or the foldable window member.
12. The portable communication device of claim 11, wherein the foldable display further includes a polarizing layer and a bending protection layer, the polarizing layer disposed under the foldable window member, and the bending protection layer disposed on the bending potion and spaced apart from the polarizing layer.
13. The portable communication device of claim 12, wherein the conductive layer is configured to prevent the electrical stimulation from entering a separation gap between the polarizing layer and the bending protection layer.
14. The portable communication device of claim 1, wherein the foldable housing includes a lateral frame forming a sidewall of the portable communication device, the lateral frame including a first metal portion, a second metal portion and a non-metal portion disposed between the first metal portion and the second metal portion, and wherein the conductive layer is not disposed on a portion of the protective member that is aligned with the non-metal portion.
15. The portable communication device of claim 14, wherein the conductive layer includes a third conductive layer portion and a fourth conductive layer portion separated from each other via the portion of the protective member.
16. A portable communication device comprising: a foldable housing including a first housing portion and a second housing portion foldable with respect to each other; a foldable display including a first display portion accommodated in the first housing portion and a second display portion accommodated in the second housing portion, the foldable display including a foldable display panel including a planar panel portion and a bended panel portion, the bended panel portion accommodated in the first housing portion as extended from the planar panel portion and connected with a display driving circuit; a first protective member composed of an insulative material and disposed on the first housing portion such that the first protective member substantially surrounds three sides of a periphery of the first display portion of the foldable display; a second protective member composed of the insulative material and disposed on the second housing portion such that the second protective member substantially surrounds three sides of a periphery of the second display portion of the foldable display; and a conductive layer disposed on an inner surface of the first protective member such that the conductive layer is extended from an upper portion of the inner surface to a side portion of the inner surface substantially angled with respect to the upper portion such that the conductive layer faces at least part of the bended panel portion.
17. The portable communication device of claim 16, wherein the conductive layer is not disposed on an ending portion of the upper portion of the inner surface of the protective member such that the protective member is protruded toward the foldable display more than the conductive layer is.
18. The portable communication device of claim 16, wherein the conductive layer includes a first conductive layer portion having a first length and a second conductive layer portion having a second length shorter than the first length, and wherein at least part of the first conductive layer portion is disposed on the upper portion of the inner surface of the first protective member, and at least part of the second conductive layer portion is disposed on the side portion of the inner surface of the first protective member.
19. The portable communication device of claim 16, wherein the first housing portion includes a lateral frame forming a sidewall portion of the portable communication device corresponding to the first display portion, the lateral frame including a first metal portion, a second metal portion and a non-metal portion disposed between the first metal portion and the second metal portion, wherein

the conductive layer is not disposed on a portion of the first protective member that is aligned with the non-metal portion, and wherein the conductive layer includes a third conductive layer portion and a fourth conductive layer portion separated from each other via the portion of the first protective member.

20. The portable communication device of claim 16, wherein the conductive layer includes a first conductive layer portion having a first length and a second conductive layer portion having a second length shorter than the first length, wherein at least part of the first conductive layer portion is disposed on the upper portion of the inner surface of the protective member, and wherein at least part of the second conductive layer portion is disposed on the side portion of the inner surface of the protective member.