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# ELECTRONIC COMPONENT


## Abstract

An electronic component includes an element body and an inductor. The inductor includes a first conductor, a second conductor, a third conductor, a fourth conductor, a fifth conductor, and a sixth conductor extending in a stacking direction of a plurality of element body layers, and a first inductor conductor, a second inductor conductor, a third inductor conductor, and a fourth inductor conductor. The first inductor conductor connects an end portion on one side of the first conductor in an extending direction and an end portion on one side of the second conductor in an extending direction. The second inductor conductor connects an end portion on the other side of the second conductor in the extending direction, an end portion on the other side of the third conductor in an extending direction, and an end portion on the other side of the fourth conductor in an extending direction.



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## Background/Summary

CROSS-REFERENCE TO RELATED APPLICATION

[0001] This application is based upon and claims the benefit of priority from Japanese Patent Application No. 2024-024936, filed on Feb. 21, 2024, the entire contents of which are incorporated herein by reference.

TECHNICAL FIELD

[0002] The present disclosure relates to an electronic component.

BACKGROUND

[0003] For example, an electronic component described in Japanese Unexamined Patent Publication No. 2011-244503 is known as an electronic component of the related art. The electronic component described in Japanese Unexamined Patent Publication No. 2011-244503 includes an element body formed by stacking a plurality of insulator layers, and an inductor disposed in the element body. The inductor includes two conductors extending in a stacking direction of the plurality of insulator layers, and a connection conductor connecting two conductors.

SUMMARY

[0004] An object of one aspect of the present disclosure is to provide an electronic component capable of improving a Q-value.

[0005] (1) An electronic component according to one aspect of the present disclosure includes an element body formed by stacking a plurality of insulator layers, and an inductor disposed in the element body. The inductor includes a first conductor, a second conductor, a third conductor, a fourth conductor, a fifth conductor, and a sixth conductor extending in a stacking direction of the plurality of insulator layers, and a first connection conductor, a second connection conductor, a third connection conductor, and a fourth connection conductor, the first connection conductor connects an end portion on one side of the first conductor in an extending direction of the first conductor and an end portion on one side of the second conductor in an extending direction of the second conductor, the second connection conductor connects an end portion on the other side of the second conductor in the extending direction, an end portion on the other side of the third conductor in an extending direction of the third conductor, and an end portion on the other side of the fourth conductor in an extending direction of the fourth conductor, the third connection conductor connects an end portion on one side of the third conductor in the extending direction and an end portion on one side of the fifth conductor in an extending direction of the fifth conductor, and the fourth connection conductor connects an end portion on one side in the extending direction of the fourth conductor and an end portion on one side of the sixth conductor in an extending direction of the sixth conductor.

[0006] In the electronic component according to one aspect of the present disclosure, the second connection conductor connects the end portion on the other side of the second conductor, the end portion on the other side of the third conductor, and the end portion on the other side of the fourth conductor. As described above, in the electronic component, one conductor (second conductor) and two conductors (third conductor and fourth conductor) are connected by the second connection conductor. As a result, in the electronic component, the inductance can be secured in the inductor. Therefore, in the electronic component, the Q-value can be improved.

[0007] (2) In the electronic component of the above (1), the second connection conductor may include two members.

[0008] (3) In the electronic component of the above (1) or (2), the first conductor may be disposed between the third conductor and the fourth conductor in a direction orthogonal to a facing direction

in which the first conductor and the second conductor face each other as viewed from the stacking direction. In this configuration, the first conductor, the third conductor, and the fourth conductor are disposed side by side in the element body. As a result, in the electronic component, space saving of the disposition of the first conductor, the third conductor, and the fourth conductor in the element body can be achieved while realizing the configuration in which the second conductor, the third conductor, and the fourth conductor are connected by the second connection conductor. Thus, the electronic component can be downsized.

[0009] (4) In the electronic component according to any one of the above (1) to (3), the second conductor may be disposed between the fifth conductor and the sixth conductor in a direction orthogonal to a facing direction in which the first conductor and the second conductor face each other as viewed from the stacking direction. In this configuration, the second conductor, the fifth conductor, and the sixth conductor are disposed side by side in the element body. As a result, in the electronic component, space saving of disposition of the second conductor, the fifth conductor, and the sixth conductor in the element body can be achieved. Thus, the electronic component can be downsized.

[0010] (5) In the electronic component according to any one of the above (1) to (4), the second connection conductor may have a structure that is line-symmetric with respect to a straight line connecting the first conductor and the second conductor as viewed from the stacking direction. In this configuration, variations in characteristics of the inductor can be suppressed.

[0011] (6) In the electronic component according to any one of the above (1) to (5), the first conductor may include a plurality of via conductors.

[0012] (7) In the electronic component according to any one of the above (1) to (6), the second conductor may include a plurality of via conductors.

[0013] (8) In the electronic component according to any one of the above (1) to (7), a sectional area of a section orthogonal to the extending direction of at least one of the first conductor and the second conductor may be greater than a sectional area of a section orthogonal to the extending direction of each of the third conductor, the fourth conductor, the fifth conductor, and the sixth conductor.

[0014] (9) In the electronic component according to any one of the above (1) to (8), a width of the first connection conductor may be greater than a width of each of the third connection conductor and the fourth connection conductor as viewed from the stacking direction.

[0015] According to one aspect of the present disclosure, the Q-value can be improved.

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## Description

BRIEF DESCRIPTION OF THE DRAWINGS

[0016] FIG. **1** is a transparent perspective view of an electronic component according to a first embodiment;

[0017] FIG. **2** is a transparent perspective view of the electronic component illustrated in FIG. **1**;

[0018] FIG. **3** is a side view of the electronic component illustrated in FIG. **1**;

[0019] FIG. **4** is an end view of the electronic component illustrated in FIG. **1**;

[0020] FIG. **5** is an exploded perspective view of the electronic component illustrated in FIG. **1**;

[0021] FIG. **6** is a diagram illustrating a second inductor conductor;

[0022] FIG. **7** is an equivalent circuit diagram of the electronic component illustrated in FIG. **1**;

[0023] FIG. **8** is a transparent perspective view of an electronic component according to a second embodiment;

[0024] FIG. **9** is a transparent perspective view of the electronic component illustrated in FIG. **8**;

[0025] FIG. **10** is a side view of the electronic component illustrated in FIG. **8**; and

[0026] FIG. **11** is a diagram illustrating a sectional configuration of a conductor according to

another embodiment.

## DETAILED DESCRIPTION

[0027] Hereinafter, preferred embodiments of the present disclosure will be described in detail with reference to the accompanying drawings. Note that, the same or corresponding elements in the description of the drawings are denoted by the same reference signs, and redundant description is omitted.

[0028] [First Embodiment] An electronic component according to a first embodiment will be described with reference to FIGS. **1**, **2**, **3**, and **4**. FIG. **1** is a transparent perspective view of the electronic component according to the first embodiment. FIG. **2** is a transparent perspective view of the electronic component illustrated in FIG. **1**. FIG. **3** is a side view of the electronic component illustrated in FIG. **1**. FIG. **4** is an end view of the electronic component illustrated in FIG. **1**. As illustrated in FIGS. **1** to **4**, an electronic component **1** includes an element body **2**, a first terminal electrode **3**, a second terminal electrode **4**, a third terminal electrode **5**, and a resonator **6**. In FIGS. **1** to **4**, the element body **2** is indicated by a dashed double-dotted line.

[0029] The element body **2** has a rectangular parallelepiped shape. The rectangular parallelepiped shape includes a rectangular parallelepiped shape in which corner parts and ridge line parts are chamfered, or a rectangular parallelepiped shape in which corner parts and ridge line parts are rounded. The element body **2** has, as outer surfaces, a pair of end surfaces **2***a* and **2***b*, a pair of main surfaces **2***c* and **2***d*, and a pair of side surfaces **2***e* and **2***f*. The end surfaces **2***a* and **2***b* face each other. The main surfaces **2***c* and **2***d* face each other. The side surfaces **2***e* and **2***f* face each other. In the following description, a facing direction of the end surfaces **2***a* and **2***b* is referred to as a first direction D**1**, a facing direction of the main surfaces **2***c* and **2***d* is referred to as a second direction D**2**, and a facing direction of the side surfaces **2***e* and **2***f* is referred to as a third direction D**3**. The first direction D**1**, the second direction D**2**, and the third direction D**3** are substantially orthogonal to each other.

[0030] The end surfaces **2***a* and **2***b* extend in the second direction D**2** so as to be connected to the main surfaces **2***c* and **2***d*. The end surfaces **2***a* and **2***b* also extend in the third direction D**3** so as to link the side surfaces **2***e* and **2***f*. The main surfaces **2***c* and **2***d* extend in the first direction D**1** so as to link the end surfaces **2***a* and **2***b*. The main surfaces **2***c* and **2***d* also extend in the third direction D**3** so as to link the side surfaces **2***e* and **2***f*. The side surfaces **2***e* and **2***f* extend in the first direction D**1** so as to link the end surfaces **2***a* and **2***b*. The side surfaces **2***e* and **2***f* also extend in the second direction D**2** so as to be connected to the main surfaces **2***c* and **2***d*.

[0031] The main surface **2***d* is an implementation surface, for example, a surface facing another electronic device (for example, circuit base material or multilayer electronic component) when the electronic component **1** is implemented on the another electronic device (not illustrated). The end surfaces **2***a* and **2***b* are surfaces continuous from the implementation surface (that is, the main surface **2***d*).

[0032] A length of the element body **2** in the first direction D**1** is longer than a length of the element body **2** in the second direction D**2** and a length of the element body **2** in the third direction D**3**. The length of the element body **2** in the second direction D**2** is shorter than the length of the element body **2** in the third direction D**3**. In other words, in the present embodiment, the end surfaces **2***a* and **2***b*, the main surfaces **2***c* and **2***d*, and the side surfaces **2***e* and **2***f* each have an oblong shape. The length of the element body **2** in the second direction D**2** may be equal to the length of the element body **2** in the third direction D**3**, or may be longer than the length of the element body **2** in the third direction D**3**.

[0033] It should be noted that “equal” in the present embodiment may mean not only “equal” but also a value including a slight difference, a manufacturing error, or the like in a preset range. For example, when a plurality of values are included within a range of +5% of an average value of the plurality of values, the plurality of values are defined to be equal.

[0034] The element body **2** is formed by stacking a plurality of element body layers (insulator

layers) **7** (see FIG. **5**) in the second direction D**2**. In other words, a stacking direction of the element body **2** is the second direction D**2**. In the actual element body **2**, the plurality of element body layers **7** may be integrated to such an extent that boundaries between the layers cannot be visually recognized, or may be integrated such that boundaries between the layers can be visually recognized.

[0035] The element body layer **7** is formed by using, for example, a sintered body of a ceramic green sheet containing a dielectric material. The dielectric material includes, for example, at least one selected from a BaTiO.sub.3 based material, a Ba(Ti, Zr)O.sub.3 based material, a (Ba, Ca)TiO.sub.3 based material, a glass material, or an alumina material.

[0036] Each of the first terminal electrode **3**, the second terminal electrode **4**, and the third terminal electrode **5** is provided in the element body **2**. Each of the first terminal electrode **3**, the second terminal electrode **4**, and the third terminal electrode **5** is disposed on the main surface **2***d* of the element body **2**. Each of the first terminal electrode **3**, the second terminal electrode **4**, and the third terminal electrode **5** may have an oblong shape (rectangular shape). Each of the first terminal electrode **3**, the second terminal electrode **4**, and the third terminal electrode **5** is disposed such that each side is along the first direction D**1** or the third direction D**3**. In the present embodiment, a length of the first terminal electrode **3** in the first direction D**1** is longer than lengths of the second terminal electrode **4** and the third terminal electrode **5** in the first direction D**1**.

[0037] As illustrated in FIG. **3**, the first terminal electrode **3**, the second terminal electrode **4**, and the third terminal electrode **5** are disposed apart from each other in the first direction D**1**. The first terminal electrode **3** is disposed at a central position in the first direction D**1** on the main surface **2***d*. The second terminal electrode **4** is disposed at a position closer to the end surface **2***a* on the main surface **2***d*. The third terminal electrode **5** is disposed at a position closer to the end surface **2***b* on the main surface **2***d*. The first terminal electrode **3** is disposed between the second terminal electrode **4** and the third terminal electrode **5** in the first direction D**1**.

[0038] Each of the first terminal electrode **3**, the second terminal electrode **4**, and the third terminal electrode **5** protrudes from the main surface **2***d*. That is, in the present embodiment, surfaces of the first terminal electrode **3**, the second terminal electrode **4**, and the third terminal electrode **5** are not flush with the main surface **2***d*. The first terminal electrode **3**, the second terminal electrode **4**, and the third terminal electrode **5** are made of a conductive material (for example, Cu).

[0039] A plating layer (not illustrated) containing, for example, Ni, Sn, Au, or the like may be provided in each of the first terminal electrode **3**, the second terminal electrode **4**, and the third terminal electrode **5** by electrolytic plating or non-electrolytic plating. The plating layer may have a Ni plating film covering the first terminal electrode **3**, the second terminal electrode **4**, and the third terminal electrode **5**, and an Au plating film containing Au and covering the Ni plating film.

[0040] FIG. **5** is an exploded perspective view of the electronic component **1** illustrated in FIG. **1**. As illustrated in FIGS. **1** to **5**, the resonator **6** includes a first conductor **10**, a second conductor **11**, a third conductor **12**, a fourth conductor **13**, a fifth conductor **14**, a sixth conductor **15**, a seventh conductor **16**, an eighth conductor **17**, a ninth conductor **18**, a tenth conductor **19**, a first inductor conductor (first connection conductor) **20**, a second inductor conductor (second connection conductor) **21**, a third inductor conductor (third connection conductor) **22**, a fourth inductor conductor (fourth connection conductor) **23**, a fifth inductor conductor **24**, a sixth inductor conductor **25**, a capacitor conductor **26**, a capacitor conductor **27**, a capacitor conductor **28**, a capacitor conductor **29**, a capacitor conductor **30**, a capacitor conductor **31**, a capacitor conductor **32**, a capacitor conductor **33**, and a capacitor conductor **34**.

[0041] The first conductor **10** extends along the second direction D**2**. The first conductor **10** can include a plurality of via conductors B**1**. The first conductor **10** is disposed at a position closer to the side surface **2***e* at a central position in the first direction D**1**.

[0042] The second conductor **11** extends along the second direction D**2**. The second conductor **11** can include a plurality of via conductors B**2**. The second conductor **11** is disposed at a position

closer to the side surface **2***f* at a central position in the first direction D**1**. The second conductor **11** is disposed at a position facing the first conductor **10** in the third direction D**3**.

[0043] The third conductor **12** extends along the second direction D**2**. The third conductor **12** can include a plurality of via conductors B**3**. The third conductor **12** is disposed at a position closer to the side surface **2***e* at a position closer to a center in the first direction D**1**. The third conductor **12** is disposed at a position closer to the end surface **2***b* than the first conductor **10**. In the present embodiment, the third conductor **12** is disposed on the same straight line as the first conductor **10** in the first direction D**1**.

[0044] The fourth conductor **13** extends along the second direction D**2**. The fourth conductor **13** can include a plurality of via conductors B**4**. The fourth conductor **13** is disposed at a position closer to the side surface **2***e* at a position closer to a center in the first direction D**1**. The fourth conductor **13** is disposed at a position closer to the end surface **2***a* than the first conductor **10**. In the present embodiment, the fourth conductor **13** is disposed on the same straight line as the first conductor **10** in the first direction D**1**. The third conductor **12** and the fourth conductor **13** are disposed at positions sandwiching the first conductor **10** in the first direction D**1**. That is, the first conductor **10** is disposed between the third conductor **12** and the fourth conductor **13** in the first direction D**1** (direction orthogonal to the facing direction in which the first conductor **10** and the second conductor **11** face each other) as viewed from the second direction D**2**.

[0045] The fifth conductor **14** extends along the second direction D**2**. The fifth conductor **14** can include a plurality of via conductors B**5**. The fifth conductor **14** is disposed at a position closer to the side surface **2***f* at a position closer to a center in the first direction D**1**. The fifth conductor **14** is disposed at a position closer to the end surface **2***b* than the second conductor **11**. In the present embodiment, the fifth conductor **14** is disposed on the same straight line as the second conductor **11** in the first direction D**1**.

[0046] The sixth conductor **15** extends along the second direction D**2**. The sixth conductor **15** can include a plurality of via conductors B**6**. The sixth conductor **15** is disposed at a position closer to the side surface **2***f* at a position closer to a center in the first direction D**1**. The sixth conductor **15** is disposed at a position closer to the end surface **2***a* than the second conductor **11**. In the present embodiment, the sixth conductor **15** is disposed on the same straight line as the second conductor **11** in the first direction D**1**. The fifth conductor **14** and the sixth conductor **15** are disposed at positions sandwiching the second conductor **11** in the first direction D**1**. That is, the second conductor **11** is disposed between the fifth conductor **14** and the sixth conductor **15** in the first direction D**1** as viewed from the second direction D**2**.

[0047] The seventh conductor **16** extends along the second direction D**2**. The seventh conductor **16** can include a plurality of via conductors B**7**. The seventh conductor **16** is disposed at a position closer to the side surface **2***e* at a position closer to the end surface **2***a*.

[0048] The eighth conductor **17** extends along the second direction D**2**. The eighth conductor **17** can include a plurality of via conductors B**8**. The eighth conductor **17** is disposed at a position closer to the side surface **2***f* at a position closer to the end surface **2***a*. The eighth conductor **17** is disposed at a position facing the seventh conductor **16** in the third direction D**3**.

[0049] The ninth conductor **18** extends along the second direction D**2**. The ninth conductor **18** can include a plurality of via conductors B**9**. The ninth conductor **18** is disposed at a position closer to the side surface **2***e* at a position closer to the end surface **2***b*. In the present embodiment, the ninth conductor **18** is disposed on the same straight line as the first conductor **10**, the third conductor **12**, the fourth conductor **13**, and the seventh conductor **16** in the first direction D**1**.

[0050] The tenth conductor **19** extends along the second direction D**2**. The tenth conductor **19** can include a plurality of via conductors B**10**. The tenth conductor **19** is disposed at a position closer to the side surface **2***f* at a position closer to the end surface **2***b*. The tenth conductor **19** is disposed at a position facing the ninth conductor **18** in the third direction D**3**. In the present embodiment, the tenth conductor **19** is disposed on the same straight line as the second conductor **11**, the fifth

conductor **14**, the sixth conductor **15**, and the eighth conductor **17** in the first direction D**1**.
[0051] The first inductor conductor **20** electrically connects the first conductor **10** and the second conductor **11**. The first inductor conductor **20** connects an end portion on one side (main surface **2***c* side) of the first conductor **10** and an end portion on one side of the second conductor **11**. The first inductor conductor **20** extends along the third direction D**3**. In the present embodiment, the end portion means a portion on the main surface **2***c* side or the main surface **2***d* side with respect to a central position in an extending direction of the first conductor **10** (second direction D**2**) in the extending direction. The end portion on one side means a portion on the main surface **2***c* side, and the end portion on the other side means a portion on the main surface **2***d* side.
[0052] The first inductor conductor **20** includes an inductor pattern **20**A and an inductor pattern **20**B. The inductor pattern **20**A and the inductor pattern **20**B have the same shape. The inductor pattern **20**A and the inductor pattern **20**B are disposed to face each other in the second direction D**2**.
[0053] The second inductor conductor **21** electrically connects the second conductor **11** to the third conductor **12** and the fourth conductor **13**. The second inductor conductor **21** connects an end portion on the other side (the main surface **2***d* side) of the second conductor **11** and an end portion on the other side of the third conductor **12**. The second inductor conductor **21** connects the end portion on the other side of the second conductor **11** and an end portion on the other side of the fourth conductor **13**. The second inductor conductor **21** includes an inductor pattern **21**A and an inductor pattern **21**B. The inductor pattern **21**A and the inductor pattern **21**B have the same shape. The inductor pattern **21**A and the inductor pattern **21**B are disposed to face each other in the second direction D**2**.
[0054] FIG. **6** is a diagram illustrating the second inductor conductor **21**. As illustrated in FIG. **6**, the second inductor conductor **21** (inductor patterns **21**A and **21**B) has a substantially V-shape. The second inductor conductor **21** has a line-symmetric shape as viewed from the second direction D**2**. The second inductor conductor **21** has a structure that is line-symmetric with respect to a straight line SL connecting the first conductor **10** and the second conductor **11** in the facing direction (third direction D**3**) of the first conductor **10** and the second conductor **11**. The second inductor conductor **21** includes a first portion **35**, a second portion **36**, and a third portion **37**. The first portion **35**, the second portion **36**, and the third portion **37** are integrally formed. The first portion **35** is a portion to which the second conductor **11** is connected. The second portion **36** extends (protrudes) from the first portion **35** and is a portion to which the third conductor **12** is connected. The third portion **37** extends from the first portion **35** and is a portion to which the fourth conductor **13** is connected.
[0055] As illustrated in FIGS. **1** to **5**, the third inductor conductor **22** electrically connects the third conductor **12** and the fifth conductor **14**. The third inductor conductor **22** connects an end portion on one side of the third conductor **12** and an end portion on one side of the fifth conductor **14**. The third inductor conductor **22** extends along the third direction D**3**. The third inductor conductor **22** includes an inductor pattern **22**A and an inductor pattern **22**B. The inductor pattern **22**A and the inductor pattern **22**B have the same shape. The inductor pattern **22**A and the inductor pattern **22**B are disposed to face each other in the second direction D**2**.
[0056] The fourth inductor conductor **23** electrically connects the fourth conductor **13** and the sixth conductor **15**. The fourth inductor conductor **23** connects an end portion on one side of the fourth conductor **13** and an end portion on one side of the sixth conductor **15**. The fourth inductor conductor **23** extends along the third direction D**3**. The fourth inductor conductor **23** includes an inductor pattern **23**A and an inductor pattern **23**B. The inductor pattern **23**A and the inductor pattern **23**B have the same shape. The inductor pattern **23**A and the inductor pattern **23**B are disposed to face each other in the second direction D**2**.
[0057] The fifth inductor conductor **24** electrically connects the seventh conductor **16** and the eighth conductor **17**. The fifth inductor conductor **24** connects an end portion on one side of the seventh conductor **16** and an end portion on one side of the eighth conductor **17**. The fifth inductor

conductor **24** includes an inductor pattern **24**A, an inductor pattern **24**B, an inductor pattern **24**C, an inductor pattern **24**D, an inductor pattern **24**E, and an inductor pattern **24**F.
[0058] The inductor pattern **24**A and the inductor pattern **24**B have the same shape. The inductor pattern **24**A and the inductor pattern **24**B are disposed to face each other in the second direction D**2**. The inductor pattern **24**C and the inductor pattern **24**D have the same shape. The inductor pattern **24**C and the inductor pattern **24**D are disposed to face each other in the second direction D**2**. The inductor pattern **24**E and the inductor pattern **24**F have the same shape. The inductor pattern **24**E and the inductor pattern **24**F are disposed to face each other in the second direction D**2**.
[0059] The sixth inductor conductor **25** electrically connects the ninth conductor **18** and the tenth conductor **19**. The sixth inductor conductor **25** connects an end portion on one side of the ninth conductor **18** and an end portion on one side of the tenth conductor **19**. The sixth inductor conductor **25** includes an inductor pattern **25**A, an inductor pattern **25**B, an inductor pattern **25**C, an inductor pattern **25**D, an inductor pattern **25**E, and an inductor pattern **25**F.
[0060] The inductor pattern **25**A and the inductor pattern **25**B have the same shape. The inductor pattern **25**A and the inductor pattern **25**B are disposed to face each other in the second direction D**2**. The inductor pattern **25**C and the inductor pattern **25**D have the same shape. The inductor pattern **25**C and the inductor pattern **25**D are disposed to face each other in the second direction D**2**. The inductor pattern **25**E and the inductor pattern **25**F have the same shape. The inductor pattern **25**E and the inductor pattern **25**F are disposed to face each other in the second direction D**2**.
[0061] The capacitor conductor **26** is electrically connected to the first terminal electrode **3**. The capacitor conductor **27** is electrically connected to the second terminal electrode **4**. The capacitor conductor **28** is electrically connected to the third terminal electrode **5**.
[0062] The capacitor conductor **29** is connected to an end portion on the other side of the first conductor **10**. The capacitor conductor **29** is disposed at a position facing the capacitor conductor **26** in the second direction D**2**. The capacitor conductor **30** is connected to an end portion on the other side of the fifth conductor **14**. The capacitor conductor **30** is disposed at a position facing the capacitor conductor **28** in the second direction D**2**. The capacitor conductor **31** is connected to an end portion on the other side of the sixth conductor **15**. The capacitor conductor **31** is disposed at a position facing the capacitor conductor **27** in the second direction D**2**.
[0063] The capacitor conductor **32** is connected to an end portion on the other side of the seventh conductor **16**. A part of the capacitor conductor **32** is disposed at a position facing the capacitor conductor **29** in the second direction D**2**. The capacitor conductor **33** is connected to an end portion on the other side of the ninth conductor **18**. A part of the capacitor conductor **33** is disposed at a position facing the capacitor conductor **29** in the second direction D**2**. The capacitor conductor **34** is disposed at a position facing each of the capacitor conductor **32** and the capacitor conductor **33** in the second direction D**2**.
[0064] FIG. **7** is an equivalent circuit diagram of the electronic component **1** illustrated in FIG. **1**. As illustrated in FIG. **7**, the electronic component **1** includes a first inductor (inductor) L**1**, a second inductor L**2**, a third inductor L**3**, a first capacitor C**1**, a second capacitor C**2**, a third capacitor C**3**, a fourth capacitor C**4**, a fifth capacitor C**5**, a sixth capacitor C**6**, a seventh capacitor C**7**, an eighth capacitor C**8**, a ninth capacitor C**9**, a tenth capacitor C**10**, and an eleventh capacitor C**11**.
[0065] The first inductor L**1** includes the first conductor **10**, the second conductor **11**, the third conductor **12**, the fourth conductor **13**, the fifth conductor **14**, the sixth conductor **15**, the first inductor conductor **20**, the second inductor conductor **21**, the third inductor conductor **22**, and the fourth inductor conductor **23**. The second inductor L**2** includes the seventh conductor **16**, the eighth conductor **17**, and the fifth inductor conductor **24**. The third inductor L**3** includes the ninth conductor **18**, the tenth conductor **19**, and the sixth inductor conductor **25**.
[0066] The first capacitor C**1** includes the capacitor conductor **26** and the capacitor conductor **29**. The second capacitor C**2** includes the capacitor conductor **27** and the capacitor conductor **31**. The third capacitor C**3** includes the capacitor conductor **26** and the capacitor conductor **32**. The fourth

capacitor C**4** includes the capacitor conductor **26** and the capacitor conductor **33**. The fifth capacitor C**5** includes the capacitor conductor **28** and the capacitor conductor **30**.
[0067] The sixth capacitor C**6** includes the capacitor conductor **29** and the capacitor conductor **32**. The seventh capacitor C**7** includes the capacitor conductor **29** and the capacitor conductor **33**. The eighth capacitor C**8** includes the capacitor conductor **27** and the capacitor conductor **32**. The ninth capacitor C**9** includes the capacitor conductor **32** and the capacitor conductor **34**. The tenth capacitor C**10** includes the capacitor conductor **33** and the capacitor conductor **34**. The eleventh capacitor C**11** includes the capacitor conductor **28** and the capacitor conductor **33**.
[0068] As described above, in the electronic component **1** according to the present embodiment, the second inductor conductor **21** connects the end portion on the other side of the second conductor **11**, the end portion on the other side of the third conductor **12**, and the end portion on the other side of the fourth conductor **13**. As described above, in the electronic component **1**, one conductor (second conductor **11**) and two conductors (third conductor **12** and fourth conductor **13**) are connected by the second inductor conductor **21**. As a result, in the electronic component **1**, an inductance can be secured in an inductor of the resonator **6**. Therefore, in the electronic component **1**, a Q-value can be improved.
[0069] In the electronic component **1** according to the present embodiment, the first conductor **10** is disposed between the third conductor **12** and the fourth conductor **13** in the direction (first direction D**1**) orthogonal to the facing direction (third direction D**3**) in which the first conductor **10** and the second conductor **11** face each other as viewed from the second direction D**2**. In this configuration, the first conductor **10**, the third conductor **12**, and the fourth conductor **13** are disposed side by side in the element body **2**. As a result, in the electronic component **1**, space saving of the disposition of the first conductor **10**, the third conductor **12**, and the fourth conductor **13** in the element body **2** can be achieved while realizing the configuration in which the second conductor **11**, the third conductor **12**, and the fourth conductor **13** are connected by the second inductor conductor **21**. Thus, the electronic component **1** can be downsized.
[0070] In the electronic component **1** according to the present embodiment, the second conductor **11** is disposed between the fifth conductor **14** and the sixth conductor **15** in the direction (first direction D**1**) orthogonal to the facing direction (third direction D**3**) in which the first conductor **10** and the second conductor **11** face each other as viewed from the second direction D**2**. In this configuration, the second conductor **11**, the fifth conductor **14**, and the sixth conductor **15** are disposed side by side in the element body **2**. As a result, in the electronic component **1**, space saving of the disposition of the second conductor **11**, the fifth conductor **14**, and the sixth conductor **15** in the element body **2** can be achieved. Thus, the electronic component **1** can be downsized.
[0071] In the electronic component **1** according to the present embodiment, the second inductor conductor **21** has a structure that is line-symmetric with respect to the straight line SL connecting the first conductor **10** and the second conductor **11** as viewed from the second direction D**2**. In this configuration, variations in characteristics of the inductor can be suppressed.
[0072] [Second Embodiment] Next, a second embodiment will be described. FIG. **8** is a transparent perspective view of an electronic component according to a second embodiment. FIG. **9** is a transparent perspective view of the electronic component illustrated in FIG. **8**. FIG. **10** is a side view of the electronic component illustrated in FIG. **8**. As illustrated in FIGS. **8** to **10**, an electronic component **1**A includes an element body **2**, a first terminal electrode **3**, a second terminal electrode **4**, a third terminal electrode **5**, and a resonator **6**A. In FIGS. **8** and **9**, the element body **2** is indicated by a dashed double-dotted line.
[0073] The resonator **6**A includes first conductors **10**A and **10**B, second conductors **11**A and **11**B, a third conductor **12**, a fourth conductor **13**, a fifth conductor **14**, a sixth conductor **15**, a seventh conductor **16**, an eighth conductor **17**, a ninth conductor **18**, a tenth conductor **19**, a first inductor conductor (first connection conductor) **40**, a second inductor conductor (second connection conductor) **41**, a third inductor conductor (third connection conductor) **22**, a fourth inductor

conductor (fourth connection conductor) **23**, a fifth inductor conductor **24**, a sixth inductor conductor **25**, a capacitor conductor **26**, a capacitor conductor **27**, a capacitor conductor **28**, a capacitor conductor **29**, a capacitor conductor **30**, a capacitor conductor **31**, a capacitor conductor **32**, a capacitor conductor **33**, and a capacitor conductor **34**.

[0074] The first conductor **10**A extends along a second direction D**2**. The first conductor **10**A can include a plurality of via conductors B**1**. The first conductor **10**A is disposed at a position closer to a side surface **2***e* at a position closer to a center in a first direction D**1**. The first conductor **10**B extends along the second direction D**2**. The first conductor **10**B can include a plurality of via conductors B**1**. The first conductor **10**B is disposed at a position closer to the side surface **2***e* at a position closer to a center in the first direction D**1**.

[0075] The second conductor **11**A extends along the second direction D**2**. The second conductor **11**A can include a plurality of via conductors B**2**. The second conductor **11**A is disposed at a position closer to a side surface **2***f* at a central position in the first direction D**1**. The second conductor **11**A is disposed at a position facing the first conductor **10**A in a third direction D**3**. The second conductor **11**B extends along the second direction D**2**. The second conductor **11**B can include a plurality of via conductors B**2**. The second conductor **11**B is disposed at a position closer to the side surface **2***f* at a central position in the first direction D**1**. The second conductor **11**B is disposed at a position facing the first conductor **10**B in the third direction D**3**.

[0076] The first inductor conductor **40** electrically connects the first conductors **10**A and **10**B and the second conductors **11**A and **11**B. The first inductor conductor **40** connects end portions on one side of the first conductors **10**A and **10**B and end portions on one side of the second conductors **11**A and **11**B. The first inductor conductor **40** extends along the third direction D**3**. As viewed from the second direction D**2**, a width of the first inductor conductor **40** is greater than a width of each of the third inductor conductor **22** and the fourth inductor conductor **23**.

[0077] The second inductor conductor **41** electrically connects the second conductors **11**A and **11**B to the third conductor **12** and the fourth conductor **13**. The second inductor conductor **41** connects end portions on the other side of the second conductors **11**A and **11**B and end portions on the other side of the third conductor **12**. The second inductor conductor **41** connects end portions on the other side of the second conductors **11**A and **11**B and end portions on the other side of the fourth conductor **13**.

[0078] As described above, in the electronic component **1**A according to the present embodiment, the second inductor conductor **41** connects the end portions on the other side of the second conductors **11**A and **11**B, the end portion on the other side of the third conductor **12**, and the end portion on the other side of the fourth conductor **13**. As described above, in the electronic component **1**A, the second conductors **11**A and **11**B are connected to the third conductor **12** and the fourth conductor **13** by the second inductor conductor **41**. As a result, in the electronic component **1**A, an inductance can be secured in an inductor of the resonator **6**A. Therefore, in the electronic component **1**A, a Q-value can be improved.

[0079] In the electronic component **1**A according to the present embodiment, the resonator **6**A includes the first conductors **10**A and **10**B and the second conductors **11**A and **11**B. In this configuration, a current can be concentrated on the first inductor conductor **40**. Therefore, in the electronic component **1**A, as viewed from the second direction D**2**, the width of the first inductor conductor **40** is greater than the width of each of the third inductor conductor **22** and the fourth inductor conductor **23**. As a result, in the electronic component **1**A, it is possible to suppress the current from concentrating on the first inductor conductor **40**.

[0080] Although the embodiments of the present disclosure have been described in the foregoing, the present disclosure is not necessarily limited to the above-described embodiments, and various modifications can be made without departing from the gist thereof.

[0081] In the above embodiment, a mode in which the resonators **6** and **6**A include the first conductors **10**, **10**A, and **10**B has been described as an example. However, as illustrated in FIG. **11**,

the first conductor **50** has a shape in which a plurality of (two in the example illustrated in FIG. **11**) circles overlap each other. Specifically, the first conductor **50** has a shape in which a part of each of a pair of adjacent circles overlaps. For example, two adjacent circles overlap each other such that an outer periphery of one circle passes through a center of the other circle. In this configuration, a sectional area of a section orthogonal to an extending direction of the first conductor **50** is greater than a sectional area of a section orthogonal to an extending direction of each of the third conductor **12**, the fourth conductor **13**, the fifth conductor **14**, and the sixth conductor **15**. As a result, it is possible to suppress the current from concentrating. The second conductor may have a configuration similar to the first conductor **50**.

[0082] In the above embodiment, a mode in which the first conductors **10**, **10**A, and **10**B and the second conductors **11**, **11**A, and **11**B are connected by the first inductor conductors **20** and **40** has been described as an example. However, the first conductors **10**, **10**A, and **10**B and the second conductors **11**, **11**A, and **11**B may be further connected by another inductor conductor (connection conductor).

[0083] In the above embodiment, a mode in which the second inductor conductors **21** and **41** are one member has been described as an example. However, the second inductor conductor may include two members.

## Claims

**1**. An electronic component comprising: an element body formed by stacking a plurality of insulator layers; and an inductor disposed in the element body, wherein the inductor includes: a first conductor, a second conductor, a third conductor, a fourth conductor, a fifth conductor, and a sixth conductor extending in a stacking direction of the plurality of insulator layers, and a first connection conductor, a second connection conductor, a third connection conductor, and a fourth connection conductor, the first connection conductor connects an end portion on one side of the first conductor in an extending direction of the first conductor and an end portion on one side of the second conductor in an extending direction of the second conductor, the second connection conductor connects an end portion on the other side of the second conductor in the extending direction, an end portion on the other side of the third conductor in an extending direction of the third conductor, and an end portion on the other side of the fourth conductor in an extending direction of the fourth conductor, the third connection conductor connects an end portion on one side of the third conductor in the extending direction and an end portion on one side of the fifth conductor in an extending direction of the fifth conductor, and the fourth connection conductor connects an end portion on one side in the extending direction of the fourth conductor and an end portion on one side of the sixth conductor in an extending direction of the sixth conductor.

**2**. The electronic component according to claim 1, wherein the second connection conductor includes two members.

**3**. The electronic component according to claim 1, wherein the first conductor is disposed between the third conductor and the fourth conductor in a direction orthogonal to a facing direction in which the first conductor and the second conductor face each other as viewed from the stacking direction.

**4**. The electronic component according to claim 1, wherein the second conductor is disposed between the fifth conductor and the sixth conductor in a direction orthogonal to a facing direction in which the first conductor and the second conductor face each other as viewed from the stacking direction.

**5**. The electronic component according to claim 1, wherein the second connection conductor has a structure that is line-symmetric with respect to a straight line connecting the first conductor and the second conductor as viewed from the stacking direction.

**6**. The electronic component according to claim 1, wherein the first conductor includes a plurality of via conductors.

**7**. The electronic component according to claim 1, wherein the second conductor includes a plurality of via conductors.

**8**. The electronic component according to claim 1, wherein a sectional area of a section orthogonal to the extending direction of at least one of the first conductor and the second conductor is greater than a sectional area of a section orthogonal to the extending direction of each of the third conductor, the fourth conductor, the fifth conductor, and the sixth conductor.

**9**. The electronic component according to claim 1, wherein a width of the first connection conductor is greater than a width of each of the third connection conductor and the fourth connection conductor as viewed from the stacking direction.