CLAIMS

What is claimed is:

1. An acoustic wave filter comprising:

multimode filters, each including an IDT, connected in parallel;

a ceiling that is commonly located above at least two multimode filters of the multimode filters so as to form a cavity between the IDT and the ceiling, electrically connected to the multimode filters, and formed of a metal; and

at least two terminals, each electrically connected to the ceiling for connecting the ceiling to an external ground, said at least two terminals being located directly above the at least two multimode filters, respectively, so that each of said at least two terminals is directly above a corresponding one of said at least two multimode filters.

2. The acoustic wave filter according to claim 1, wherein

each of the at least two terminals is configured to be connected to the external ground through an inductor.

3. The acoustic wave filter according to claim 1, further comprising

a resonator connected at least one of between the multimode filters and an input terminal and between the multimode filters and an output terminal.

4. The acoustic wave filter according to claim 1, further comprising:

a sealing portion that is located above the ceiling so that the at least two terminals are exposed.

5. A module comprising:

at least two inductors; and

a substrate on which the acoustic wave filter according to claim 1 is mounted,

wherein said at least two terminals are connected to the external ground through said at least two inductors, respectively.

6. An acoustic wave filter comprising:

multimode filters, each including an IDT, connected in parallel;

a ceiling that is commonly located above at least two multimode filters of the multimode filters so as to form a cavity between the IDT and the ceiling, electrically connected to the multimode filters, and formed of a metal; and

at least two terminals that are electrically connected to the ceiling and located above the at least two multimode filters,

wherein each of the at least two terminals is configured to be connected to an external ground through an inductor,

wherein an inductance of the inductor through which one of the at least two terminals is connected to the external ground has a value different from an inductance of the inductor through which another of the at least two terminals is connected to the external ground.

CLAIMS

What is claimed is:

1. An acoustic wave filter comprising:

multimode filters, each including an IDT, connected in parallel;

a ceiling that is commonly located above at least two multimode filters of the multimode filters so as to form a cavity between the IDT and the ceiling, electrically connected to the multimode filters, and formed of a metal; and

at least two terminals that are electrically connected to the ceiling and located above the at least two multimode filters.

2. The acoustic wave filter according to claim 1, wherein

each of the at least two terminals is grounded through an inductor.

3. The acoustic wave filter according to claim 2, wherein

the inductors have different inductances.

4. The acoustic wave filter according to any one of claims 1 to 3, further comprising:

a resonator connected at least one of between the multimode filters and an input terminal and between the multimode filters and an output terminal.

5. The acoustic wave filter according to any one of claims 1 to 4, further comprising:

a sealing portion that is located above the ceiling so that the terminals are exposed.

6. A module comprising:

an inductor; and

a substrate on which the acoustic wave filter according to any one of claims 1 to 5 is mounted.