CLAIMS

1. A radiation detection apparatus comprising:

a planar detection unit, having a two-dimensional array of elements which obtain electrical signals based on radiation, configured to detect radiation upon irradiation , image signal lines for outputting the electrical signals, and driving signal lines for driving switches for causing the elements to output the electrical signals;

a driving circuit which drives the switches;

an obtaining circuit which obtains the electrical signals from the elements in accordance with the switches being driven;

a support base on which the driving circuit and the obtaining circuit are arranged; and

a conductive member having parts which are electrically connected to ground of the driving circuit and ground of the obtaining circuit, respectively,

wherein the radiation detection apparatus is formed by stacking the conductive member , the two-dimensional array and the support base when viewed from a radiation source which performs irradiation with radiation, and

wherein the driving circuit, the obtaining circuit, driving signal lines, and the image signal linesform a closed circuit via the conductive member and not via the support base.

2. The apparatus according to claim 1, wherein the support base is arranged at a position at which a distance between the support base and the planar detection unit is larger than a distance between the planar detection unit and the conductive member.

3. The apparatus according to claim 1 or 2, wherein an impedance of the support base is higher than an impedance of the conductive member.

4. The apparatus according to any one of claims 1 to 3, wherein a driving off-bias for turning off the switch is input to the driving circuit, and

a capacitor is connected between the driving off-bias and ground of the driving circuit, and the conductive member is electrically connected to ground of the driving circuit and ground of the obtaining circuit.

5. The apparatus according to any one of claims 1 to 3, wherein a driving off-bias for turning off the switch is input to the driving circuit, and

the conductive member is connected to the driving off-bias in the driving circuit and is further electrically connected to ground of the obtaining circuit via a capacitor arranged between the driving off-bias and ground of the obtaining circuit.

6. The apparatus according to claim 4 or 5, wherein the capacitor has a capacitance from 1.3 μF to 1.0 mF.

7. The apparatus according to any one of claims 1 to 6, wherein at least one of ground of the driving circuit and ground of the obtaining circuit is not electrically connected to the support base.

8. The apparatus according to any one of claims 1 to 7, wherein the parts of the conductive member include a thin film portion covering the planar detection unit.

9. The apparatus according to any one of claims 1 to 8, wherein the conductive member is electrically connected to at least one of ground of the driving circuit and ground of the obtaining circuit at a plurality of positions.

10. A radiation imaging system comprising:

a radiation detection apparatus according to claim 1; irradiation unit configured to irradiate the radiation detection apparatus with radiation; and

a forming unit configured to form a radiographic image based on the electrical signals obtained by the obtaining circuit.