flexographic printing is preferably repeated. In particular, if the flexographic printing is repeated twice to four times, the balance between the amount of the sintered body of silver particles in the silver conductive film formed on the substrate and the electrical resistance of the silver conductive film is good, so that the flexographic printing is more preferably repeated twice to four times.

In this method for producing a silver conductive film, the average particle diameter of the silver particles is preferably 20 nm or less, and more preferably in the range of from 5 nm~~μm~~ to 15 nm~~μm~~. If the average particle diameter of the silver particles is in the range of from about a few nanometers to about over ten nanometers, the specific surface area thereof increases, so that the melting point thereof dramatically decreases. For that reason, even if the silver particles are calcined at a low temperature of not higher than 300 ℃, it is possible to sinter the silver particles with each other (that is, it is possible to obtain the degree of sintering at a low temperature). However, if the average particle diameter of the silver particles is greater than 20 nm, it is difficult to obtain the degree of sintering at a low temperature, which is expected as silver nanoparticles (fine silver particles).

Furthermore, the average particle diameter (average primary particle diameter) of the silver particles can be calculated as follows. For example, 2 parts by weight of an Ag ink containing silver particles, such as an Ag ink (PFI-700 produced by

Claims

1. An antenna for RFID tag formed of a silver conductive film which contains 10-50 % by volume of a sintered body of silver particles and which has a thickness of 1.4-6 μm, a surface resistivity of 0.01-0.43 Ω/□ and a volume resistivity of 3-100 μΩ・cm.

2. An antenna for RFID tag~~silver conductive film~~ as set forth in claim 1, wherein the amount of said sintered body of silver particles contained in said silver conductive film is 30-50 % by volume.

~~3. A silver conductive film as set forth in claim 1, which has a surface resistivity of 0.5 Ω/□ or less.~~

~~4. A silver conductive film as set forth in claim 1, which has a thickness of 1-6 μm.~~

~~5~~3. A method for producing an antenna for RFID tag formed of a silver conductive film, the method comprising the steps of:

preparing a silver particle dispersing solution which contains 50-70 % by weight of silver particles;

applying the silver particle dispersing solution on a substrate; and

sintering~~calcining~~ the silver particle dispersing solution on the substrate to form a silver conductive film as set forth in ~~any one of~~ claim~~s~~ 1~~ through 4~~.

~~6~~4. A method for producing an antenna for RFID tag formed of a silver conductive film as set forth in claim ~~5~~3, wherein said applying of said silver particle dispersing

solution on the substrate is carried out by the flexographic printing.

~~7~~5. A method for producing an antenna for RFID tag formed of a silver conductive film as set forth in claim ~~5~~4, wherein said applying of said silver particle dispersing solution on the substrate is carried out by repeating the flexographic printing a plurality of times.

~~8~~6. A method for producing an antenna for RFID tag formed of a silver conductive film as set forth in claim ~~5~~4, wherein said applying of said silver particle dispersing solution on the substrate is carried out by repeating the flexographic printing twice to four times.

~~9~~7. A method for producing an antenna for RFID tag formed of a silver conductive film as set forth in any one of claims ~~5~~3 through ~~8~~6, wherein said silver particles have an average particle diameter of 20 nm or less.

~~10. An antenna for RFID tag, which is formed of a silver conductive film as set forth in any one of claims 1 through 4.~~

~~11~~8. An RFID tag comprising an antenna for RFID tag~~, which is formed of a silver conductive film~~ as set forth in ~~any one of~~ claim~~s~~ 1 ~~through 4~~, and an IC chip.