electromagnetic wave absorption effect (i.e., electromagnetic wave noise suppression effect), the above method cannot avoid problems such as a malfunction caused by electromagnetic wave noise.

[0003] Conventional technologies include the following. Patent Document 1 proposes an adhesive tape with a two-layer structure having a porous layer that contains a thermally conductive filler and a layer that contains an electromagnetic wave shielding filler or an electromagnetic wave absorbing filler. Patent Document 2 proposes that organopolysiloxane be mixed with an electromagnetic wave absorbing filler and a thermally conductive filler. Patent Document 3 proposes that an organic molecular sheet or a glass sheet be formed on a silicone gel layer in which a soft magnetic powder is dispersed.

Prior Art Documents

Patent Documents

[0004] Patent Document 1: JP 2013-136766 A

Patent Document 2: JP 2005-015679 A

Patent Document 3: JP 2003-023287 A

Disclosure of Invention

Problem to be Solved by the Invention

[0005] However, in the conventional electromagnetic wave absorbing thermally conductive compositions, an imaginary part (μ") of relative permeability is low in a frequency band of 18 to 26.5 GHz.

To solve the above conventional problems, embodiments of the present invention provide~~s~~ an electromagnetic wave absorbing thermally conductive composition and its sheet that can increase the value of the imaginary part (μ") of relative permeability in a frequency band of 18 to 26.5 GHz, efficiently absorb electromagnetic wave noise in this frequency band, and also have a high thermal conductivity.

Means for Solving Problem

[0006] ~~An~~According to a first aspect of the present invention, there is

provided an electromagnetic wave absorbing thermally conductive composition ~~of the present invention contains~~including a matrix resin component, metal soft magnetic particles, and thermally conductive particles. The metal soft magnetic particles are carbonyl iron particles and are present in an amount of 30% by volume or more when the electromagnetic wave absorbing thermally conductive composition is a population parameter. A value of an imaginary part (μ") of relative permeability of the electromagnetic wave absorbing thermally conductive composition is 0.9 or more in at least some bands in a frequency range of 18 to 26.5 GHz. The electromagnetic wave absorbing thermally conductive composition in the form of a sheet has a thermal conductivity of 2.0 W/m·K or more in a thickness direction.

[0007] ~~An~~According to a second aspect of the present invention, there is provided an electromagnetic wave absorbing thermally conductive sheet ~~of the present invention includes~~including the above electromagnetic wave absorbing thermally conductive composition in the form of a sheet. A value of an imaginary part (μ") of relative permeability of the electromagnetic wave absorbing thermally conductive sheet is 0.9 or more in at least some bands in a frequency range of 18 to 26.5 GHz. The electromagnetic wave absorbing thermally conductive sheet has a thermal conductivity of 2.0 W/m·K or more in a thickness direction.

Effects of the Invention

[0008] In embodiments of the present invention, the electromagnetic wave absorbing thermally conductive composition contains the matrix resin component, the metal soft magnetic particles, and the thermally conductive particles. The metal soft magnetic particles are carbonyl iron particles. Thus, embodiments of the present invention can provide the electromagnetic wave absorbing thermally conductive composition and its molded body that can increase the value of the imaginary part (μ") of relative permeability in a frequency band of 18 to 26.5 GHz, efficiently absorb electromagnetic wave noise in this frequency