

SCATTERING TOMOGRAPHY DEVICE AND SCATTERING TOMOGRAPHY METHOD

[ABSTRACT]

5 A scattering tomography device (100) includes: a transmitting antenna element (101) that transmits radio waves into an object from outside; a receiving antenna element (102) that receives, outside the object, scattered waves of the radio waves transmitted into the object; and an information processing circuit (103) that
10 generates an image of the interior of the object using measurement data indicating the scattered waves received by the receiving antenna element (102). The information processing circuit (103): derives, using the measurement data, a relational expression that satisfies an equation whose solution is a scattering field function;
15 derives, using the relational expression, an image function that is for generating the image and includes one or more parameters indicating a correspondence between a change in frequency of the radio waves and a change in a dielectric constant of the object in accordance with Debye relaxation; and generates the image using
20 the image function.

[FIG. 19]