

ABSTRACT

The present application relates to an electromagnetic wave transceiving apparatus, including a detection and control unit, an electromagnetic exciter, a dielectric adjustment unit, and a positioning unit. When the electromagnetic wave transceiving apparatus is coupled with a surface of an external dielectric body, the electromagnetic exciter, the dielectric adjustment unit, and the externally coupled dielectric body constitute a resonator with a specific electromagnetic wave spectrum. With the influence of the external dielectric body to which the electromagnetic wave transceiving apparatus is coupled being considered, when the electromagnetic wave transceiving apparatus is coupled to the surface of the external dielectric body, the electromagnetic exciter and the dielectric adjustment unit may be adjusted by the detection and control unit, such that the electromagnetic exciter, the dielectric adjustment unit and the coupled external dielectric body may form a resonator with the required frequency, and the transmission and reception performance of electromagnetic signals would not be affected by the contacted dielectric material.

Figure 1A