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(54) **SHIELDING LAYER FOR A DEVICE HAVING A PLURALITY OF ANTENNAS**

(52) **U.S. Cl.**

CPC ..... **H01Q 1/526** (2013.01)

USPC ..... **343/841; 29/600**

(71) Applicant: **BROADCOM CORPORATION**,  
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(57) **ABSTRACT**

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A shielding layer is provided that reduces the coupling between magnetic field lines emanating from a plurality of antennas in an electronic device. In one embodiment, the shielding layer is a heterogeneous shielding layer that has different regions. Each region is configured to be positioned adjacent to a respective antenna. Each region is a different type of material, has a different thickness, and/or has other non-uniformities (e.g., different permeabilities) to concentrate magnetic field lines in accordance to the properties of the respective antenna. In another embodiment, a heterogeneous shielding layer is provided that has different regions that are formed of a same material that is configured to concentrate magnetic field lines. Each region is configured to be positioned adjacent to a respective antenna. The different regions are separated by gap to isolate the magnetic field lines emanating from the respective antenna, which reduces the coupling between the magnetic field lines.

(21) Appl. No.: **13/911,174**

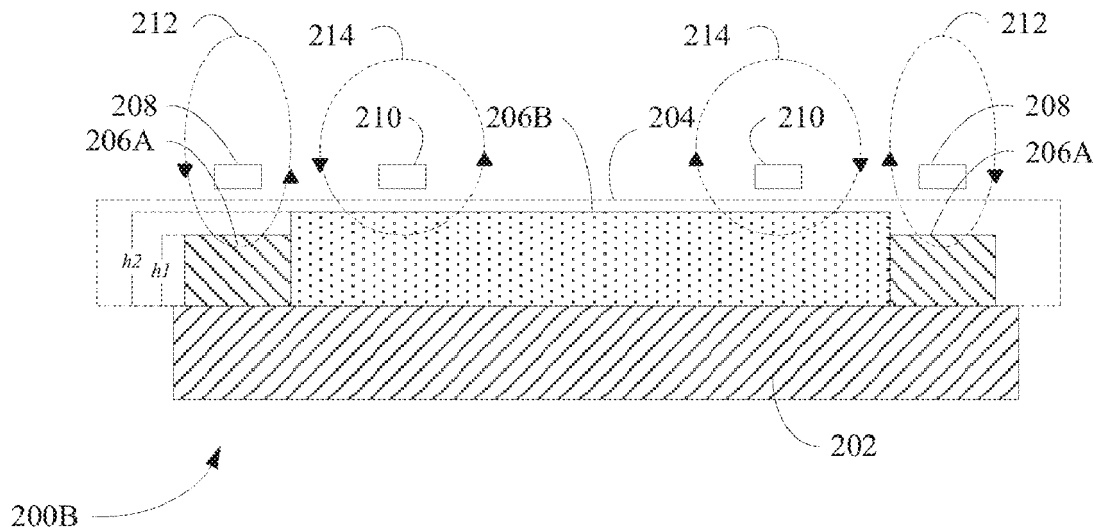
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**Publication Classification**

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**H01Q 1/52** (2006.01)



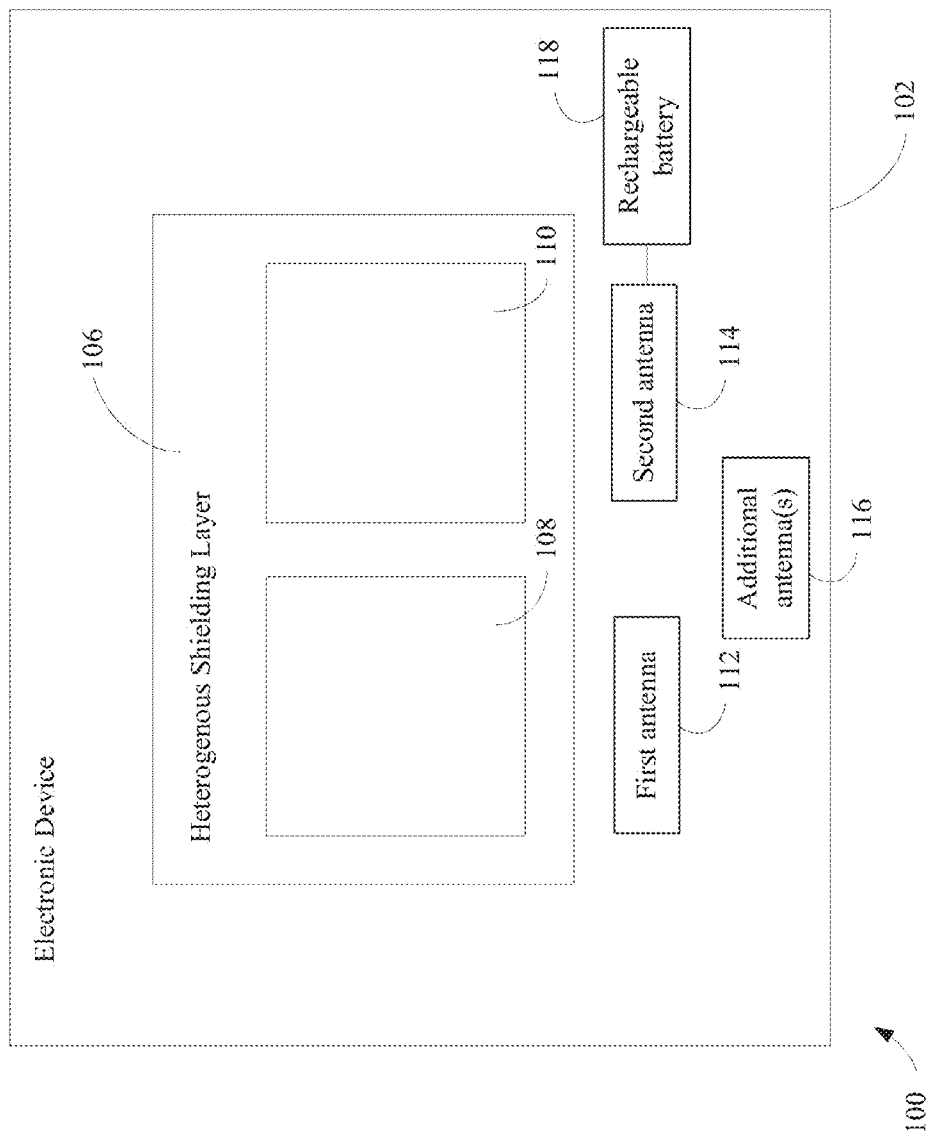


FIG. 1

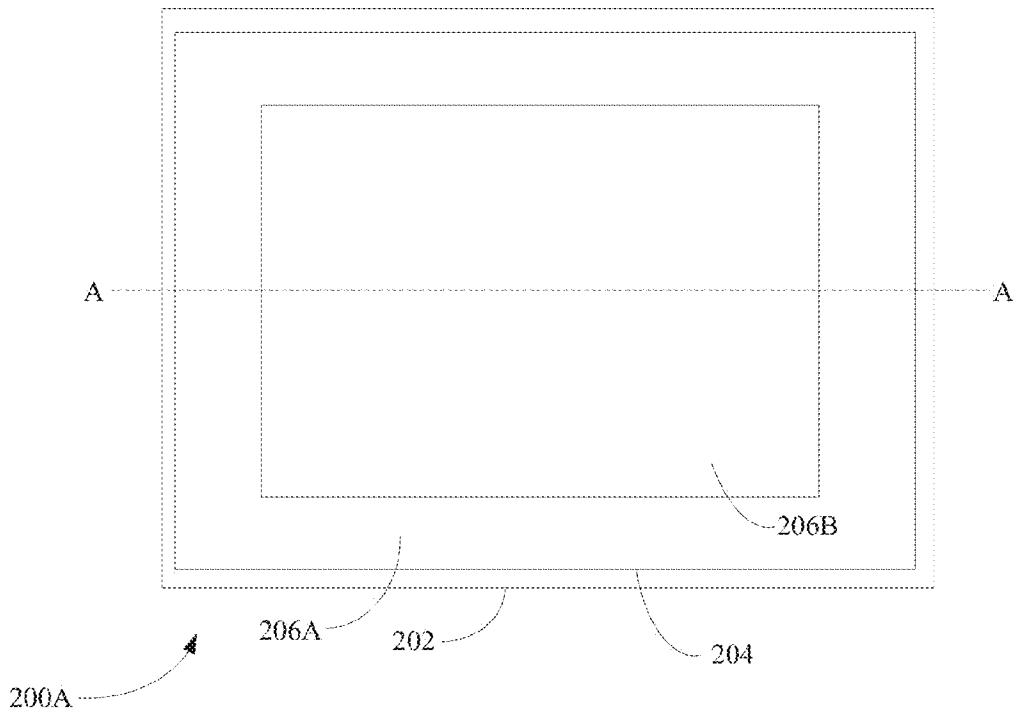


FIG. 2A

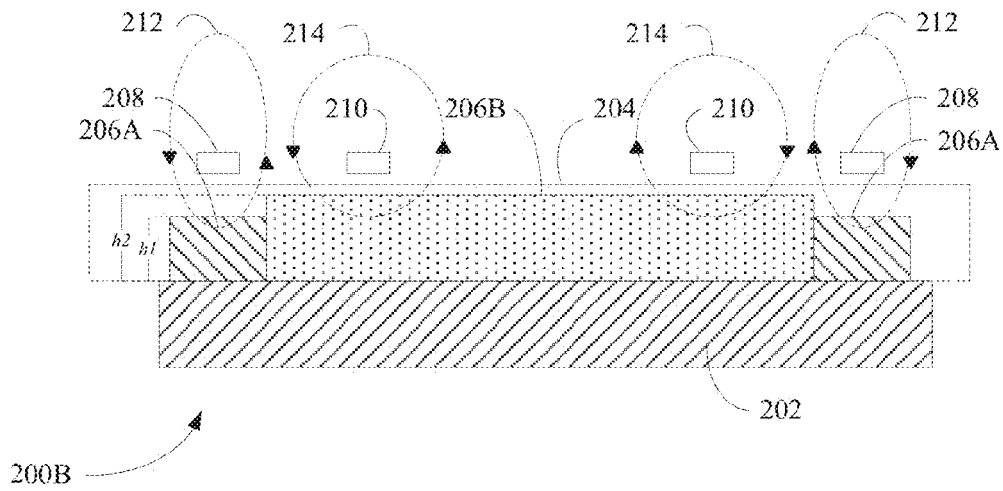


FIG. 2B

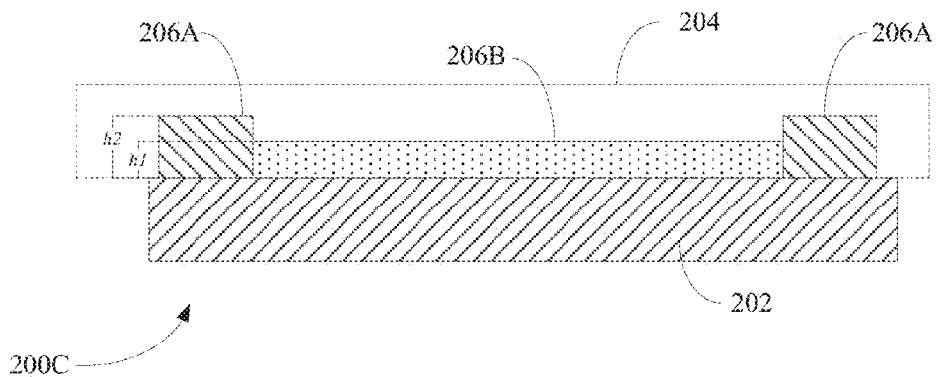


FIG. 2C

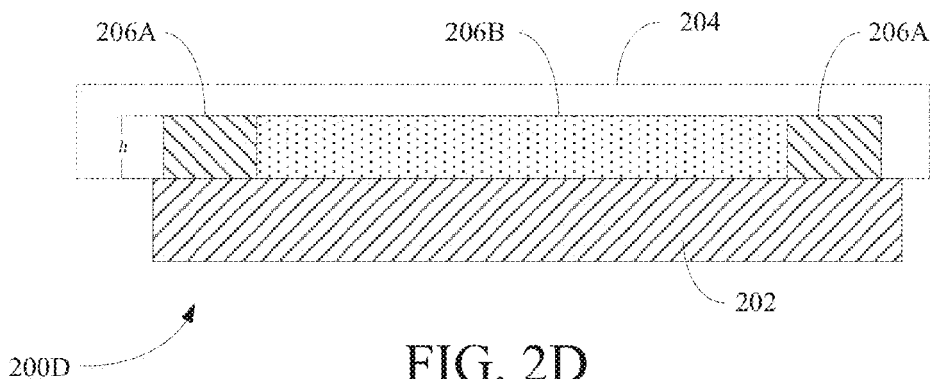


FIG. 2D

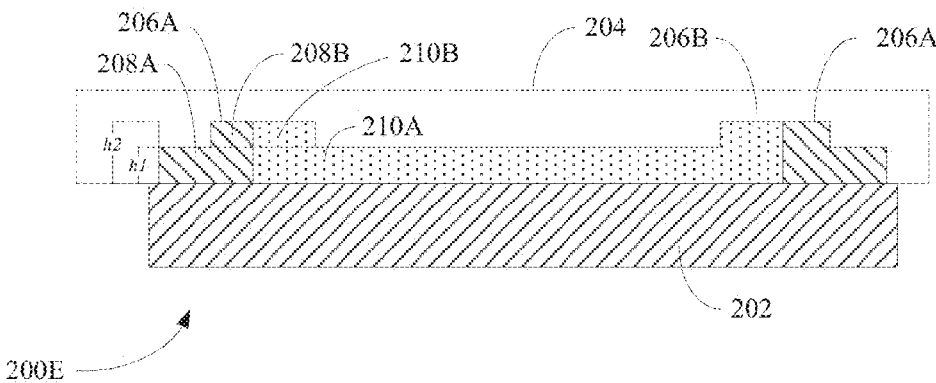


FIG. 2E

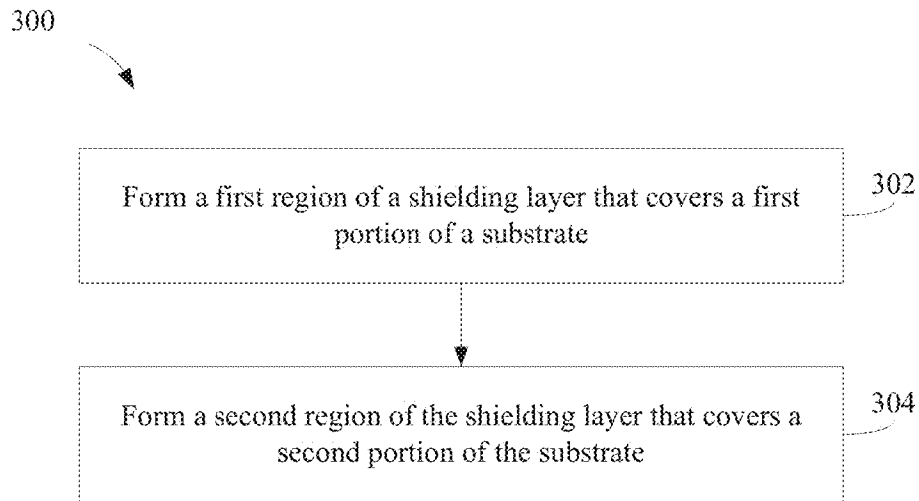


FIG. 3

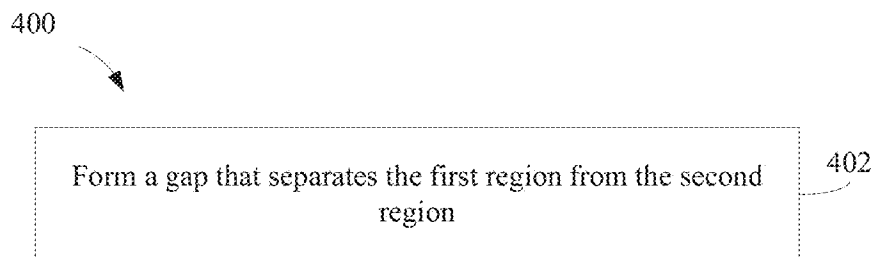


FIG. 4

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