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(54) **ANTENNA-COIL DESIGN APPARATUS AND DESIGN METHOD**

**Publication Classification**

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(57) **ABSTRACT**

A method of designing on a short-time basis an antenna which satisfies desired electrical characteristic values.

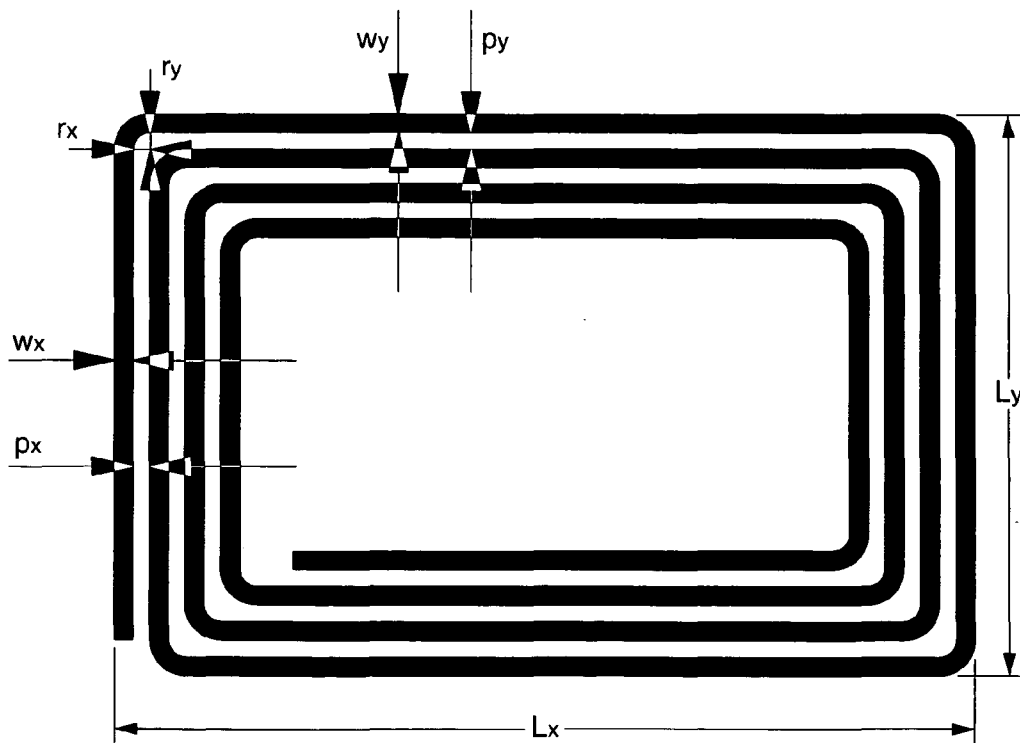
There is provided the method of designing the antenna coil used in a non-contact IC card or a RFID. Here, the antenna-coil design method includes the following steps: Inputting information about plural configurations of the antenna coil and materials thereof, analyzing resistance, inductance, and stray capacitance of the antenna coil relative to the number of turns of the antenna coil in the inputted plural configurations of the antenna coil, and, based on the analysis result, selecting one of the plural configurations of the antenna coil.

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(30) **Foreign Application Priority Data**

Jul. 14, 2003 (JP) ..... 2003-196179



**SQUARE-FIGURED TYPE**

FIG. 1

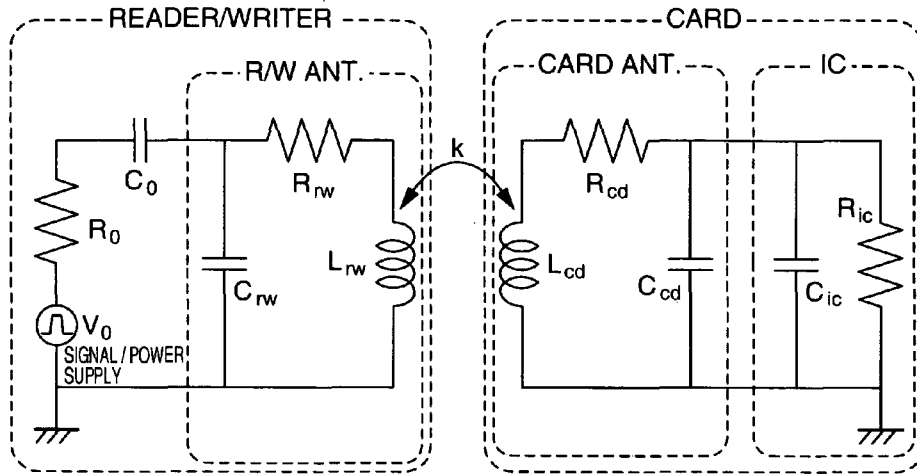


FIG. 2

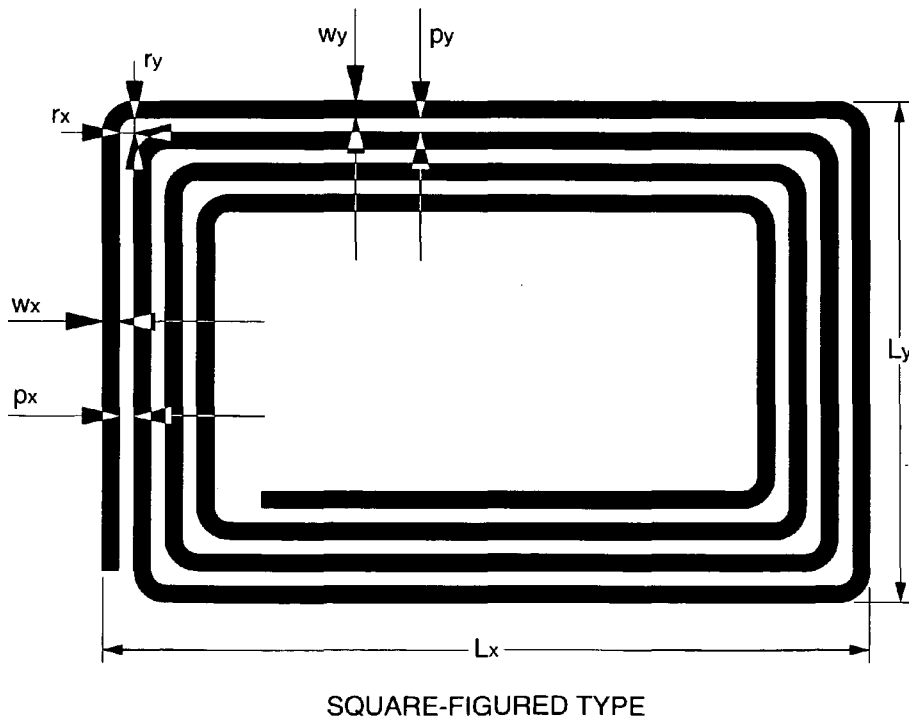


FIG. 3A

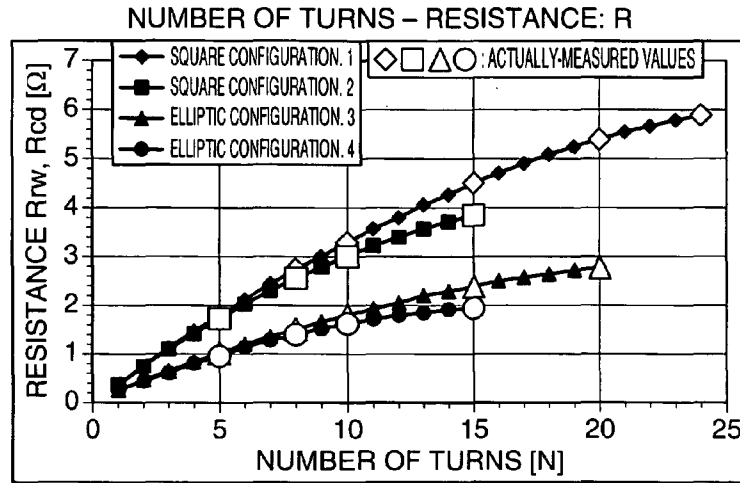


FIG. 3B

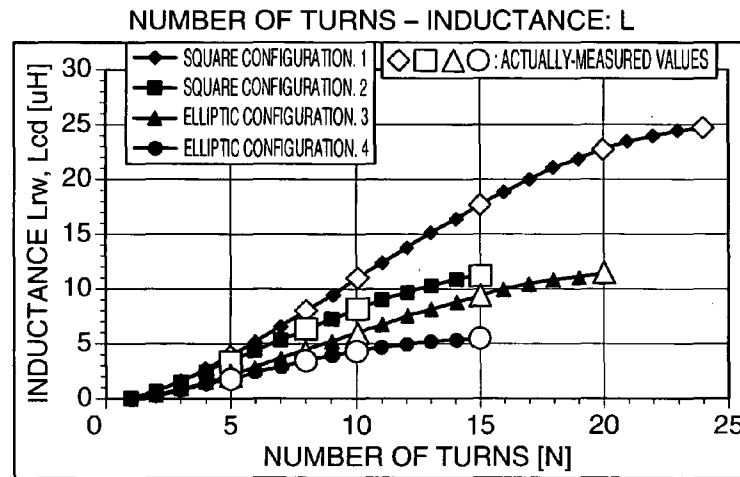


FIG. 3C

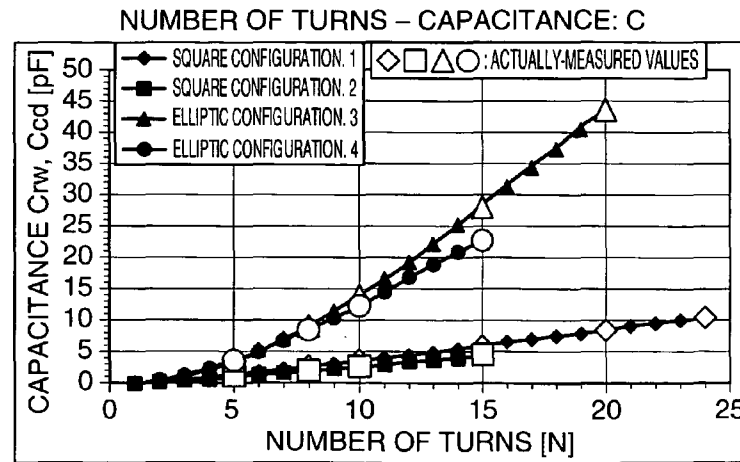


FIG. 4A

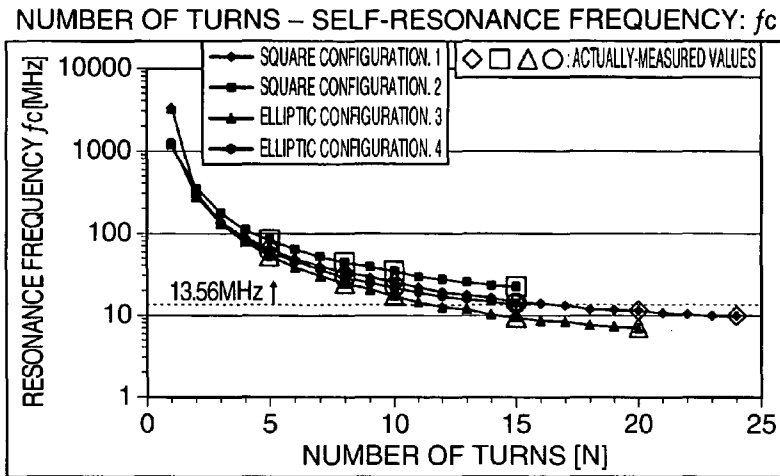


FIG. 4B

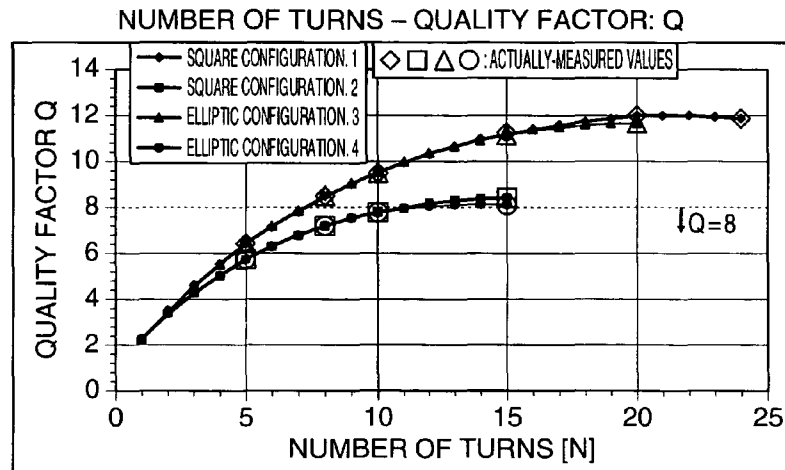


FIG. 4C

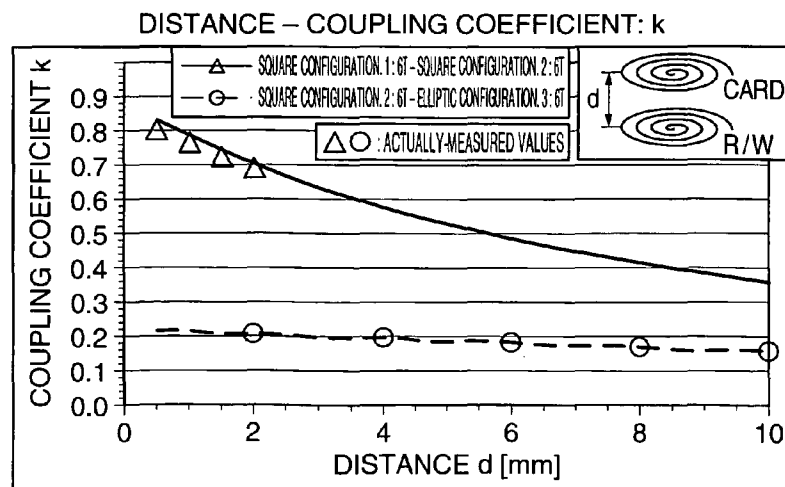
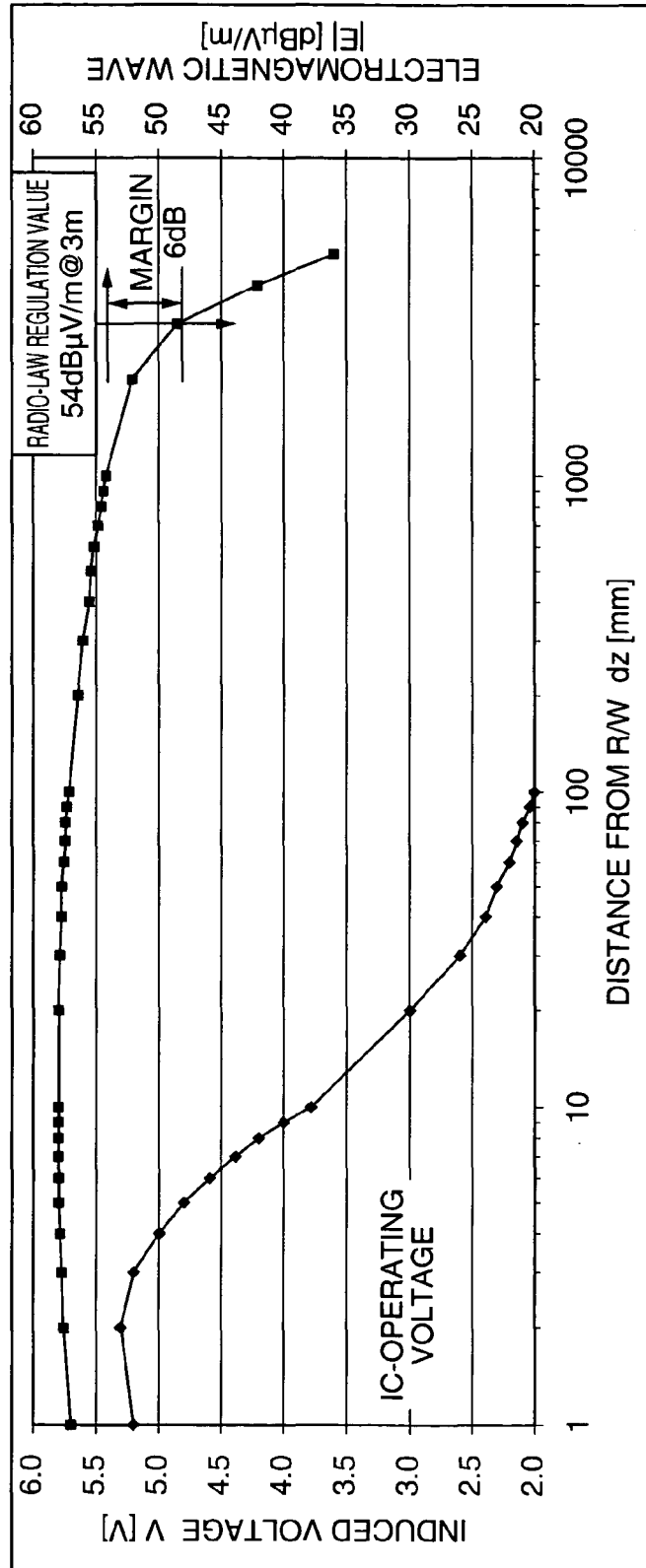


FIG. 5



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