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SILICON-BASED INDUCTOR

ABSTRACT

A silicon-based inductor in a semiconductor is disclosed. One
5 embodiment provides for an inductor having a metal region comprising
turns. The metal region has spacing between adjacent turns. The width of
the spacing varies. The spacing is pre-determined to optimize the
performance of the inductor by reducing eddy currents in the turns and
reducing eddy currents induced in a substrate. One embodiment provides
10 for an inductor having a spiral structure. The spiral structure may have a
number of turns with the spacing between the turns of the inductor being
larger near the inside of the spiral structure. A large spacing between the
inductor's inner turns may serve to reduce both conductor eddy currents
and the induced substrate current. Thus, the structure improves the
15 inductor's overall performance.

FIGURE 6