

RADIO FREQUENCY IDENTIFICATION (RFID) TAG INCLUDING A THREE-DIMENSIONAL LOOP ANTENNA

Abstract

This disclosure describes a radio frequency identification (RFID) tag that includes a three-dimensional (3D) loop antenna. The 3D loop antenna includes a first conductive portion having a length and width that substantially exceed a thickness. The length and width of the first conductive portion substantially lie in a first plane. The 3D loop antenna includes a second conductive portion having a length and width that substantially exceed a thickness. The length and width of the second conductive portion substantially lie in a second plane that is substantially parallel to the first plane. An RFID circuit electrically connected to the loop antenna excites a current through the first and second conductive portions in a current loop that lies in a third plane that is not substantially parallel to the first and second planes. In some instances the third plane may be substantially perpendicular to the first and second planes.

Figure 2A