

Abstract of the Disclosure**MAGNETIC SENSOR UTILIZING IMPEDANCE VARIATION OF A
SOFT MAGNETIC ELEMENT IN DEPENDENCE UPON A MAGNETIC
FIELD STRENGTH AND A METHOD OF MANUFACTURING THE SAME**

A magnetic sensor (31) comprises an insulator substrate (37) having first and second surfaces opposite to each other, a soft magnetic element having first and second ends opposite to each other and mounted on the first surface of the insulator substrate, and a conductor mounted on the second surface of the insulator substrate, and an output port coupled to the first and the second ends of the soft magnetic element for deriving an impedance of the soft magnetic element between the first and the second ends. The impedance changes in dependence upon a magnetic field strength applied to the soft magnetic element. In the magnetic sensor (31), the soft magnetic element is a soft magnetic wire (33). The conductor is a ground conductor (35) to be grounded. The magnetic sensor may further comprise a short-circuiting conductor (39) connecting the first end of the soft magnetic wire with the ground conductor while the output port is coupled to the short-circuiting conductor and the second end of the soft magnetic wire. The soft magnetic element may comprise a soft magnetic thin film.

(Figure No. 2)