

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 comprises an insulator substrate and a soft magnetic film element formed on the substrate. The magnetic sensor further comprises an inner conduct layer surrounded by the magnetic thin film element through an inner insulator layer. The soft magnetic thin film element comprising a Co-Nb-Zr thin layer which consist essentially of 80-87 atomic percent Co, 10-17 atomic percent Nb, and 1-6 atomic percent Zr. In the magnetic sensor, the inner conductor layer is preferably of at least one of Cu, Ag, and Al. The inner insulator layer is of at least one of SiO₂, Si₃N₄, Al₂O₃, and AlN.

Figure No. 18