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A NEW MAGNETIC FIELD TRANSDUCER BASED ON MAGNETO-IMPEDANCE AMORPHOUS WIRES

BY

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The paper presents a new type of magnetic field transducer, based on a $(Fe_{0.06}Co_{0.94})_{72.5}Si_{12.5}B_{15}$ amorphous wire magneto-impedance (MI) element (120 μm diameter, 20 mm length), having frequency output. The MI element works as a resistive one in a Colpitts oscillator with the oscillation frequency in the range of tenth of MHz. A negative feedback helps increasing the magnetic field range, the linearity and the temperature stability.