ABSTRACT

A prototype of a pyramidal electromagnetic absorber with size of base 3,5 cm x 3,5 cm and height 10,9 cm has been constructed from 2 unit mass of ferromagnetic sand, 7 styrofoam and 12 gasoline in order to get a material with $\varepsilon_r = 2\text{-}j1$ and $\mu_r = 1$ (*John D. Kraus: Antennas for All Applications*).

A torroidal coiled of that material as core and a parallel plate condenser of that material as substrat (dielectric), were used for μ_r and ε_r measurement with a Network Analyzer. The result are $\varepsilon_r = 2{,}09 - j1{,}34$ and $\mu_r = 0{,}868$ both with in 1500 MHz to 2500 MHz.

By placing the prototype in the middle line of sight between two horns antennas of two RWG slotted line in 9400 MHz band measuring system, has been found 24,5 dB attenuation in one direction (position) and 25,9 dB in the reverse position.