Abstracts

Low-Cost Method of the Measurement of Microwave Ferrite Parameters

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Theory and experimental results are presented to show the possibility of using a ferrite cylindrical specimen coupled to the microstrip line for measuring properties of magnetic materials at microwave frequencies. The complex permittivity and initial scalar permeability of ferrite are calculated on the base of the measured resonant frequencies and Q-factors of the structure with TE/sub 01delta/ mode. The measurements are made, without saturation of tested material, for two (or more) different distances between ferrite sample and upper mobile metal plate of the holder. The measurement accuracies of real parts of permittivity and permeability are better than 0.2 percent, and measurement error of total loss tangent is less than 2 percent.

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