Abstracts

Characteristics of microstrip line on YIG film substrate and its application to beam forming of antenna

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Characteristics of a microstrip line on a yttrium iron garnet (YIG) film substrate are investigated by using the spectral domain method and the effect of the strip width on the coupling between magnetostatic forward volume wave (MSFVW) and quasi-TEM mode are discussed under the estimation of the calculated dispersion relation. To confirm the dispersion curve, delay line characteristics of the stripline proposed have been experimentally examined using 20-/spl mu/m and 100 /spl mu/m-thick YIG films both in the linear and nonlinear regime. The beam forming of antenna pattern has also been experimentally demonstrated as an application of the delay line using the MSFVW mode in the stripline.

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