

Broadband and Tunable Negative Monolithic Circuits for Microwave Active Filters Compensation (1995 Vol. II [MWSYM])

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In this article, GaAs MMIC negative resistance chips are presented. These devices are used to improve the performances of planar microstrip resonators structures. The broadband capabilities of these negative resistance circuits are illustrated with their use to compensate for the losses of two 4-pole bandpass microstrip half wave filters designed with alumina substrate and centered respectively at 1.5 GHz and 4 GHz. Finally, experimental results of bandstop active filters built on lossy high permittivity dielectric substrate ($\epsilon_r=36$) and also compensated for with these monolithic circuits confirm their great interest.

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