Abstracts

Silicon micromachined RF MEMS resonators

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A new resonator concept based on a three dimensional (3D) high resistivity silicon substrate filled cavity resonators is investigated. Fabrication is done using micromachining technologies. Two types of resonators are investigated, an "open-end" patch resonator and a "short circuit via" resonator. Both types show good agreement in simulated and measured resonance frequencies (within 2%). However, measured quality factors (50-70) are still lower than the simulated values and theoretical expectations.

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