# Abstracts

## A simple method to design wide-band electronically tunable combline filters

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A new systematic approach for designing wide-band tunable combline filters is presented. New results on tunable combline filter theory are proposed and explicit design formulas, to obtain the filter design parameters from specifications, are included. These design parameters are: center frequency, resonator electrical length, instantaneous bandwidth, and tuning capacitance. The proposed design technique is used to construct an X-band wide-band microstrip tunable filter from 8 to 12 GHz with commercial GaAs FETs as tuning elements. Parasitic effects and simulation problems are also discussed.

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