Abstracts

Electronically Tunable Microwave Bandpass Filters

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Combline filters with novel input and output coupling networks which enable broad-band tuning to be achieved with minimum degradation in passband performance are discussed. Explicit design formulas for these filters are presented. Computer analysis of varactor tuned combine bandpass filters including the small signal varactor equivalent circuit is presented enabling filter performance to be easily evaluated. The design and experimental performance of a varactor tuned combline filter, realized in suspended substrate stripline is described. This filter toned from 3.2 GHz to 4.9 GHz exhibited low passband insertion loss and its performance was is close agreement with theoretical expectations.

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