Abstracts

Coplanar stripline resonators modeling and applications to filters

Young-Ho Suh and Kai Chang. "Coplanar stripline resonators modeling and applications to filters." 2002 Transactions on Microwave Theory and Techniques 50.5 (May 2002 [T-MTT]): 1289-1296.

This paper presents coplanar stripline (CPS) resonators and their practical implementations to filters. Five types of CPS resonator are built using open and short-ended strips. Lumped-element equivalent circuits are presented for each resonator. Their performances are investigated and compared in terms of Q factor or bandwidth. Two types of bandpass filter are developed with the resonators. The bandpass filters have low-passband insertion losses and wide-stopband suppression bandwidths. Lumped-element equivalent circuits are presented for the bandpass filters. A wide-band CPS-to-microstrip transition is developed for the measurements. The back-to-back transition has an insertion loss of less than 3 dB and a return loss of better than 10 dB for the frequency range from 1.3 to 13.3 GHz (1:10.2).

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