Abstracts

Design and Performance of Coplanar Waveguide Bandpass Filters

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End-coupled resonator bandpass filters built in coplanar waveguide are investigated. The admittance inverter parameters of the coupling gaps between resonant sections are deduced from experiment, and bandpass filter design rules are developed. This allows easy filter synthesis from "prototype" low-pass designs. Measurements of single section resonator quality factors are used to predict filter insertion losses. Several examples of filters realized in coplanar waveguide are presented. Odd-mode coplanar waveguide filter elements that shortcircuit the even coplanar waveguide mode are investigated. Filter tuning, accomplished by adjusting the height of conducting planes above the resonant filter sections, is demonstrated.

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