Abstracts

Theoretical and experimental study of various types of compensated dielectric bridges for millimeter-wave coplanar applications

E. Rius, J.P. Coupez, S. Toutain, C. Person and P. Legaud. "Theoretical and experimental study of various types of compensated dielectric bridges for millimeter-wave coplanar applications." 2000 Transactions on Microwave Theory and Techniques 48.1 (Jan. 2000 [T-MTT]): 152-156.

This paper describes a new approach for the integration of dielectric bridges in microwave-integrated-circuit uniplanar technology. Taking into account the electrical influence of these elements on coplanar waveguide, a simple way to compensate these parasitic effects is presented. It consists of locally tuning the dimensions of both the bridges and associated compensation lines. Theoretical and experimental results on coplanar waveguides and T-junctions are given for the millimeter frequency range. Finally, to validate the proposed technique, a bandpass filter including compensated dielectric bridges is implemented.

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