Abstracts

Ultra Low Impedance CPW Transmission Lines for Multilayer MMICs (1993 [MCS])

M. Gillick and I.D. Robertson. "Ultra Low Impedance CPW Transmission Lines for Multilayer MMICs (1993 [MCS])." 1993 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 93.1 (1993 [MCS]): 127-130.

A new technique for realising low-loss coplanar waveguide transmission lines with ultra-low characteristic impedance on multilayer MMIC's is presented. The performance of these CPW lines is investigated experimentally with either (a) ground planes extended under the signal conductor or (b) the center conductor extended underneath the ground planes. Using this technique characteristic impedances as low as 7Omega have been realised. The technique has been combined extensively with the proven standard thin-film microstrip transmission line. The TFMS technique can be used for lines with characteristic impedance as low as 3.6Omega, but is found here to be significantly more lossy.

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