Abstracts

Ultra Low Impedance CPW Transmission Lines for Multilayer MMIC's (1993 Vol. I [MWSYM])

M. Gillick and I.D. Robertson. "Ultra Low Impedance CPW Transmission Lines for Multilayer MMIC's (1993 Vol. I [MWSYM])." 1993 MTT-S International Microwave Symposium Digest 93.1 (1993 Vol. I [MWSYM]): 145-148.

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 compared 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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